UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Colonel Dexter Nunnally
Commander, U.S. Army Garrison
810 Schreider Street
Fort Detrick, Maryland 21702-5000

Re: *Fort Detrick Area B Landfills Second Five-Year Review Report,* April 2020

Dear Colonel Nunnally:

The U.S. Environmental Protection Agency (EPA) concurs with the Fort Detrick Area B Five-Year Review Report titled, *Final Second Five-Year Review Report for the Area B Landfills,* dated April 2020. The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) requires that Five-Year Reviews be completed for sites with remedial actions that have resulted in hazardous substances, pollutants, or contaminants remaining at the sites above levels that allow for unlimited use and unrestricted exposure (UU/UE). Five-Year Reviews are conducted in accordance with CERCLA §121(c), as amended, and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), Part 300.430(f)(4)(ii) of the Code of Federal Regulations. This report satisfies the five-year review requirements for the capped inactive landfills located at the Area B Fort Detrick National Priority List site. This final report marks the second complete five-year review for Area B of Fort Detrick.

The obligation to issue this report was triggered by the initiation of the inactive landfill capping construction at Area B, which began June 25, 2009. The first five-year review due date for Fort Detrick was June 25, 2014, and the second five-year review due date was June 25, 2019. A draft second five-year review was submitted to EPA for review at the end of April 2019, and EPA issued review comments to the Army on May 29, 2019. Significant issues were found with the draft second five-year review document for Area B of Fort Detrick, as reflected in EPA's May 29 comment letter.

In June 2019, Region III sent a "deferral" letter to the Army, stating that the Region could not make a protectiveness determination given the significant issues with the draft second the five-year review. Subsequent review and modifications of the second draft five-year review resulted in the current April 2020 version, which is acceptable to Region III as an Addendum.

Nine waste disposal areas at Area B are addressed in this second five-year review:

- Area B-11
- Area B-2
- Area B-3 Inactive
- Area B-6
- Area B-8
- Trenches North of Area B-8
- Area B-18
- Area B-10
- Area B-Grove

The April 2020 Addendum did not report any technical issues or recommendations related to the inactive capped landfills. The following Issues and Recommendations will be tracked by EPA:

Issues and Recommendations

- *The conceptual site model for groundwater at Area B needs to be finalized.*
- *Information will be collected to complete the conceptual site model for groundwater and confirm that the landfills prevent contaminant migration from soil to groundwater.*
- *The ongoing USGS Hydrogeologic Study of Area B will be completed by December 2021.*

The following Protectiveness Statements will be reported to Congress:

The remedy to prevent exposure to contaminated soils and wastes for the Area B Inactive Landfills at Fort Detrick is protective of human health and the environment, and the pathways that could result in unacceptable risks from the contaminated soils and wastes are being controlled. Consistent with guidance in OSWER 9200.2-111 a determination of "short-term protective" is appropriate because, while there are no issues with current protectiveness, additional lines of evidence will help evaluate remedy performance in line with the final Conceptual Site Model for groundwater at Area B.

Furthermore, as part of the Five-Year Review, EPA has evaluated the Government Performance and Results Act (GPRA) measures for Fort Detrick Area B and has determined the status is as follows:

Environmental Indicators
Human Health: Insufficient data to determine Human Health Exposure Under Control
Groundwater Migration: Not Under control

Sitewide Ready for Anticipated Use
The Fort Detrick Area B facility is not Site-Wide Ready for Anticipated Use but is projected to achieve this goal by 12/31/2038.

The next Five-Year Review report for Fort Detrick Area B is due by June 25, 2024. If you have any questions, please contact Robert Thomson at 215-814-3357.

Sincerely,

Paul Leonard, Director
Superfund and Emergency Management Division
U.S. Environmental Protection Agency - Region 3

cc: Joseph Gortva, Fort Detrick
Dr. Elisabeth Green, MDE

DEPARTMENT OF THE ARMY
U.S. ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT DETRICK
810 SCHREIDER STREET, SUITE 212
FORT DETRICK, MARYLAND 21702-5000

REPLY TO
ATTENTION OF

May 26, 2020

Environmental Management Division

Robert Thomson, PE, REM
US EPA -Region 3
NPLIBRAC Federal Facilities Branch
1650 Arch Street (3HSII)
Philadelphia, PA 19103-2029

Re: Fort Detrick Area B Landfills, Final Five-Year Review, Clarification of Protectiveness Statements

Dear Mr. Thomson:

The U.S. Army finalized the referenced Five-Year Review with Command signature executed 06 April 2020. Subsequently, the U.S. Army has received the following USEPA comment regarding the protectiveness statements included in the referenced Five-Year Review:

> "In looking over the FYR, the Protectiveness Determination is listed as "Protective", and doesn't specify short-term or long-term protective. Is there any idea which was meant in the FYR?
>
> Given that the groundwater migration pathway is still not completely understood, and with the USGS study underway to further define the CSM for groundwater, it would be difficult for EPA to concur with a long-term protectives [sic] determination at this time."

This letter has been drafted to clarify the protectiveness statements in the Review for consistency with USEPA expectations for a short-term protectiveness determination. The following long-term protectiveness statements are currently presented in the review, formatted in accordance with the OSWER 9200.2-111, *Clarifying the Use of Protectiveness Determinations for Comprehensive Environmental Response, Compensation, and Liability Act Five-Year Reviews*:

<u>Area B-2</u>
The remedy for Area B-2 is protective of human health and the environment.
The landfill cap and land use controls prevent direct human contact with elevated concentrations of contaminants of potential concern. Groundwater monitoring data confirms that the cap effectively reduces storm water infiltration and contaminant migration from soil to groundwater.

MCHD-DSE
SUBJECT: Fort Detrick Area B Landfills, Final Five-Year Review, Clarification of Protectiveness Statements
May 2020

Areas B-3, B-6 and the Western Disposal Areas
The remedy for Area B-3, Area B-6, and the WDA is protective of human health and the environment.
The landfill cap and land use controls prevent direct human contact with elevated concentrations of contaminants of potential concern. Groundwater monitoring data confirms that the caps effectively reduce storm water infiltration and contaminant migration from soil to groundwater.

To meet the USEPA request for short-term protectiveness and to maintain consistency with OSWER directive 9200.2-111, the protectiveness statements have been revised as follows:

Area B-2
The remedy at Area B-2 currently protects human health and the environment because the landfill cap and land use controls prevent direct human contact with elevated concentrations of contaminants of potential concern. Groundwater monitoring data also confirms that the cap effectively reduces storm water infiltration and contaminant migration from soil to groundwater. However, in order for the remedy to be protective in the long-term, the following action needs to be taken to ensure protectiveness: following the completion of the conceptual site model for groundwater, confirm that the Area B-2 Landfill prevents contaminant migration from soil to groundwater.

Areas B-3, B-6 and the Western Disposal Areas
The remedy for Area B-3, Area B-6, and the WDA currently protects human health and the environmental because the landfill caps and land use controls prevent direct human contact with elevated concentrations of contaminants of potential concern. Groundwater monitoring data also confirms that the caps effectively reduce storm water infiltration and contaminant migration from soil to groundwater. However, in order for the remedy to be protective in the long-term, the following action needs to be taken to ensure protectiveness: following the completion of the conceptual site model for groundwater, confirm that the Areas B-3, B-6 and WDA Landfills prevent contaminant migration from soil to groundwater.

If you have any questions, please feel free to contact me at (301) 619-3196.

Sincerely,

Joseph J. Gortva
Chief, Environmental Management Division
Directorate of Public Works

Enclosure

Final
Second Five-Year Review Report
for the
Area B Landfills (FTD-49, 50, 51, 69, 70, 71)

Fort Detrick
Frederick, Maryland

February 2020

Prepared for:
U.S. Army Environmental Command
And
Fort Detrick

Approved by:

Dexter Nunnally
Colonel, U.S. Army
Commanding

Date:

6 Apr 20

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LIST OF ACRONYMS AND ABBREVIATIONS

ADI	allowable daily intake
ARARs	Applicable or Relevant and Appropriate Requirements
AWQS	Ambient Water Quality Standard
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COMAR	Code of Maryland Regulations
COPC	chemical of potential concern
FTD	Fort Detrick
GFPR	Guaranteed Fixed Price Remediation
HQAES	Headquarters Army Environmental System
LUCIP	land use control implementation plan
MCL	Maximum Contaminant Level
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
PBC	Performance Based Contract
PCB	Polychlorinated biphenyls
PCE	tetrachloroethylene
PQL	practical quantitation limit
RAO	remedial action objective
RBC	risk-based concentration
RCRA	Resource Conservation and Recovery Act
RSL	risk-based screening level
TCE	trichloroethylene
USACE	United States Army Corps of Engineers
USAEC	United States Army Environmental Command

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

USAMRIID	United States Army Medical Research Institute of Infectious Diseases
USEPA	United States Environmental Protection Agency
UU/UE	unlimited use and unrestricted exposure
VISL	vapor intrusion screening levels target groundwater concentrations
WDA	Western Disposal Area

EXECUTIVE SUMMARY

This is the second five-year review of remedial actions taken at the Area B Landfills located at Fort Detrick in Frederick, Maryland. This review encompasses the following sites:

- Area B-2 (Fort Detrick [FTD]-50, Headquarters Army Environmental System [HQAES] ID 24225.1020)
- Area B-3 Inactive (FTD-51, HQAES ID 24225.1021)
- Area B-6 (FTD-69, HQAES ID 24225.1039)
- The Western Disposal Area (WDA):
    - Area B-8, the Trenches North of Area B-8, and Area B-18 (FTD-70; HQAES ID 24225.1041)
    - Area B-10 and B-10 Grove (FTD-71, HQAES ID 24225.1040)
    - Area B-11 (FTD-49, HQAES ID 1019)

The purpose of this review is to determine if remedial actions implemented at the Area B Landfills are, and will continue to be, protective of human health and the environment.

This Five-Year Review Report was prepared in accordance with the U.S. Environmental Protection Agency's Comprehensive Five-Year Review Guidance (USEPA, 2001). The United States Army prepared this review consistent with applicable requirements of the Comprehensive Environmental Response, Compensation, and Liability Act §121 and the National Contingency Plan. This five-year review is required because hazardous substances, pollutants, or contaminants remain at the Area B Landfills above levels that allow for unlimited use and unrestricted exposure (UU/UE) (40 CFR 300.430(f)(4)(ii)). The methods, findings, and conclusions of the review, identified issues, and recommendations are documented in this report. The triggering action for this five-year review was the due date of the first five year review on 25 June 2014.

The remedies for the Area B Landfills include landfill caps and land use controls. The remedies were selected in two decision documents:

- Decision Document for Area B-2 (FTD-50), Fort Detrick, Maryland (21 February 2008) (Shaw Environmental Inc, 2008)
- Decision Document for Area B-3 Inactive (FTD-51), Area B-6 (FTD-69), and the Western Disposal Areas (FTDs-70, 71, 49), Fort Detrick, Maryland (02 March 2009) (Shaw Environmental Inc, 2009)

The following protectiveness statements were identified:

Area B-2

The remedy for Area B-2 is protective of human health and the environment.

The landfill cap and land use controls prevent direct human contact with elevated concentrations of contaminants of potential concern. Groundwater monitoring data confirms that the cap effectively reduces storm water infiltration and contaminant migration from soil to groundwater. As evidenced by groundwater, surface water, vapor intrusion, and sediment data, no exposures are occurring on or off site that adversely affect human health or the environment.

Area B-3, B-6, and the Western Disposal Area

The remedy for Area B-3, Area B-6, and the WDA is protective of human health and the environment.

The landfill cap and land use controls prevent direct human contact with elevated concentrations of contaminants of potential concern. Groundwater monitoring data confirms that the caps effectively reduce storm water infiltration and contaminant migration from soil to groundwater. As evidenced by groundwater, surface water, vapor intrusion, and sediment data, no exposures are occurring on or off site that adversely affect human health or the environment.

The next five-year review for the Area B Landfills will be conducted by 25 June 2024.

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: Fort Detrick, Area B Landfills (FTD 49, 50, 51, 69, 70, and 71)		
EPA ID: MD985397249		
Region: 3	**State:** MD	**City/County** Fort Detrick/Frederick

SITE STATUS	
NPL Status: Non-NPL	
Multiple OUs? Yes	**Has the site achieved construction completion?** No

REVIEW STATUS
Lead agency: Other Federal Agency **If "Other Federal Agency" was selected above, enter Agency name:** U.S. Army
Author name (Federal or State Project Manager): Joseph Gortva
Author affiliation: Chief, Fort Detrick Environmental Management Division
Review period: August 2018 – June 2019
Date of site inspection: 10 September 2018
Type of review: Statutory
Review number: 2
Triggering action date: 25 June 2014
Due date *(five years after triggering action date)*: 25 June 2019

Issues/Recommendations
AOC(s) without Issues/Recommendations Identified in the Five-Year Review:
Area B-2, B-3, B-6 and the WDA

Protectiveness Statement(s)		
AOC: Area B-2	*Protectiveness Determination:* Protective	*Addendum Due Date (if applicable):* Not Applicable
The remedy for Area B-2 is protective of human health and the environment. The landfill cap and land use controls prevent direct human contact with elevated concentrations of contaminants of potential concern. Groundwater monitoring data confirms that the cap effectively reduces storm water infiltration and contaminant migration from soil to groundwater. As evidenced by groundwater, surface water, vapor intrusion, and sediment data, no exposures are occurring on or off site that adversely affect human health or the environment.		
AOC: Area B-3, B-6 and the Western Disposal Area	*Protectiveness Determination:* Protective	*Addendum Due Date (if applicable):* Not Applicable
The remedy for Area B-3, Area B-6, and the WDA is protective of human health and the environment. The landfill cap and land use controls prevent direct human contact with elevated concentrations of contaminants of potential concern. Groundwater monitoring data confirms that the caps effectively reduce storm water infiltration and contaminant migration from soil to groundwater. As evidenced by groundwater, surface water, vapor intrusion, and sediment data, no exposures are occurring on or off site that adversely affect human health or the environment.		

1.0 INTRODUCTION

This is the second five-year review of the Area B Landfills located at Fort Detrick, Frederick County, City of Frederick, Maryland. Fort Detrick is located approximately 50 miles west of the City of Baltimore, Maryland in Frederick County, Frederick, Maryland (Figure A.1-1 in Attachment 1).

This review encompasses the following sites:

- Area B-2 (Fort Detrick [FTD]-50, Headquarters Army Environmental System [HQAES] ID 24225.1020
- Area B-3 Inactive (FTD-51, HQAES ID 24225.1021)
- Area B-6 (FTD-69, HQAES ID 24225.1039)
- The Western Disposal Area (WDA):
    - Area B-8, the Trenches North of Area B-8, and Area B-18 (FTD-70; HQAES ID 24225.1041)
    - Area B-10 and B-10 Grove (FTD-71, HQAES ID 24225.1040)
    - Area B-11 (FTD-49, HQAES ID 1019)

Remedies were selected for the Area B Landfills in two Decision Documents:

- Decision Document for Area B-2 (FTD-50), Fort Detrick, Maryland (21 February 2008) (Shaw Environmental Inc, 2008)
- Decision Document for Area B-3 Inactive (FTD-51), Area B-6 (FTD-69), and the Western Disposal Areas (FTDs-70, 71, 49), Fort Detrick, Maryland (02 March 2009) (Shaw Environmental Inc, 2009)

Background information for the Area B Landfills has been consolidated into one description for all sites. The data review, technical assessments, and protectiveness statements are specific to each remedy and Decision Document.

Additional remedial actions undertaken at Fort Detrick on Area A and Area C are reviewed under separate cover. In addition, in 2010, the Army became aware of historical outdoor testing of tactical herbicides at multiple locations on Fort Detrick. Two Archive Search Reports were drafted to evaluate all historical practices that could have resulted in adverse environmental impacts. Several locations within Area B were identified for further evaluation, and a Site Inspection Work Plan (PIKA/ARCADIS, 2016) was drafted. The Site Inspection was completed in February 2018; however, further investigation was recommended. As these areas are still in the investigative phase, no evaluation of a remedy was performed.

This review was conducted by the United States Army Corps of Engineers (USACE) Buffalo District on behalf of the United States Army Environmental Command (USAEC) and Fort Detrick.

This is the second five-year review of remedial actions taken at Area B Landfills. The remedies at the Area B Landfills are not on the National Priorities List (NPL); however, Area B Groundwater is listed on the NPL as United States Environmental Protection Agency (USEPA) ID MD985397249. This operable unit is addressed separately from the Area B Landfills. No remedy has been selected for the Area B Groundwater. The Remedial Investigation (RI) has

been drafted for Area B Groundwater and a pilot study is planned to evaluate two groundwater and two surface water remedial technologies.

This review was prepared consistent with applicable requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This review is required by statute; the United States Army prepared it pursuant to CERCLA §121 and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). CERCLA §121 states:

"If the president selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews."

The USEPA interpreted this requirement further in the NCP; 40 Code of Federal Regulations (CFR) §300.430(f)(4)(ii) states:

"If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action."

This five-year review is required because hazardous substances, pollutants, or contaminants remain at the Area B Landfills above levels that allow for unlimited use and unrestricted exposure (UU/UE) (40 CFR 300.430(f)(4)(ii)). The last five-year review for Area B Landfills documents a trigger date of 25 June 2009 based on the initiation of the first remedial action that left hazardous substances, pollutants or contaminants on site that did not allow for UU/UE on the Area B Landfill remedies. The last five-year review for Area B Landfills was due 25 June 2014 and signed by the Army on 20 April 2017 (US Army, 2017). The due date for this five-year review is 25 June 2019. The purpose of the five-year review is to determine whether the site remedies are protective of human health and the environment. The methods, findings, and conclusions of the review are documented in this report.

2.0 SITE CHRONOLOGY

The following table lists the dates of important events for the site.

Table 1 Chronology of Site Events

Event	Date
Area B purchased by the Army	1946
Operation of the Area B Landfills Initiated	1946
Area B Landfills largely ceased operation with the exception of Area B-3 East and West which operated until 1990	1950-1972
Area B Landfills identified in the Fort Detrick Installation Action Plan	1993
Initial investigation of Area B Landfills	1993
Removal action performed at four Area B-11 disposal pits	2001-2004
Remedial Investigation/Feasibility Study finalized for Area B-2, B-3 Inactive, Area B-6, and the Western Disposal Area	2006-2008
Area B-2 Decision Document signed	21 February 2008
Area B-3, B-6, and WDA Decision Document signed	2 March 2009
Phase I (site preparation and stockpiling of fill) of capping process	March-June 2009
Triggering date – start of cap construction and restoration activities	25 June 2009
Phase II (cap construction and restoration activities) of capping process	June 2009-June 2010
Area B Waste Pit Capping Project Completion Report	August 2014
First Semi-Annual Groundwater Monitoring Event	May 2016
Groundwater Monitoring Work Plan	June 2016
First Area B Five-Year Review	20 April 2017
Landfill lysimeters and 16 new monitoring wells installed	August 2017-March 2018

3.0 BACKGROUND

3.1 PHYSICAL CHARACTERISTICS

Fort Detrick, located in Frederick County, Frederick, Maryland (see Figure A.1-1 in Attachment 1), includes six non-contiguous land parcels. The parcels are identified as Area A, Area B, Area C Water Treatment Plant, Area C Wastewater Treatment Plant, Forest Glen Annex, and Glen Haven Annex. The parcel relevant to this review (Area B) is approximately 400 acres and is depicted on Figure A.1-2 in Attachment 1.

Area B is surrounded by a chain-link fence with a keyed gate for access by authorized personnel. The parcel consists of rolling hills with elevations ranging from approximately 300 to 400 feet above mean sea level. The site consists mainly of open, vegetated fields with some wooded and developed areas intermixed. All of the landfills are vegetated and undeveloped. Regulatory floodways are located along the northern, eastern, and southern borders of Area B (Federal Emergency Management Agency, 2007), and surface water is present across portions of the parcel (Carroll Creek, Streams 1-6, Post Pond, and Robinson Pond). Storm water and wetland mapping was performed in 2004. Storm water management features are present at many of the landfills.

3.1.1 Climatology

The climate of Frederick County is moderately humid temperate. The mean temperature is 53ºF and the annual average humidity is 58 percent. The annual mean precipitation is 41 inches and is relatively evenly distributed throughout the year. This includes 24 inches of snowfall which typically melts quickly. The average growing season is 170 days. Prevailing winds are from the west-southwest with an average velocity of 7.4 miles per hour (Shaw Environmental, Inc, 2008).

Frederick encountered substantially higher amounts of precipitation in 2018. As of September 2018, nearby Baltimore had already received 56.52 inches of rain, in contrast to their average of 42 total annual inches (Dance, 2018).

3.1.2 Geology and Lithology

Surficial geology in Area B includes approximately 30 feet of residuum that thins to a few feet thick near Carroll Creek. The residuum is generally described as a reddish brown heterogeneous mixture of silt or clay with sand and gravel (ARCADIS/Malcolm Pirnie, 2014). Area B soils are primarily in the Penn series. Penn Series soil are silt loam, loam or silty clay loam that forms in materials weathered from noncalcareous reddish shale, siltstone, and fine-grained sandstone, normally of Triassic age. The far western portion of the site is situated in a similar soil type—the Athol Series that forms in residuum weathered from Triassic conglomerate or breccia consisting of a red calcareous matrix containing fragments of limestone, shale, sandstone, and quartz. (Shaw Environmental, Inc, 2008)

Area B is underlain by fractured limestone and dolomite of the Frederick Formation in the southeastern portion and by New Oxford Formation Conglomerate in the northern portion. As of 2012, a total of 72 wells at Area B penetrate bedrock. Drilling footage in rock ranged from 7 to 309 feet. Monitoring wells BMW65, BMW66, and BMW66D represent the deepest boreholes extending from 317 to 337 feet below ground surface. The bedrock forms karst, the result of preferential dissolution of rock by circulating groundwater. Karst forms where groundwater progressively enlarges the existing flow paths (such as bedrock fractures), increasing the aquifer

transmissivity and altering its drainage patterns by creating networks of interconnected conduits (ARCADIS/Malcolm Pirnie, 2014). Fractured zones and voids are present. Evidence of associated sinkholes, springs, and subsurface voids is present at Area B. During the 2011-2012 drilling event, the largest void encountered was 11 feet at BMW-73 (ARCADIS/Malcolm Pirnie, 2013).

3.1.3 Hydrogeology

Bedrock aquifers are the most important sources of groundwater in Frederick County. Overburden sediments are typically not important sources of groundwater, but serve to transmit surface water runoff to recharge the deeper aquifers. Groundwater in bedrock occurs in joints, faults, and bedding plane partings. In the limestone units, secondary porosity as a result of solutional enlargement of joints, faults, and bedding plane partings is important. In the Triassic shales, sandstones, and siltstones, bedding plane partings are more important in transmitting groundwater.

The majority of groundwater in Frederick County originates from the infiltration of local precipitation. Primary discharge zones are streams and springs. The Monocacy River is the major drainage feature of Frederick County and is likely a major groundwater discharge point. A number of perennially flowing springs are also present in Area B which also serve as groundwater discharge points.

Static water level measurements recorded during Area B periodic groundwater sampling events indicate that groundwater underlying Area B likely flows to the east-southeast towards the springs that drain into Carroll Creek, and ultimately, the Monocacy River. Exceptions to the regional groundwater flow occur in the western portion of Area B due to surface water transmissions, and in the northern portions of Area B due to groundwater mounding in the vicinity of monitoring wells BMW41, 41D, and 42. The groundwater mounding correlates with a surficial topographic mound and an occurrence of the sandstone/claystone member of the New Oxford Formation. This unit has not been observed to be karst-forming and as such is lower in transmissivity, where recharge cannot dissipate as quickly as it does in the areas of karstified conflomerate that surround it.

A dye trace study was conducted in Area B beginning in 2013 with the final report issued in 2018 (ARCADIS, 2018). The study concluded that shallow and deep bedrock are part of the same groundwater flow system, and that patterns of flow and discharge locations are similar regardless of the originating depth. The data produced during the dye trace study suggest that contaminants introduced into the upper portions of the aquifer (epikarst) in Area B would be preferentially discharged to an area located to the southeast of Area B. This area includes a privately owned complex of springs (Robinson's Box and Rock Springs near Robinson's Pond) and Carroll Creek. Based on estimated straight line travel rates for fluorescein and eosine dyes used in the dye trace study, it is estimated that groundwater flow ranges from 79-246 feet per day with a mean value of 151 feet per day (Shaw Environmental, Inc, 2008).

Figures extracted from the Area B site conceptual model are included in Attachment 3.

3.2 LAND AND RESOURCE USE

Fort Detrick is a United States Army Installation Management Command (IMCOM) post supporting a multi-governmental community that conducts biomedical research and development, medical materiel management, global telecommunications, and the study of

foreign plant pathogens (U.S. Army, 2017). Fort Detrick is headquarters to the United States Army Medical Research and Materiel Command (USAMRMC) (U.S. Army, 2018). Each branch of the U.S. military is represented among the approximately 11,000 military, federal, and contractor employees assigned on post (U.S. Army, 2017).

Area B's 400 acres include an active municipal landfill operating under a Resource Conservation and Recovery Act (RCRA) Permit (Maryland Permit 2005-WMF-0327), research animal farming operated by the United States Army Medical Research Institute of Infectious Diseases (USAMRIID), a former shooting range, historical waste disposal areas for Fort Detrick, an explosives storage facility, and open fields historically used for research purposes (Shaw Environmental Inc, 2009). There are no residential land uses within Area B. Since the last five-year review, solar panels have been added to Area B, but are outside the boundaries of the Area B Landfills.

Future land use within Area B is expected to remain consistent with current uses. A public road was proposed by the City of Frederick transecting Area B, and has been included in the City's Master Plan for over 20 years. The project remains in the planning stages. Local news outlets document discussion among the Fort Detrick staff, Restoration Advisory Board members, and the public regarding the proposed project and the need for precautions regarding the remedies at Area B Landfills (Carignan, 2016).

The land use surrounding Area B consists of agricultural, residential, and small commercial and government areas.

3.3 HISTORY OF CONTAMINATION

Area B has been the primary location of waste disposal activities for Fort Detrick. This historically occurred in several closed waste disposal sites that contain demolition and remodeling debris from Area A buildings, and several unlined trenches or pits. Some of the pits were reportedly used for disposal of incinerated biological waste, decontamination sludge, lab chemicals, autoclaved animal carcasses, and residual pesticides and herbicides after demilitarization. In addition, the following materials were discovered during an Interim Removal Action at Area B-11: non-incinerated biological waste, medical waste (including live pathogens), preserved animal specimens, laboratory waste (bottles, compressed gas canisters, lab equipment, etc.), and containerized solvents. Medical wastes excavated during the Interim Removal Action were incinerated for sterilization as part of the final disposal process. (US Army, 2017)

For more detail, the histories and figures for each individual landfill are included in Attachment 3.

3.4 INITIAL RESPONSE

As noted above, an Interim Removal Action was completed on the westernmost portion of Area B-11 from 2001 to 2004 to remove an inferred source of trichloroethylene (TCE) and tetrachloroethylene (PCE) contamination. Approximately 3,494 tons of contaminated soil and waste material were removed that included chemical containers, approximately 59 intact and 35 perforated compressed gas cylinders, biological and medical waste including vials containing live pathogenic bacteria, and miscellaneous scrap material. All contaminated waste was disposed of off-site. During the removal action, the discovery of pathogens and the expense of

maintaining effective safety precautions during the excavations caused the suspense of further intrusive work at all other Area B disposal areas. (US Army, 2017)

Groundwater is not included in the Area B Landfills, however, for the purposes of evaluating remedial action objectives later, the following actions are noted here:

In October 1992, 21 off-site residential wells adjacent to Area B were sampled. TCE concentrations above the MCL were identified in four of the tested water supply wells located on Shookstown Road and Montevue Lane. The Army addressed affected residences by providing bottled water followed by connection of the City of Frederick municipal water system. In 1997, the Army began voluntarily monitoring drinking water wells surrounding Area B.

In 2005, detections of VOCs below MCLs prompted placement of several residences along Kemp Lane on bottled water. These residences were subsequently connected to the City of Frederick water system.

3.5 BASIS FOR TAKING ACTION

Buried waste at the Area B Landfills, including those impacted with hazardous substances, was identified during investigative and interim removal action activities at the Area B Landfills. A remedy was deemed appropriate to prevent potential exposures to those wastes from receptors. In addition, significant health and safety concerns were identified during the interim removal action discussed in Section 3.4 including explosive, biological, and chemical hazards. The presence of these hazards underscored the need for a remedy, and highlighted the importance of limiting intrusive activities at the site.

Fort Detrick elected to use the USEPA Presumptive Remedy approach, which requires a streamlined risk assessment to identify potential exposure pathways that should be addressed by future remedial action. The streamlined risk assessment was completed during the Remedial Investigations for the Area B Landfills (Shaw Environmental, Inc, 2008) (Shaw Environmental Inc, 2006). In accordance with the Presumptive Remedy guidance, quantitative estimates of potential risk are not calculated. The main objective of the streamlined risk assessment is to identify potential exposure pathways that should be addressed by future remedial action. The following potential exposure pathways were selected for the Area B Landfills:

- Site workers and visitors potentially ingesting, contacting, and inhaling contaminants at the site.
- Off-site residents potentially inhaling airborne contaminants.
- Site workers, visitors, and off-site residents potentially ingesting, contacting, and inhaling contaminants that have migrated via runoff and surface water.
- Off-site residents potentially ingesting, contacting, and inhaling contaminants migrated via groundwater.

Chemicals of potential concern (COPCs) were evaluated to identify those chemicals that are present as a result of past activities at the site and most likely to be of concern to human health. The process for selecting COPCs is documented in the Remedial Investigations (Shaw Environmental, Inc, 2008) (Shaw Environmental Inc, 2006) and reviewed in the Risk Assessment and Toxicological Evaluation, Attachment 11. The list of COPCs for each site as well as the maximum detected concentrations are discussed in the narratives in Attachment 3.

Wastes buried in Area B-11 have been identified as the primary source of TCE and PCE in Area B groundwater and surface water.

Streamlined Ecological Risk Assessments were performed for the Area B Landfills, which assess the potential for adverse effects to non-human receptors resulting from exposure to site impacts. The results of the Assessments determined that the preferred alternative is protective of the environment because all ecological exposure pathways will be interrupted by the remedy.

4.0 REMEDIAL ACTIONS

4.1 REMEDY SELECTION

The remedies selected for the sites subject to this review were documented in two Decision Documents (Shaw Environmental Inc, 2008) (Shaw Environmental Inc, 2009). The Decision Documents are summarized in Attachment 4. Note that both Decision Documents specify that the Area B Landfill remedies do not address groundwater, which is addressed under a separate operable unit. The remedial action objectives (RAOs) and selected remedies are similar but not identical. The RAOs for Area B-2 are as follows:

1. Prevent direct human contact with elevated concentrations of contaminants of potential concern, including:
    a. Site workers and visitors through ingestion, dermal contact, and inhalation of contaminants.
    b. Off-site residents through inhalation of airborne contaminants.
    c. Site workers, visitors, and off-site residents from ingestion, dermal contact, and inhalation of contaminants migrated via runoff and surface water.
    d. Off-site residents through ingestion, dermal contact, and inhalation of contaminants migrated via groundwater.
2. Comply with chemical-specific, location-specific, and action specific Applicable or Relevant and Appropriate Requirements (ARARs).

The RAOs for the remaining landfills are the same except for (1)(d) which states:

    d. Off-site resident exposure to groundwater by minimizing further infiltration of rainwater and migration of contaminants to groundwater.

The selected remedies for all areas subject to this review are landfill caps and land use controls. These remedies were selected in accordance with the USEPA Presumptive Remedy for CERCLA Municipal Landfills. The remedy components were further described as follows:

- The landfill cap design will meet State of Maryland regulations for industrial waste landfill closure defined by the Code of Maryland Regulations (COMAR) 26.04.07.21H. According to the regulation, the closure cap shall be designed to minimize infiltration into the landfill and include a low permeability cap, drainage layer, final earthen cover, and vegetative stabilization. The cap would be sloped at a minimum of 4 percent to induce water runoff.
- To prevent land use that would compromise the integrity of the closure cap, Land Use Controls would be put into Fort Detrick's geographic information system (GIS), which is utilized in the development of Fort Detrick's Real Property Master Plan and construction permitting process. In the unlikely event that the Army sells the property, the restrictions would be incorporated into any real property documents necessary for transferring ownership from the Army.

Since potential contamination is left in-place, this remedy includes monitoring/maintenance and a 5-year review process to determine whether the response remains protective.

As a result of the application of this remedy, the Decision Documents expect that all potential exposure pathways will be interrupted mitigating potential unacceptable risks to human health. As noted in the streamlined ecological risk assessments for the Area B Landfills, this includes

ecological exposure pathways resulting in protection of the environment. The landfill areas, as defined by the extent of the landfill caps, are subject to perpetual restrictions on land use that would compromise the integrity of the cap. This would include intrusive activities and activities that would significantly disturb the vegetative cover. Land use besides open space would require an engineering evaluation to make sure it does not compromise the effectiveness of the cap and does not pose a risk to human health and the environment.

4.2 REMEDY IMPLEMENTATION

The implementation of the capping portion of the remedies was documented in a 2014 document titled *Area B Waste Pit Capping Project Completion Report* (CB&I Federal Services LLC, 2014). The capping was completed in two phases beginning in March 2009 when common fill was delivered and stockpiled at Area B. This phase of the remedy implementation was completed in June 2009. The second phase, including site preparation and cap construction, was initiated in June 2009. The cap design and construction components included the following:

- Existing vegetation killed and, to extent practical, removed above the ground surface
- Ground surface, including vegetative root mass and top soil, left in place within waste limits
- Site graded to achieve minimum 4 percent slope using imported common fill
- Geomembrane of 40-mil thickness deployed beyond the limits of delineated waste
- Geosynthetic drainage composite deployed over the geomembrane
- A methane gas vent system was installed at each cap location to intercept any methane gas that may be generated from the contents of the landfills, and from decaying roots and root mat left in place. The vent pipes were installed as booted penetrations through the cap geosynthetics.
- A final cover, consisting of no less than 24 inches of select fill and topsoil
- Establishment of a vegetative cover over the landfill cap and all disturbed areas
- Land us controls denoted by posted signs at the perimeter of capped areas
- Monitoring wells located in areas with caps installed were modified to accommodate the change in grade.
- As-built surveys were completed to document the extents of the landfills (see Attachment 5).

The waste disposal areas were organized within contiguous capping limits. The contiguous caps are summarized as follows:

- The WDA installed cap covers an area measuring approximately 6.5 acres and encompasses 25 separate disposal areas.
- The Area B-18 installed cap covers an area measuring approximately 0.2 acres.
- The Area B-6 installed cap covers an area measuring approximately 2.5 acres.
- The Area B-10 installed caps cover two small separate areas, each measuring approximately 0.1 acres.
- The Area B-2 installed cap covers an area measuring approximately 1 acre.
- The Area B-3 East installed cap covers an area measuring approximately 0.5 acre.
- The Area B-3 West installed cap covers an area measuring approximately 3 acres, merging with the active sanitary liner on the north.

Cap construction was completed in June 2010 (see Attachment 5). The as-built surveys were incorporated into the Fort Detrick GIS and the Fort Detrick Real Property Master Plan for reference and use in the construction permitting process. The Real Property Master Plan, last released in 2010, is currently undergoing significant revision. Several documents now detail the installation planning process and results including a Vision Plan, Installation Planning Standards, and Area Development Plans for Area A, Areas B and C, and Area D Forest Glen. The Preliminary Area Development Plan including Area B (Gallup-Woolpert Joint Venture, 2018) was reviewed to verify the incorporation of the required land use controls. The Area B Landfills are excluded from areas identified as developable land. In addition, some areas are identified as areas containing "Environmental Issues" or as a "Pollution Area". All Area B Landfill sites are identified as "Restricted Areas" under operational constraints. The text for this section also describes the land use controls in place:

> "There is one active landfill at Area B which primarily serves the medical waste from Area A. In addition to this active landfill, there are several other restricted areas at Area B. These restricted areas are former landfills that have land use controls as part of Area B's bio-remediation efforts. Digging, trenching or disturbing soil in these areas is not allowed by the office of environmental management. There are three restricted sites situated to the north of the northern set of solar arrays, which are associated with former landfill operations. Two additional restricted areas are situated next to the western and southern sets of solar arrays and are associated with environmental remediation areas. In total these areas are roughly 26.5 acres of Area B."

The construction permitting process requires written application for all intrusive activities at Fort Detrick. The applications are subject to review by the Environmental Management Division.

A Land Use Control Implementation Plan (LUCIP) was recently drafted for Fort Detrick including the Area B Landfills (DAWSON Technical LLC, 2017). The LUCIP documents the following restrictions for the Area B Landfills:

- Prohibit activities that would impact the landfill cap (or cover system) and drainage system
- Prohibit excavation on the landfill cap or cover system
- Prohibit installation of utility system lines through the site
- Restrict construction of buildings that may interfere with the landfill cap or cover system
- Restrict plantings that interfere with the landfill cap or cover system (roots that penetrate the cap or cover system)
- Restrict vehicular traffic

The institutional controls include dig permits, notation in the master plan, restrictions on land use, and inclusion in the Fort Detrick GIS. Engineering controls include the landfill cap, signage, and markers.

The LUCIP implementation is discussed in Section 4.3, below.

4.3 OPERATION, MAINTENANCE AND MONITORING

The operation, maintenance and monitoring of the Area B Landfills includes landfill inspections and maintenance, and groundwater and lysimeter monitoring. These details are discussed in the

following sections. In addition, a vapor intrusion investigation was conducted from January 2013 to January 2016 to select off-post and on-post buildings.

4.3.1 Landfill Inspections and Maintenance

The landfill inspections and maintenance requirements were initially documented in a report titled *Area B Waste Pit Capping Project O&M Plan* (CB&I Federal Services LLC, 2014). Following initial completion of the cap installations, monthly inspections were performed to monitor site conditions and to identify any maintenance and repair activities required. Additional inspections were performed as required following substantial precipitation events with rainfall rates equal to or greater than one inch per hour of two inches of total rainfall within a 24 hour period. These monthly inspections were required, and cap construction sediment and erosion controls remained in place, until sufficient vegetation (>50%) was established. The inspections documented seeding and stabilization of cap vegetative covers, cap integrity including even minor erosion, visible settlement, depressions, evidence of animal burrowing, and exposed or damaged geosynthetics.

Once >50% vegetative covers were achieved, long-term operations and maintenance were initiated including semi-annual inspections (supplemented as necessary due to heavy rain fall) in spring and fall. The vegetative cover is also cut in spring and fall. Repair to the caps, including reseeding or soil supplementation, is performed as necessary. Semi-annual inspections continue to assess cap and gas vent integrity. Monitoring wells at the WDA were surrounded by bollards following the modification of these wells to adjust for the new ground surface elevation following the cap installation. The wells and bollards are inspected. Perimeter signs were also installed at the perimeter of the landfill caps and are inspected for condition and legibility.

A new document titled *Final Cap Inspection and Monitoring Work Plan* (ARCADIS, 2016) was drafted to optimize the inspection and maintenance program at the Area B Landfills, as well as to add a groundwater monitoring component to the program to assess compliance with the remedy RAOs (see Sections 4.3.2 and 5.0, below). The Work Plan documented the following requirements for inspections and maintenance:

- Semi-annual landfill inspections in the spring and fall to assess the vegetative covers, cap integrity, gas vents, and land use control signage.
- Mowing of the vegetative caps.
- Repairs on an as-needed basis to all remedy components.
- Reporting of inspections.

No landfill inspections were documented from fall 2014 through fall 2015.

The following inspection and monitoring reports were available for review in support of this review:

- Draft Semi-Annual Landfill Cap Monitoring Report, Fort Detrick, Area B May 2016 Sampling Event, August 2017 (Watermark ECC LLC, 2017)
- Draft Semi-Annual Landfill Cap Monitoring Report, Fort Detrick, Area B November 2016 Sampling Event, March 2017 (Watermark ECC LLC, 2017)
- Draft Semi-Annual Landfill Cap, Groundwater Monitoring Program Report, Fort Detrick, Area B – April 2017 Sampling Event, August 2018 (Watermark ECC LLC, 2018)

The reports documented the following:

May 2016

- Mowing of the caps 19-20 May 2016
- Landfill inspections 25 May 2016
    - No animal burrows observed
    - Area B-2 missing a sign
    - Weed control necessary
    - Landfill caps, perimeter areas, gas vents/bumpers, and monitoring wells in good condition
- Application of herbicide to control weeds 8 August 2016

November 2016

- Caps mowed October – November 2016
- Landfill inspection 15 November 2016
    - Several groundhog burrows observed on B-2 (1), B-3 (3), and the WDA (3)
    - Rodent control performed
    - Landfill caps (exclusive of the groundhog burrows), perimeter areas, gas vents/bumpers, and monitoring wells in good condition

April 2017

- Mowing noted as not required prior to inspection activities
- Landfill inspection 3 April 2017
    - Groundhog burrows observed on B-2 (1) and WDA (1)
    - Rodent control performed
    - Damaged or missing signs noted across several of the landfills
    - Landfill caps (exclusive of the groundhog burrows), perimeter areas, gas vents/bumpers, and monitoring wells in good condition

No significant issues were identified with the integrity of the landfill caps or the remedial components (monitoring wells, etc.). Copies of the inspection forms are included in Attachment 5.

4.3.2 Lysimeter Monitoring

Six pairs of lysimeters were originally planned for the monitoring program at the Area B Landfills in a 2016 Work Plan (ARCADIS, 2016) as an additional line of evidence for meeting the monitoring program objectives. The lysimeter pairs included one beneath both the waste and the landfill cap and one outside the capped area. The lysimeters are constructed with slotted screen along the top half of the PVC to allow water to infiltrate into the well, and are installed at a 40º angle. The bottom half is solid PVC to retain any water that has infiltrated into the lysimeter. The difference in percolation observed between the lysimeters in each pair is an empirical measure of the reduction in percolation provided by the cap. The locations of the lysimeters are depicted on Figure A.1-3 in Attachment 1. The lysimeters were installed by USACE Baltimore District in January 2018 (USACE, Baltimore District, 2018). Six pairs of lysimeters were planned, each pair consisting of a lysimeter directed toward the landfill and a lysimeter directed away from the landfill. At Area B-3 East, the lysimeter directed away from

the landfill could not be installed due to a lack of adequate space. At Area B-18, the lysimeter pair could not be installed due to the close proximity of solar panel arrays surrounding the landfill. As a result, a total of 9 lysimeters are currently present at the Area B Landfills.

According to the 2016 work plan, lysimeter monitoring will includes semi-annual synoptic groundwater elevation measurements as well as the collection of a grab sampling for laboratory analysis for parameters consistent with the groundwater monitoring program (see Section 4.3.3).

The lysimeter installation details are included as Figure A.1-4 in Attachment 1.

The first lysimeter monitoring event was attempted in May 2018. A significant number of lysimeters were found to contain excessive quantities of water. At the time of the five-year review, the source of the water is unknown. The Army, along with the USEPA and MDE, developed a monitoring protocol for further assessment of the lysimeters (U.S. Army, 2019). The protocol includes the purging of the lysimeters and several weeks of subsequent monitoring to "…(1) monitor the lysimeters and obtain sufficient baseline data to establish short-term and long-term comparative conditions, (2) to verify that lysimeters and landfill caps are functioning as intended, (3) to evaluate if any other potential source(s) of water are entering the lysimeters (i.e., shallow groundwater), and (4) to determine if short-term, near-surface mounding of run-off is occurring around the perimeter of the landfills following precipitation events." Once baseline conditions have been established and the lysimeters have been deemed functional, long-term monitoring will resume.

4.3.3 Groundwater Monitoring

Area B is currently subject to two groundwater monitoring programs – one for the Area B Landfills (subject of this review), and one for Area B Groundwater (Sentinel Monitoring Program). All Area B monitoring data has been included in this review relevant to the assessment of the remedial RAOs for the Area B Landfills' remedies. Note that the investigatory phase for the Area B Groundwater operable unit is currently in progress and remains incomplete. The data and conclusions presented here are limited by the data available, is intended only to assess the Area B Landfill remedy, and not the Area B Groundwater operable unit.

Each monitoring program is discussed in the following sections:

4.3.3.1 Area B Landfills Monitoring Program

The groundwater monitoring program for the Area B Landfills was established in the *Final Cap Inspection and Monitoring Work Plan* (ARCADIS, 2016). The objectives of the inspections and monitoring program are: 1) collect data that will be used to determine whether the caps remain intact overtime and, 2) identify changes in groundwater quality that may indicate potential problems with the cap integrity.

The Work Plan required semi-annual groundwater monitoring of 32 existing monitoring wells and the installation of 16 new monitoring wells. The data collected as part of the Area B Landfills Monitoring Program is assessed in two parts: (1) the data collected from the original 32 monitoring well network, and (2) one comprehensive round of monitoring data collected in May-June 2018 for the complete monitoring well network following the installation of 16 additional monitoring wells. The results of the Area B Landfill monitoring program were documented in the following reports:

- *Draft Semi-Annual Landfill Cap Monitoring Report, Fort Detrick, Area B May 2016 Sampling Event, August 2017* (Watermark ECC LLC, 2017)
- *Draft Semi-Annual Monitoring Report, Fort Detrick, Area B November 2016 Sampling Event, March 2017* (Watermark ECC LLC, 2017)
- *Draft Semi-Annual Landfill Cap Groundwater Monitoring Program Report, Fort Detrick, Area B – April 2017 Sampling Event, August 2018* (Watermark ECC LLC, 2018)
- *Draft Semi-Annual Landfill Cap Groundwater Monitoring Program Event, Fort Detrick, Area B – May-June 2018 Sampling Event, July 2019* (Watermark ECC LLC, 2019)

The installation of the new monitoring wells, as well as the decommissioning and reinstallation of five existing wells (BMW6, 18, 25, 26, and 81) due to apparent lack of connection with the surficial aquifer, was documented in a draft report dated October 2018 (USACE, Baltimore District, 2018). The monitoring well network work was completed in December 2017. The existing monitoring network is depicted as Figure A.1-5 in Attachment 1. The new and replacement monitoring wells were designated BMW6R, 18R, 25R, 26R, 81R, and 83-97. The locations of the new monitoring wells are depicted on Figure A.1-3 in Attachment 1. The as-built diagrams of the monitoring wells are included in Attachment 7.9. The tabulated monitoring well list including historical well installation details are provided in Figures A.1-6 and A.1-7 in Attachment 1.

The monitoring program includes biannual monitoring for VOCs, SVOCs, total metals (filtered and unfiltered), and general water quality parameters on an annual basis. Annual sampling will be conducted for pesticides, polychlorinated biphenyls; herbicides, dioxins, and radiochemistry, in addition to the VOCs, SVOCs, and total metals, and general water quality parameters.

Semi-Annual groundwater monitoring results were provided in the three documents referenced in Section 4.3.1. The semi-annual data sets reviewed for 2016-2018 include VOCs, semi-volatile organic compounds (SVOCs), total and dissolved metals, polychlorinated biphenyls (PCBs), herbicides, dioxin/furan, gross alpha and gross beta particles, and water quality parameters.

Historical groundwater data was also reviewed for all of the monitoring wells included in the Area B Landfill program in order to assess contaminant trends. The monitoring data is discussed in detail in Section 6.4.

4.3.3.2 Area B Groundwater Sentinel Monitoring Program

Quarterly groundwater monitoring has been ongoing at Area B since 1999. As part of the Remedial Investigation activities for the Area B Groundwater operable unit (not subject to this review), a quarterly groundwater monitoring program is performed for 15 sentinel and source area groundwater monitoring wells, and a downgradient spring. This data was evaluated against the following Area B Landfill RAOs:

Area B-3 Inactive, Area B-6, and WDA:

1. Prevent direct human contact with elevated concentrations of COPCs, including:

    d. Off-site resident exposure to groundwater by minimizing further infiltration of rainwater and migration of contaminants to groundwater.

Area B-2

1. Prevent direct human contact with elevated concentrations of contaminants of potential concern, including:
    - Off-site residents potentially ingesting, contacting, and inhaling contaminants migrated via groundwater.

The monitoring wells included in the sentinel monitoring program are tabulated in Table A.7.4.1-2 in Attachment 7.4. Groundwater samples are submitted for laboratory analysis of VOCs.

The available results of the sentinel monitoring program over the last five years are documented in the following reports:

- *Quarterly Report (September 2014), Off-Post Private Well Investigation and Associated Activities, Supplemental Public Outreach and Monitoring Well Sampling, Fort Detrick Area B Groundwater, Fort Detrick, Maryland, November 2016* (PIKA International, Inc./ARCADIS, 2016)
- *Quarterly Report (December 2014), Off-Post Private Well Investigation and Associated Activities, Supplemental Public Outreach and Monitoring Well Sampling, Fort Detrick Area B Groundwater, Fort Detrick, Maryland, November 2016* (PIKA International, Inc./ARCADIS, 2016)
- *Quarterly Groundwater Monitoring Report (March/April 2015), Fort Detrick Area B Groundwater, Fort Detrick, Maryland, November 2016* (ARCADIS/Malcolm Pirnie, 2016)
- *Fort Detrick Area B Quarterly Groundwater Monitoring Report (June 2015), November 2016* (ARCADIS, 2016)
- *Fort Detrick Area B Quarterly Monitoring Report, September 2015 Data, November 2016* (ARCADIS, 2016)
- *Draft Area B Quarterly Groundwater Monitoring Annual Report – 2017, Area B Landfill Support and Groundwater Monitoring for Area A and B, Fort Detrick, May 2018* (Watermark ECC LLC, 2018). This report includes documentation of monitoring performed in June, August, October, and December 2017.

Additionally, all monitoring data dating back to the Area B Landfills' remedy selections were reviewed as discussed in Section 6.4.

4.3.4 Drinking Water Data Collection

Drinking water data is not collected as part of the Area B Landfill monitoring program but is included in routine monitoring and broader assessments of impacts associated with the Area B Groundwater operable unit. The data available from Area B Landfill remedy selection (February 2008) to the present was reviewed to assess remedial compliance with the following RAOs:

Area B-3 Inactive, Area B-6, and WDA:

2. Prevent direct human contact with elevated concentrations of COPCs, including:

    c. Site workers, visitors, and off-site residents from ingestion, dermal contact, and inhalation of contaminants migrated via runoff and surface water.

Area B-2

2. Prevent direct human contact with elevated concentrations of contaminants of potential concern, including:

c. Site workers, visitors, and off-site residents potentially ingesting, contacting, and inhaling contaminants that have migrated via runoff and surface water.
d. Off-site residents potentially ingesting, contacting, and inhaling contaminants migrated via groundwater.

These monitoring events were documented in the following reports:

- *Memorandum, Fort Detrick Area B Periodic Monitoring Report for March 2008 Sampling* (Shaw Environmental, Inc., 2008)
- *Memorandum, Fort Detrick Area B Periodic Monitoring Report for June 2008 Sampling* (Shaw Environmental, Inc., 2008)
- *Quarterly Report (November 2011), Off-Post Private Well Investigation and Associated Activities, Supplemental Public Outreach and Monitoring Well Sampling* (PIKA International, Inc./ARCADIS, 2013)
- *Synoptic Water Level Monitoring, Groundwater and Surface Water/Sediment Sampling – Round 1 Report* (ARCADIS/Malcolm Pirnie, 2013)

The following table documents the sample dates and locations collected as part of a voluntary monitoring program and in support of the Area B Groundwater Remedial Investigation.

Table 2 – Drinking Water Monitoring Events

Monitoring Location	Sample Date					
	3/24/2008	6/26/2008	11/16/2011	4/20/2012	4/24/2012	5/30/2015
DWGRAN-17						X
DWGRAN-18	X	X	X	X		
DWELL-66	X	X	X			
DWELL-77	X	X	X	X		
DWELL-77D		X				
DWELL-314	X	X	X	X		
DWELL-600			X	X		
DWSRD-1	X				X	
DWSRD-13	X	X				
DWSRD-26	X				X	
DWSRD-26D	X					

Note: Monitoring wells DWGRAN-17 and DWGRAN-18 appear to be mistakenly identified as DGRAN- or DWGRAW- in some of the monitoring reports. These wells are assumed as the same location via the sampling location maps.

In addition, the Army initiated a comprehensive survey of properties surrounding Fort Detrick in fall 2012. The objectives of the study were to identify and document drinking water wells, expand upon the existing drinking-water well sampling program, and further verify that the VOCs originating at Area B Landfills have not affected drinking water wells in the surrounding community. The study area encompassed 1,370 acres surrounding Area B (see Figure A.7.6-2 in Attachment 7.6). The study included 2,522 parcels. Parcels located in Frederick County utilize drinking water supply wells. Note that these properties are located upgradient from the Area B Landfill source areas. A total of 149 parcels were identified in Frederick County in the study

area. These parcels were issued surveys. A total of 125 survey responses were received. Of these, 109 drinking water wells were identified in use as primary sources of potable water and permission was provided for the sampling of 93 of these wells (see Figure A.7.6-4 in Attachment 7.6). Samples were collected from November 2012 to May 2013. Where VOC detections were identified, confirmation samples were also collected. The results of this survey were documented in an *Off-Post Well Investigation Report* (PIKA International, Inc./ARCADIS, 2015). The results of this study are discussed in Section 6.4.2.2.

Figure A.1-10 in Attachment 1 depicts the location of drinking water wells.

4.3.5 Vapor Intrusion Data Collection

Vapor intrusion data is not collected as part of the Area B Landfill monitoring program but is included in broader assessments of impacts associated with the Area B Groundwater operable unit. This data was reviewed to assess remedial compliance with the following Area B Landfill RAOs:

Area B-3 Inactive, Area B-6, and WDA:

1. Prevent direct human contact with elevated concentrations of COPCs, including:
    a. Site workers and visitors through ingestion, dermal contact, and inhalation of contaminants.
    b. Off-Site residents through inhalation of airborne contaminants.
    c. Site workers, visitors, and off-site residents from ingestion, dermal contact, and inhalation of contaminants migrated via runoff and surface water.

Area B-2

1. Prevent direct human contact with elevated concentrations of contaminants of potential concern, including:
    a. Site workers and visitors potentially ingesting, contacting, and inhaling contaminants at the site.
    b. Off-site residents potentially inhaling airborne contaminants.
    c. Site workers, visitors, and off-site residents potentially ingesting, contacting, and inhaling contaminants that have migrated via runoff and surface water.
    d. Off-site residents potentially ingesting, contacting, and inhaling contaminants migrated via groundwater.

From January 2013 to January 2016, sub-slab soil gas samples were collected from five properties including four off-post and one on-post building. Four rounds of data were collected from the following locations:

- Montevue Lane A
- Montevue Lane B
- Montevue Lane C
- Montevue Lane D
- Building 1261, on-site Area B Warehouse

The locations of these sampling locations are depicted on Figure A.1-11 in Attachment 1.

The details of the results of the first two monitoring events were summarized in the following report: *Final – Vapor Intrusion Data Report for Area B, Fort Detrick, Maryland, January 28, 2015* (ARCADIS, 2015). All data was subsequently rolled into a *Draft Vapor Intrusion Human Health Risk Assessment* (Burns & McDonnell Engineering Company, Inc., 2017). The results are discussed in Section 6.4.

4.3.6 Surface Water Data Collection

Surface water quality data is not required as part of the Area B Landfill remedies; however, it is collected in support of the Area B Groundwater operable unit and is evaluated here relative to the Area B Landfill remedies' RAOs:

Area B-3 Inactive, Area B-6, and WDA:

1. Prevent direct human contact with elevated concentrations of COPCs, including:

    c. Site workers, visitors, and off-site residents from ingestion, dermal contact, and inhalation of contaminants migrated via runoff and surface water.

Area B-2

1. Prevent direct human contact with elevated concentrations of contaminants of potential concern, including:
    c. Site workers, visitors, and off-site residents potentially ingesting, contacting, and inhaling contaminants that have migrated via runoff and surface water.

"Prevent direct human contact with elevated concentrations of contaminants of potential concern, including: Site workers, visitors, and off-site residents from ingestion, dermal contact, and inhalation of contaminants migrated via runoff and surface water."

The generalized patterns of apparent groundwater flow across Area B compiled from Area B potentiometric surfaces (including numerous stream gauges and piezometers installed around surface water locations) and tracer studies are easterly with discharge points to surface water via springs, seeps, and ultimately to Carroll Creek. Surface water quality was investigated as part of the Area B Site Conceptual Model and Remedial Investigation (ARCADIS/Malcolm Pirnie, 2014) including 28 springs/seeps. The highest concentrations of VOCs were detected in Carroll Creek downgradient from Robinson Pond.

Historical and current routine monitoring programs associated with Area B Groundwater also include surface water sampling. Data collected from four surface water sampling locations: upgradient Kemp Lane Surface Water (ASTLINSP), and downgradient Robinson Box Spring (RISP-3), Robinson Rock Spring (RISP-4), and Hospital Spring (STRSSW-42) was available from 1998 through 2008. In addition, the sentinel groundwater monitoring program includes the Robinson Box Spring sample location (RISP-3) with data available from 2011 through 2017. RISP-3 has historically contained the highest contaminant concentrations. Surface water sampling locations are depicted on Figure A.1-12 in Attachment 1.

A discussion of the results of the surface water sampling data is included in Section 6.4.4.

4.3.7 Sediment Data Collection

Sediment data is not required as part of the Area B Landfill remedies; however, data was collected in support of the Area B Groundwater investigations. The data is evaluated here relative to the Area B Landfill remedies' RAOs:

Area B-3 Inactive, Area B-6, and WDA:

1. Prevent direct human contact with elevated concentrations of COPCs, including:
    c. Site workers, visitors, and off-site residents from ingestion, dermal contact, and inhalation of contaminants migrated via runoff and surface water.

Area B-2

1. Prevent direct human contact with elevated concentrations of contaminants of potential concern, including:
    c. Site workers, visitors, and off-site residents potentially ingesting, contacting, and inhaling contaminants that have migrated via runoff and surface water.

Sediment from five springs (Carroll Creek, Robinson Spring, North Armory Spring, South Armory Spring, and Dock Spring) was sampled in conjunction with the Area B Site Conceptual Model and Remedial Investigation (ARCADIS/Malcolm Pirnie, 2014). The locations of sediment samples are depicted on Figure A.1-13 in Attachment 1. The results of the sediment data analysis are discussed in Section 6.4.5.

5.0 PROGRESS SINCE THE LAST FIVE-YEAR REVIEW

The previous five-year review for the Area B Landfills (US Army, 2017) included the following protectiveness statement:

> "*The remedy to prevent exposure to contaminated soils and wastes for the Area B Inactive Landfills at Fort Detrick is protective of human health and the environment, and the pathways that could result in unacceptable risks from the contaminated soils and wastes are being controlled.*
>
> *Consistent with guidance in OSWER 9200.2-111 a determination of "short term protective" is appropriate because, while no issues with current protectiveness, additional lines of evidence will help evaluate remedy performance and will be undertaken as described in the Landfill Cap Monitoring and Inspection Plan, 2016."*

The previous five-year review did not identify any issues with the Area B Landfill remedies but recognized limitations in assessing the integrity of the landfill caps based solely on visual observations. The following recommendations were made:

1. Ensure that animal burrowing activities are controlled at the landfill caps, particularly at Area B-6 and the WDA. Although there has been no evidence of damage to the geosynthetics, it is prudent to control the burrowing activity to avoid future problems.
2. Monitoring reports should be submitted to regulators in a timely fashion.
3. Implement semiannual monitoring plan as specified in the approved Final Cap Inspection and Monitoring Work Plan (June 2016), which includes the following:
    a. Installation of 16 additional monitoring wells in the vicinity of the capped landfills.
    b. Installation of six pairs of lysimeters, two per landfill, for a total of 12 lysimeters.

Since the last five-year review, the following actions have been taken to address these recommendations:

1. Animal control is routinely performed at the Area B Landfills to reduce the population of burrowing animals. Repairs are also made to the landfills on an as-needed basis. No evidence of damage to the geosynthetics has been observed to date.
2. Timely monitoring deliverables have been prioritized under the current contracts for these services.
3. The semiannual monitoring plan was implemented in 2016 and three monitoring events were available for review. The monitoring wells and lysimeters were also installed in 2018; however, documentation of these activities were not available at the time of this review.

6.0 FIVE-YEAR REVIEW PROCESS

6.1 ADMINISTRATIVE COMPONENTS

The following activities were performed for this five-year review:

- Community notification of the start of the five-year review.
- Documents and site data review.
- Site inspections.
- Interviews with Fort Detrick and regulatory staff, and Restoration Advisory Board (RAB) members with insight on decisions made and activities completed at the sites.

This five-year review was conducted and written by staff of the USACE Buffalo District:

- Holly Akers, PE, Project Engineer
- Michelle Barker, FE, PMP, HTRW Regional Technical Specialist
- Karen Keil, PhD, Environmental Toxicologist
- Mick Senus, Project Manager

Staff from Fort Detrick including the Chief of the Environmental Management Division Directorate of Public Works, Joseph Gortva, and the Onsite Contractor (ERG LLC), Shelly K. Morris, PMP, also provided assistance.

6.2 COMMUNITY NOTIFICATION AND INVOLVEMENT

A public notice was published in the Frederick News-Post on 21 September 2018 to announce that the five-year review process had begun. A copy of the notice is included in Attachment 6.

The five-year review document will be made available to the public once it has been finalized. A copy of the document will be placed in the following repository:

C. Burr Artz Central Library
110 East Patrick Street
Frederick, MD 21701

Major documents are also made available to the public at the following web address:

http://www.detrick.army.mil/responsible/informationRepository.cfm

Upon completion of the five-year review, a public notice will be placed in the Frederick News-Post to announce the availability of the final five-year review in the document repository.

Fort Detrick does interface with a public RAB whose members were invited to participate in the five-year review process. Interview forms completed by RAB members are included in Attachment 9 and discussed in Section 6.6. Copies of the RAB meeting minutes and presentation materials are publicly available at the following web address:

http://www.detrick.army.mil/rab/

6.3 DOCUMENT REVIEW

Relevant, site-related documents were reviewed including the decision documents, remedial investigations, feasibility studies, groundwater monitoring reports, land use control management and implementation documents, and previous five-year reviews. A complete list of the documents reviewed is provided in Attachment 2.

6.4 DATA REVIEW

6.4.1 Groundwater Data

As discussed in Section 4.3.3.1, there are two monitoring programs in Area B, one specific to evaluating the efficacy of the landfill remedies, and one specific to the Area B Groundwater operable unit. For the purposes of this review, comparisons are made to the USEPA Maximum Contaminant Levels (MCLs) and/or risk-based Regional Screening Levels (RSLs) for both data sets. Both sets of data are discussed in the following sections divided by remedy and Decision Document.

6.4.1.1 Area B-2

Consistent with the Area B regional groundwater flow, the localized groundwater flow at Area B-2 is east-southeast. The Area B-2 Landfill Monitoring Program includes six upgradient monitoring wells (BMW6/6R, BMW41, BMW44, BMW49, BMW95, and BMW96), one side-gradient monitoring well (BMW11) and two downgradient monitoring wells (BMW72 and BMW97).

Monitoring well BMW11 is one of two monitoring wells in an overburden/bedrock well pair (BMW11, screened 25-35 feet below ground surface, and BMW11D, screened 154-164 feet below ground surface, see Figure A.7.5.1-4, Area B Potentiometric Contour Map, 14 January 2008, in Attachment 7 for the two well locations). Monitoring well BMW72 was installed in bedrock in 2011 with the screened interval at 85-95 feet below ground surface to intercept the water-producing interval between BMW11 and BMW11D. Low levels of PCE, TCE, and Freon were historically detected at BMW11D thought to be associated with a potential source area upgradient of Areas B-2 and B-3 (ARCADIS/Malcolm Pirnie, 2014). These contaminants are not COPCs identified for Area B-2, and monitoring well BMW11D is excluded from the Area B-2 monitoring network. The installation of BMW72 allowed an assessment of whether these compounds were detected at shallower bedrock water-bearing zones. All monitoring wells were sampled in 2012 as part of the development of the Area B Groundwater site conceptual model (ARCADIS/Malcolm Pirnie, 2014). No PCE, TCE, Freon, or COPCs associated with Area B-2 were detected above the MCLs and/or RSLs in any of these wells.

Upgradient overburden well BMW6, screened from 25 to 35 feet below ground surface, was routinely identified as dry during monitoring events and was sampled during only the April 2017 monitoring event. This well was reinstalled as BMW6R in October 2017 into bedrock (screened 74.6 to 89.6 feet below ground surface). The remaining upgradient wells are installed into bedrock.

Table 3 – Area B-2 Groundwater Monitoring Network

Depth of Installation	Location Relative to Area B-2		
	Upgradient	Side-gradient	Downgradient
Overburden	BMW6	BMW11	
Intermediate			
Bedrock	BMW6R, BMW41, BMW44, BMW49, BMW95, BMW96		BMW72, BMW97

During the May 2016, November 2016, April 2017, and May-June 2018 monitoring events, low levels of several COPCs were detected in the Area B-2 network; however, no detections exceeded the MCLs and, in many instances, compounds were detected in both upgradient and downgradient monitoring wells at similar concentrations.

A full round of monitoring was conducted from May-June 2018. This data was assessed for COPCs associated with Area B-2 for upgradient monitoring wells BMW6R, BMW41, BMW44, and BMW49, side-gradient monitoring well BMW11, and downgradient monitoring wells BMW72 and BMW97. Monitoring wells BMW95 and BMW96 are included in the Area B-2 monitoring network but no data was available for review from these wells. The monitoring report indicates that samples were not collected from these wells because they had not been fully installed and developed at the time sampling occurred.

The tabulated results of the monitoring event for COPCs are included in Attachment 7.5.

- The pesticide aldrin was detected (0.0021 µg/L) at monitoring well BMW11 above the RSL in June 2018. This detection was flagged as estimated. There is no MCL for aldrin and historical monitoring has not identified this constituent above laboratory detection limits.
- Arsenic was detected in monitoring wells BMW44 and BMW72 at concentrations exceeding the RSL but below the MCL in both total and dissolved concentrations. The total arsenic concentration at BMW97 was also above the RSL but below the MCL. The dissolved arsenic concentration was below both the RSL and the MCL. Based on detections of arsenic both upgradient and downgradient from Area B-2 in the bedrock aquifer, these detections may not be related to the Area B-2 landfill.
- Total and dissolved manganese concentrations (0.880 and 0.883 mg/L, respectively) were detected above the RSL (0.43 mg/L) at monitoring well BMW97. There is no primary MCL for manganese. Based on the relatively low concentrations of manganese detected at BMW97 and the limited data set (only one sampling event available), it is inconclusive whether this detection is related to the Area B-2 Landfill.

There is no evidence of the infiltration of rainwater and migration of contaminants to groundwater, as would be observed in increasing concentrations in downgradient monitoring locations of the Area B-2 Landfill. This excludes COPCs that are also detected upgradient of the landfill as this would imply that the landfill itself is not the source of the impacts.

6.4.1.2 Areas B-3, B-6, and the Western Disposal Areas

The potential impacts to groundwater were assessed in groups based on proximity:

6.4.1.2.1 Area B-3 East

Localized groundwater flow at Area B-3 East is influenced by groundwater mounding located immediately west of the landfill in the vicinity of monitoring wells BMW41, BMW41D and BMW42. The groundwater mounding in this area results in radial groundwater flow and a general flow direction to the east with northern and southern flow components. Area B-3 East was assessed in groundwater monitoring reports based on data collected from five upgradient wells (BMW2, BMW3, BMW42, BMW77, BMW81/81R) and four downgradient wells (BMW5, BMW6/6R, BMW29A, and BMW44). In October 2017, new monitoring wells BMW92 and BMW93 were added to the upgradient monitoring well network, and monitoring

wells BMW95 and BMW96 were added to the downgradient monitoring network. No monitoring data was available from monitoring wells BMW95 and BMW96. The monitoring report indicates that samples were not collected from these wells because they had not been fully installed and developed at the time sampling occurred.

Based on the radial flow in the vicinity, monitoring wells BMW42, BMW92, and BMW93 may be the only monitoring wells truly upgradient of Area B-3 East. The well screens for the Area B-3 monitoring network are as follows:

- Overburden wells: BMW2, BMW3, BMW5, BMW6, BMW81, BMW93, BMW95
- Bedrock wells: BMW6R, BMW29A, BMW42, BMW44, BMW77, BMW81R, BMW92, BMW96

Table 4 – Area B-3 East Groundwater Monitoring Network

Depth of Installation	Location Relative to Area B-3 East	
	Upgradient	Downgradient
Overburden	BMW2, BMW3, BMW81	BMW5, BMW6
Intermediate		
Bedrock	BMW42, BMW77, BMW81R, BMW92, BMW93	BMW6R, BMW29A, BMW44, BMW95, BMW96

As noted above, monitoring well BMW6 was routinely dry and sampled during only the April 2017 monitoring event. This well was reinstalled as BMW6R in October 2017 into bedrock. In addition, monitoring well BMW81 was reinstalled into bedrock as BMW81R.

The groundwater data associated with these monitoring wells was reviewed with the following findings:

- VOCs and SVOCs were routinely detected in monitoring well BMW77 at concentrations exceeding the MCLs and/or RSLs. This monitoring well was installed post-remedy in 2011. Trends were calculated for PCE, TCE, and chloroform concentrations as representative trends across the comingled plume at BMW77 including the 14 monitoring events available (2011 to 2018). No trend was identified for chloroform, TCE, or PCE with confidence factors of 62.6%, 48.0%, and 78.2% respectively. Replacement monitoring well BMW81R also contained chloroform at a concentration above the RSL but below the MCL. Low levels of chlorinated compounds PCE and/or DCE were identified in a few of the other surrounding wells at concentrations below the MCL and RSL including upgradient monitoring well BMW92. None of these compounds were identified in soil at Area B-3. An additional study is currently underway to address the groundwater impacts at BMW77 under the Area B Groundwater operable unit. The installation has noted that it is possible that the groundwater impacts observed at BMW77 originated from historical releases within the Area B-3 landfill from areas not characterized during the Area B-3 remedial investigations.
- Monitoring well BMW42 contained elevated concentrations of polycyclic aromatic hydrocarbons (PAHs) in May 2016 including benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene above the respective RSLs. This well

is located upgradient from Area B-3. In addition, none of these compounds were identified as COPCs at Area B-3.

- Total and dissolved arsenic are routinely detected above the RSL but below the MCL in upgradient (BMW42) and downgradient (BMW44) monitoring wells.
- The round of monitoring including all existing and new monitoring wells conducted in May/June 2018 identified no COPCs above RSLs or MCLs within the Area B-3 East network except for arsenic which was detected above the RSLs in both total and dissolved samples collected at monitoring wells BMW42 and BMW44, and in newly installed upgradient well BMW93.

Arsenic was identified as a COPC for Area B-3; however, based on similarly low concentrations of arsenic in upgradient and downgradient locations, these detections may not be associated with the Area B-3 East landfill. In addition, arsenic detections in groundwater were within background concentrations (below the upper confidence limit of the background mean, 8.46 µg/L) (Shaw Environmental, Inc., 2008).

The source of chlorinated impacts in groundwater in the vicinity of Area B-3 East is unknown and is currently under investigation as part of the Area B Groundwater operable unit. Based on trends in groundwater concentrations, the landfill cap at Area B-3 East is functioning as intended and preventing impacts to soil from serving as ongoing sources to groundwater impacts.

6.4.1.2.2 Area B-3 West

Similar to Area B-3 East, the localized groundwater flow around Area B-3 West is affected by groundwater mounding in the vicinity of monitoring wells BMW41 and BMW42. These wells are located immediately east and upgradient of Area B-3 West and were evaluated with respect to their groundwater quality in proximity to Area B-3 West. In addition to BMW41 and BMW42, upgradient monitoring wells BMW9D and BMW76 and downgradient monitoring well BMW49 were evaluated. Four newly installed monitoring wells (BMW90, BMW91, BMW93 and BMW94) were sampled for the first time in May/June 2018. Of these wells BMW94 is located immediately downgradient of the landfill. All other new wells are located upgradient. All wells in the immediate vicinity of Area B-3 West are installed into bedrock.

Table 5 – Area B-3 West Groundwater Monitoring Network

Depth of Installation	Location Relative to Area B-3 West	
	Upgradient	Downgradient
Overburden		
Intermediate		
Bedrock	BMW9D, BMW41, BMW42, BMW90, BMW91, BMW93	BMW49, BMW94

Groundwater data was reviewed with the following findings:

- Monitoring well BMW42 contained elevated concentrations of PAHs in May 2016 including benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene above the respective RSLs. This well is located upgradient from Area B-3. In addition, these compounds were not identified as COPCs originating from Area B-3.

- Monitoring well BMW9D contained an elevated concentration of PCBs (Aroclor-1248) above the RSL but below the MCL in May 2016. Aroclor-1248 was not identified as a COPC originating from Area B-3. In addition, monitoring well BMW9D is located upgradient from Area B-3 West.
- Total and dissolved arsenic were detected above the RSL and/or MCL in several monitoring wells both upgradient and downgradient of Area B-3 West (BMW9D, BMW42, and BMW76). Arsenic was identified as a COPC for Area B-3; however, based on similarly low concentrations of arsenic in upgradient and downgradient locations (including newly installed well BMW93), these detections may not be associated with the Area B-3 West landfill.
- No exceedances of RSLs or MCLs were identified for COPCs in newly installed wells BMW90, BMW91, or BMW94.

There is no evidence of the infiltration of rainwater and migration of contaminants to groundwater, as would be evidenced by increasing concentrations in downgradient monitoring locations of the Area B-3 West Landfill. This excludes COPCs that are also detected upgradient of the landfill as this would imply that the landfill itself is not the source of the impacts.

6.4.1.2.3 Area B-6 and Area B-10

Localized groundwater flow in the vicinity of Areas B-6 and B-10 varies from regional flow and is generally oriented to the east-northeast. The monitoring report groundwater elevation figures combine bedrock and overburden monitoring wells in delineating the groundwater isopleths. This results in a stronger northerly flow direction near Area B-6 and Area B-10. In the site conceptual model (ARCADIS/Malcolm Pirnie, 2014), the bedrock and overburden groundwater isopleths are separated and the northern directional groundwater flow in this area is not as prominent. The site conceptual model groundwater flow models have been used to determine upgradient and downgradient monitoring well locations for the purposes of evaluating groundwater quality.

Areas B-6 and B-10 were assessed based on the groundwater data collected from three upgradient wells (BMW20, BMW21, and BMW59D), and three downgradient monitoring wells (BMW24, BMW39, and BMW74). Monitoring wells BMW20, BMW21, and BMW24 are installed into the overburden. Monitoring well BMW39 is installed into the intermediate zone (screened from approximately 21 to 51 feet below ground surface), and the remaining monitoring wells are installed into bedrock. Monitoring wells BMW25 and BMW38 are included as downgradient monitoring wells in the Area B Landfill monitoring reports. These wells are located just east of the WDA. Based on the proximity to the WDA, these wells are not evaluated relative to Area B-6 and Area B-10 and are instead discussed in Section 6.4.1.2.4. Monitoring well BMW59D is also downgradient of the WDA and is also discussed relative to influences from the WDA.

Newly installed bedrock monitoring wells BMW88 and BMW89 were also sampled to assess groundwater quality as part of the Area B Landfill Monitoring Program. These wells are located at the west (upgradient) and east (downgradient) ends of Area B-6, respectively.

Table 6 – Area B-6 and B-10 Groundwater Monitoring Network

Depth of Installation	Location Relative to Area B-6 and B-10	
	Upgradient	Downgradient
Overburden	BMW20, BMW21	BMW24
Intermediate		BMW39
Bedrock	BMW59D, BMW88	BMW74, BMW89

The groundwater data generated from the Area B-6 and Area B-10 monitoring network was reviewed with the following findings:

- Elevated concentrations of VOCs (chloroform, TCE, and 1,2-dichloroethane) are routinely detected at upgradient and downgradient monitoring wells above the RSLs and/or MCLs (BMW24, BMW39, BMW59D, and BMW74), with the highest concentrations detected in upgradient monitoring well BMW59D. Chloroform and TCE are identified as COPCs for Area B-6. These compounds were not identified as COPCs for Area B-10.
- Contaminant concentration trends were evaluated in the data set available for chloroform and TCE at monitoring wells BMW24 and BMW74, and for TCE at monitoring well BMW39. Note that these trends included very few data points (n<7). None of the confidence factors were reported over 90% and all trends were either "no trend" or "stable" for all but chloroform trends at BMW74 (probably decreasing trend, confidence factor 92.1%). Chloroform was not evaluated for monitoring well BMW39 due to too few data points.
- Monitoring well BMW59D is included in both the Area B Groundwater sentinel monitoring program and the Area B Landfills monitoring program. Although there are numerous COPCs detected in the groundwater at monitoring well BMW59D, only PCE, TCE, and chloroform were selected for trend analysis. The PCE and TCE data set includes 35 monitoring events dating back to 1998 while the chloroform data set includes 20 monitoring events dating back to 2006. A Mann-Kendall statistical analysis was performed on the entire data set (long term) as well as the post-remedial data set (short term), including the 12 monitoring events since remedy selection in March 2009. The Mann-Kendall statistical analysis is included in Attachment 12 and identified decreasing trends in all three contaminants (confidence factor greater than 99.9%) for the long term and for PCE and TCE in the short term trend. No trend was identified in the short term data set for chloroform with a confidence factor of 87.4%.
- Chloroform and TCE were also identified in newly installed monitoring well BMW89 in May/June 2018. Since only one data set was available for this well, an assessment of data trends could not be conducted. The detected concentrations (TCE, 14 µg/L and chloroform, 2 µg/L) are similar to those detected at nearby downgradient well BMW74 assessed above (TCE, 15 µg/L and chloroform 0.8 µg/L).
- Elevated concentrations of metals exceeding the RSLs for cobalt and manganese (dissolved and total) were routinely detected in upgradient monitoring well BMW21. These compounds do not have primary MCLs. The location of these detections upgradient of Area B-6 and B-10 indicates that these landfills may not be the source of the detections.

- Arsenic (total and/or dissolved) is occasionally detected above the RSL but below the MCL at downgradient monitoring well BMW74. Arsenic is listed as a COPC for both Area B-6 and Area B-10.

Based on this information, there is no evidence of the infiltration of rainwater and migration of contaminants to groundwater, as would be evidenced by increasing concentrations in downgradient monitoring locations of the Area B-6 and B-10 Landfills. This excludes COPCs that are also detected upgradient of the landfills as this would imply that the landfills themselves are not the source of the impacts.

6.4.1.2.4 Western Disposal Area and Area B-18

Localized groundwater flow in the vicinity of the WDA and Area B-18 varies with a southerly flow across the northern portion of the WDA (due to the presence of an unnamed stream), and an easterly flow towards the central and southern portions of the WDA.

Groundwater elevations were evaluated against the depth of excavation performed during the interim removal action at Area B-11, a portion of the WDA (see Section 3.4). The surveyed elevation of the surface of the B-11 landfill ranged from 391.28 to 398.84 feet above mean sea level (based on the North American Vertical Datum of 1988 [NAVD88]). Elevations specific to Cell 1 ranged from 388.27 to 391.28 feet above mean sea level. The excavations in Area B-11 ranged from 30 feet in Cell 1 to less than 8 feet in Cells 2 through 4. This establishes the deepest point of excavation at approximately at 358.27 feet above mean sea level.

Groundwater monitoring wells in the vicinity of B-11 (BMW67A, BMW67C) are set with top of casing elevations of 395.47 (BMW67C) and 395.91 (BMW67A) feet above mean sea level. The shallowest groundwater elevations in the data set reviewed for the Five-Year Review were 353.04 (BMW67A) and 353.05 (BMW67C) feet above mean sea level (03 May 2016). The minimum depth between the final depth of the excavation and the groundwater table is approximately 5 feet.

The monitoring reports identify six upgradient monitoring wells (BMW16, BMW18, BMW59D, BMW65A, BMW67A, and BMW67C) and six downgradient monitoring wells (BMW25, BMW26, BMW37, BMW38, BMW68A, and BMW73). Monitoring wells BMW16, BMW18, and BMW38 are screened in the overburden while the remaining monitoring wells are screened into bedrock.

Several newly installed monitoring wells were added to the monitoring program in May/June 2018 for the WDA and Area B-18: BMW82, BMW83, BMW84, BMW85, BMW86, and BMW87. Monitoring wells BMW18, BMW25, and BMW26 were replaced with BMW18R, BMW25R, and BMW26R. These wells are all screened into bedrock except BMW86. Monitoring wells BMW82 and BMW83 are located upgradient while the remaining new wells are located downgradient from the WDA and Area B-18.

Table 7 – WDA and Area B-18 Groundwater Monitoring Network

Depth of Installation	Location Relative to the WDA and Area B-18	
	Upgradient	Downgradient
Overburden	BMW16, BMW18	BMW38, BMW86
Intermediate		
Bedrock	BMW18R, BMW59D, BMW65A, BMW67A, BMW67C, BMW82, BMW83	BMW25/25R, BMW26/26R, BMW37, BMW68A, BMW73, BMW84, BMW85, BMW87

The monitoring data from these wells was reviewed with the following findings:

- Numerous VOCs and a few SVOCs routinely exceed RSLs/MCLs in the vicinity of the WDA. Highest impacts are present in monitoring wells BMW18R, BMW67A, BMW67C, and BMW68A. For the purposes of evaluating data trends, PCE, TCE, and chloroform concentrations were assessed:
    - Data and trends at monitoring well BMW59D are discussed in Section 6.4.1.2.3, above.
    - Monitoring data for all other surrounding monitoring wells is much more limited and sporadic. Four to six data points were available for monitoring wells BMW65A, BMW67A, BMW67C, and BMW68A. The statistical evaluation of these data sets are included in Attachment 12. The chloroform concentrations in monitoring well BMW65A (upgradient) were decreasing with a confidence factor of 99.2%, and the PCE concentrations in the same well were probably decreasing with a confidence factor of 92.1%. All other trends were either stable or "no trend" with confidence factors less than 90%.
    - New upgradient monitoring wells BMW82 and BMW83 contained only arsenic (BMW83) at concentrations exceeding the RSL (not the MCL). Downgradient monitoring wells BMW84, BMW85, BMW86, and BMW87 contained elevated TCE and/or chloroform concentrations (only TCE exceeded the MCL), but at concentrations consistent with the surrounding monitoring network. No trends could be assessed as only one data point was available.

Contaminant impacts present in some of the monitoring wells identified as "upgradient" are consistent with source area contamination profiles; however no increasing trends were identified in any COPCs across the WDA and Area B-18 monitoring network. There is no evidence that the WDA or Area B-18 landfill is a continuing source of contamination to groundwater.

6.4.2 Drinking Water Data

6.4.2.1 Area B-2

As discussed in Section 6.4.1.1, there is no evidence of the infiltration of rainwater and migration of contaminants to groundwater, as would be evidenced by increasing concentrations in downgradient monitoring locations to the Area B-2 Landfill. Accordingly, the drinking water

data has been assessed relative to the remedy for Areas B-3, B-6, and the Western Disposal Areas in Section 6.4.2.2.

6.4.2.2 Areas B-3, B-6, and the Western Disposal Areas

6.4.2.2.1 Off-Post Well Investigation

As mentioned in Section 4.3.4, 93 drinking water wells were sampled off-post. A total of 66 wells contained no detections of VOCs above the laboratory detection limits. The remaining 27 wells contained low concentrations of VOCs (see Figures A.7.6-5 and A.7.6-6 in Attachment 7.6). No VOCs were detected in exceedance of the MCLs.

Based on these results, there are no unacceptable exposures occurring in drinking water in the residential area surrounding Area B. The Off-Post Well Investigation Report indicated that monitoring of drinking water wells would continue, however, no additional data was available for review at the time of this data evaluation.

6.4.2.2.2 Area B Groundwater Remedial Investigation

Three current/former off-post residential drinking water wells (DWSRD-1, DWSRD-26 and DWGRAN-17) were sampled in conjunction with the Area B Groundwater remedial investigation (ARCADIS/Malcolm Pirnie, 2014) in late 2011 and early 2012. Of these wells, DWSRD-1 and DWSRD-26 (located southeast of the Area B gate along Montevue Lane) are former residential wells that are no longer operable drinking water wells and serve only as groundwater monitoring locations. DWGRAN-17 is an operable well currently used for drinking water purposes at a residential property located along Shookstown Road southwest of Area B. Seven other current or former off-post residential wells identified for sampling in the RIWP were not tested because rights-of entry to these properties were not granted by the property owners.

No VOCs were detected above the MCLs in any current or former off-post residential well samples. Based on these results, there is no evidence in the Area B Groundwater Remedial Investigation that impacts originating from Areas B-3, B-6 or the WDA pose unacceptable risks to the surrounding residential water supplies.

6.4.3 Vapor Intrusion Data

6.4.3.1 Area B-2

The Area B-2 Remedial Investigation/Feasibility Study (Shaw Environmental, Inc., 2006) noted that no gross contamination was found in groundwater within 300 feet of Area B-2, and no evidence was found that storm water infiltration at Area B-2 resulted in the migration of contaminants to groundwater, as would be evidenced by increasing concentrations of COPCs in downgradient monitoring locations. The COPCs identified at Area B-2 (arsenic, chromium, iron, manganese, thallium, vanadium, aldrin, Aroclor-1254, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and heptachlor epoxide) were not evaluated as part of the vapor intrusion data collection referenced in Section 4.3.4. Of these compounds, only aldrin, Aroclor-1254, benz(a)anthracene, and heptachlor epoxide were identified by the USEPA as typically vapor-forming and known to pose a potential cancer risk or noncancer hazard through the inhalation pathway. Monitoring well sample results were reviewed for comparison to the USEPA Resident Vapor Intrusion Screening Levels Target Groundwater Concentrations (VISLs). Potential vapor intrusion risk was present for the following COPCs: benz(a)anthracene, aldrin, heptachlor epoxide, and Aroclor 1254. In April 2017 and November 2016, benz(a)anthracene results were

available and below the VISLs. Aldrin, heptachlor epoxide, and Aroclor 1254 results were available for samples collected in May 2016 and were also below the VISLs. Based on this information, no unacceptable risk was identified via the vapor intrusion pathway originating from Area B-2 on or off site.

6.4.3.2 Areas B-3, B-6 and the Western Disposal Areas

The potential for vapor intrusion issues associated with VOCs originating from Areas B-3, B-6, and the Western Disposal Areas (specifically Area B-11) were assessed in a vapor intrusion data report (ARCADIS, 2015) and draft Vapor Intrusion Human Health Risk Assessment (Burns & McDonnell Engineering Company, Inc., 2017) specific to the Area B Groundwater operable unit. As noted in Section 4.3.4, five locations were sampled four times from 2013 to 2016 including:

- Montevue Lane A
  - January to August 2013, 3 sub-slab soil gas, 1 indoor air (ambient air), 1 indoor air (sump)
  - March 2015, 1 indoor air
  - January 2016, 1 indoor air
- Montevue Lane B
  - January to August 2013, 3 sub-slab soil gas
  - March 2015, 1 indoor air sample, 3 sub-slab gas
  - January 2016, 1 indoor air sample, 3 sub-slab gas
- Montevue Lane C
  - January to August 2013, 3 sub-slab soil gas
  - March 2015, 3 sub-slab soil gas, 3 indoor air, outdoor air
  - January 2016, 3 sub-slab soil gas, outdoor air
- Montevue Lane D
  - January to August 2013, 3 sub-slab soil gas
- 1699 Shookstown Road
  - March 2015, 1 sub-slab sample
  - January 2016, 1 sub-slab sample, 1 indoor air, outdoor air
- Building 1261, on-site Area B Warehouse
  - January to August 2013, 3 sub-slab soil gas
  - March 2015, 3 sub-slab, 3 indoor air
  - January 2016, 3 sub-slab, 3 indoor air, outdoor air

The sample locations are shown on Figure A.1-11 in Attachment 1.

The samples were collected in Summa canisters and submitted for laboratory analysis for VOCs using laboratory method USEPA TO-15. The results are tabulated in Table A.7.8-1 in Attachment 7.8. The HHRA evaluated current and potential future land use theoretical exposures based on the indoor air quality data collected. Non-cancer risks were calculated below the Hazard Index of 1.0. Several exposure scenarios resulted in carcinogenic risks within USEPA's acceptable risk range of $1x10^{-6}$ to $1x10^{-4}$:

- 285 Montevue Lane Current/Future Indoor Worker
- 285 Montevue Lane Future Age-Adjusted Resident
- 286 Montevue Lane Current/Future Indoor Worker

- 286 Montevue Lane Future Age-Adjusted Resident
- 292 Montevue Lane Future Age-Adjusted Resident
- 1699 Shookstown Road Future Age-Adjusted Resident
- Fort Detrick Building 1261 Current/Future Indoor Worker
- Fort Detrick Building 1261 Future Age-Adjusted Resident

The RAOs established in the Decision Document included "Prevent direct human contact with elevated concentrations of contaminants of potential concern, including:

a. Site workers and visitors through ingestion, dermal contact, and inhalation of contaminants.
b. Off-site residents through inhalation of airborne contaminants.
c. Site workers, visitors, and off-site residents from ingestion, dermal contact, and inhalation of contaminants migrated via runoff and surface water.
d. Off-site resident exposure to groundwater by minimizing further infiltration of rainwater and migration of contaminants to groundwater."

The non-cancer and cancer risks calculated for indoor air quality at the sampled locations were all within or below the USEPA's risk management range for Superfund Sites, meeting the CERCLA requirements for the prevention of excessive risk in the inhalation exposure route for indoor air.

6.4.4 Surface Water Data

The surface water data results are presented in Attachment 7.5, Area B Groundwater Monitoring Program:

- January 2008 Monitoring Report: Table A.7.5.1-2, Chemical Detections in Water Samples, and Table A.7.5.1-3, Historical TCE and PCE results for Periodic and Other Critical Sampling Locations
- March 2008 Monitoring Report: Table A.7.5.2-1, Chemical Detections in Water Samples
- November 2011 Monitoring Report: Table A.7.5.3-1, Quarterly Groundwater Monitoring
- 2011/2012 Round 1: Table A.7.5.4-2, Comprehensive Groundwater and Spring Analytical Results, Table A.7.5.4-3, Groundwater and Spring Analytical Results (Detects Only), Table A.7.5.4-5, Comprehensive Surface Water Analytical Results, and Table A.7.5.4-7, Comprehensive Surface Water Analytical Results (Detects Only)

All COC surface water quality results were compared to the Maryland COMAR 26.08.02.03-2 Ambient Water Quality Criteria (AWQC) for protection of human health via consumption of organisms as these surface water bodies are not known water supplies (300 µg/L TCE and 33 µg/L PCE). No exceedances of the AWQC have been documented since 1997.

6.4.5 Sediment Data

The sediment data results are presented in Attachment 7.5, Area B Groundwater Monitoring Program:

- 2011/2012 Round 1: Table A.7.5.4-6, Comprehensive Sediment Analytical Results, and Table A.7.5.4-8, Comprehensive Sediment Analytical Results (Detects Only)

Although VOCs were detected in sediment, no concentrations exceeded the RSLs.

6.5 SITE INSPECTION

The Area B Landfills were inspected on 10 September 2018 with attendance by the following personnel:

- Joseph Gortva, Fort Detrick, Chief, Environmental Management Division Directorate of Public Works (present for initial discussion and planning)
- Shelly K. Morris, PMP, Fort Detrick Contractor, ERG LLC
- Holly Akers, PE, Project Engineer, USACE Buffalo District
- Mick Senus, Project Manager, USACE Buffalo District

The inspections included a vehicular tour of Area B via the access road along the perimeter of Area B as well as applicable areas outside Area B (e.g., areas of VI sampling). Physical inspections were made of the areas, signage, monitoring wells, and gas vents where accessible, and photo-documentation was collected of the inspection observations. Copies of the complete inspection logs, photographs, and photo location figures are included in Attachment 8. The following bullets summarize the inspection findings:

- Area B access was restricted to authorized personnel by a keyed gate at the time of the inspection. The site is routinely accessed by Fort Detrick personnel, contractors and associated staff working with the active sanitary landfill, livestock, military storage, the solar panel fields, and monitoring/maintenance of the landfills.
- Area B is entirely enclosed with a chain link fence topped with barbed wire. The fence was observed in good condition with no signs of damage or vandalism. Interior portions of the site contained livestock fencing.
- The access road generally extends around the perimeter of Area B and is partially paved. The remainder of the road is a gravel roadway of varying quality. Installation personnel indicated that the roadway is routinely maintained by Fort Detrick.
- All landfills were inspected except B-18 due to access issues posed by the presence of solar panels surrounding the landfill.
- The landfills were undeveloped with no evidence of cap erosion or intrusive activities visible at the time of inspection, however, the landfill surfaces of these vegetated areas could not be inspected due to the density of the vegetation.
- Mowing was recently completed along the WDA. All other areas of Area B Landfills were heavily vegetated with dense, tall grasses. Installation staff indicated that mowing was in progress, but delayed due to excessive precipitation, and all remaining landfills would be mowed as required. Herbicide is also routinely applied for invasive species (e.g., Johnson grass).
- Land use control signage was observed at each of the landfills and appeared in good condition with legible text.
- The gas vents at each landfill were inspected where encountered and found to be in good condition.

- Monitoring wells were inspected where encountered and were found to be in good condition with access restricted via padlocks. Bollards surrounding the monitoring wells were in various condition. The bollards surrounding BMW19 were observed damaged.
- Sampling and maintenance of the monitoring network at Fort Detrick are included in the contract for these services.

No issues affecting the protectiveness of the remedies at the Area B Landfills were observed during the site inspection.

6.6 INTERVIEWS

Interview forms were distributed to the following personnel in support of the five-year review:

- Mr. Joseph Gortva, Fort Detrick, Chief, Environmental Management Division Directorate of Public Works
- Ms. Shelly Morris, PMP, Fort Detrick Contractor, ERG LLC
- Dr. Gary Pauly, RAB Community Co-Chair
- Mr. Roland Clark, RAB Community Member
- Ms. Jennifer Hahn, RAB Community Member
- Mr. Cliff Harbaugh, RAB Community Member
- Ms. Karen Harbaugh, RAB Community Member
- Mr. George Rudy, RAB Community Member
- Dr. Elisabeth Green, Federal Facilities Division, Maryland Department of the Environment
- Mr. Robert Thomson, PE, REM, Office of Federal Facility Remediation, USEPA Region III

One completed interview form was received from Ms. Shelly Morris. No issues affecting protectiveness were identified. Information presented in the interview form has been incorporated into the appropriate sections of this report.

No other completed interview forms have been received to date (23 January 2019). This section will be revised as interview forms are received.

Mr. Joseph Gortva, Fort Detrick's Chief of the Environmental Management Division has noted that it is possible that the groundwater impacts observed at BMW77 originated from historical releases within the Area B-3 landfill from areas not characterized during the Area B-3 remedial investigations. This concern is discussed relative to the data review in section 6.4.1.

7.0 TECHNICAL ASSESSMENT

The technical assessment consists of responses to three questions in the sections below. These questions have been answered for each of the two decision documents relevant to the sites subject to this review.

7.1 QUESTION A: IS THE REMEDY FUNCTIONING AS INTENDED BY THE DECISION DOCUMENT?

7.1.1 Area B-2

Yes, the Area B-2 remedy is functioning as intended. The landfill cap and land use controls prevent direct human contact with elevated concentrations of COPCs. Inspections of the cap have identified no changes in site use, erosion, or evidence of intrusive activities. In addition, the remedy prevents migration of soil contaminants through runoff, surface water, and groundwater. Groundwater data collected downgradient of Area B-2 has identified no COPCs above MCLs and/or RSLs. As evidenced by groundwater, surface water, vapor intrusion, and sediment data, no exposures are occurring on or off site that adversely affect human health or the environment. The application of a presumptive remedy achieved compliance with ARARs (see Attachment 10).

7.1.2 Areas B-3, B-6 and the Western Disposal Areas

Yes, the Area B-3, Area B-6, and WDA remedy is functioning as intended. The landfill cap and land use controls prevent direct human contact with elevated concentrations of COPC. Inspection of the caps has identified no changes in site use, erosion, or evidence of intrusive activities. In addition, the remedy prevents migration of soil contaminants through runoff, surface water and groundwater. Groundwater data collected from downgradient and locations adjacent to the landfills show no increasing trends in COPC concentrations. Surface water and sediment samples collected from groundwater discharges, drinking water samples collected from surrounding residences, and VI data, did not exceed risk-based values protective of human health and the environment. The application of a presumptive remedy also achieved compliance with ARARs (see Attachment 10).

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7.2 QUESTION B: ARE THE EXPOSURE ASSUMPTIONS, TOXICITY DATA, CLEANUP LEVELS, AND REMEDIAL ACTION OBJECTIVES USED AT THE TIME OF THE REMEDY STILL VALID?

7.2.1 Area B-2

Yes, the exposure assumptions cleanup levels, and remedial action objectives used at the time of the remedy are still valid. The selected remedy for Area B-2 (landfill capping and land use controls) followed the USEPA presumptive remedy guidance for landfills, which does not include a quantitative risk assessment. Updates to toxicity criteria for landfill COPCs therefore do not affect the protectiveness of the remedy. The evaluation of exposure pathways is the key component of the streamlined risk assessment associated with such remedies, and all exposure pathways evaluated remain incomplete.

7.2.2 Areas B-3, B-6 and the Western Disposal Areas

Yes, the exposure assumptions, cleanup levels, and remedial action objectives used at the time of the remedy are still valid. The selected remedy for Areas B-3, B-6, and the Western Disposal Areas (landfill capping and land use controls) followed the USEPA presumptive remedy guidance for landfills, which does not include a quantitative risk assessment. Updates to toxicity criteria for landfill COPCs therefore do not affect the protectiveness of the remedy. The evaluation of exposure pathways is the key component of the streamlined risk assessment associated with such remedies, and no unacceptable exposures are occurring.

7.3 QUESTION C: HAS ANY OTHER INFORMATION COME TO LIGHT THAT COULD CALL INTO QUESTION THE PROTECTIVENESS OF THE REMEDY?

7.3.1 Area B-2

No, no other information has come to light that could call into question the protectiveness of the Area B-2 remedy.

7.3.2 Areas B-3, B-6 and the Western Disposal Areas

No, no other information has come to light that could call into question the protectiveness of the Area B-3, Area B-6, and WDA remedy.

8.0 ISSUES

8.1 AREA B-2

No issues were identified affecting the protectiveness of the Area B-2 remedy.

8.2 AREAS B-3, B-6 AND THE WESTERN DISPOSAL AREAS

No issues were identified affecting the protectiveness of the Area B-3, Area B-6, and WDA remedy.

9.0 RECOMMENDATIONS AND FOLLOW-UP ACTIONS

9.1 AREA B-2

No recommendations or follow-up actions were identified affecting the protectiveness of the Area B-2 remedy.

9.1.1 Other Findings

The following opportunities for optimization were identified for the Area B-2 remedy:

- The monitoring program for the landfills currently includes VOCs, SVOCs, dissolved and total metals, and general water quality parameters on an annual basis. Biannually, the samples are analyzed for pesticides, PCBs, herbicides, dioxin/furan, and gross alpha and gross beta particles. Based on the landfill COPCs, historical detections, and the characteristics of specific compounds (e.g., PCB and dioxin/furan have high sorption and low solubility), this monitoring program could be significantly reduced by eliminating unnecessary analyses. Optimization of the Area B Landfill groundwater and lysimeter monitoring program is recommended.
- The practical quantitation limits (PQLs) employed in the Area B Landfill groundwater monitoring program include some values above the respective screening limits. These values should be reassessed to ensure the COPCs can effectively be screened against regulatory and risk-based screening values, if possible.

9.2 AREAS B-3, B-6 AND THE WESTERN DISPOSAL AREAS

No recommendations or follow-up actions were identified affecting the protectiveness of the Area B-3, Area B-6, and WDA remedy.

9.2.1 Other Findings

The following opportunities for optimization were identified for the Area B-2 remedy:

- The monitoring program for the landfills currently includes VOCs, SVOCs, dissolved and total metals, and general water quality parameters on an annual basis. Biannually, the samples are analyzed for pesticides, PCBs, herbicides, dioxin/furan, and gross alpha and gross beta particles. Based on the landfill COPCs, historical detections, and the characteristics of specific compounds (e.g., PCB and dioxin/furan have high sorption and low solubility), this monitoring program could be significantly reduced by eliminating unnecessary analyses. Optimization of the Area B Landfill groundwater and lysimeter monitoring program is recommended.
- The PQLs employed in the Area B Landfill groundwater monitoring program and vapor intrusion investigation include some values above the respective screening limits. These values should be reassessed to ensure the COPCs can effectively be screened against regulatory and risk-based screening values.
- Initial reports produced during vapor intrusion screening utilized a hazard quotient of 1.0 when screening for COPCs (see report Section 6.4.3.2). In response to comment received from the USEPA on this document, the final vapor intrusion human health risk assessment should utilize a hazard quotient of 0.1 instead of 1.0 when screening for COPCs. This will ensure that unacceptable indoor air exposure is not occurring since the human health concerns for some groundwater contaminants (e.g., PCE and TCE) are

based on non-carcinogenic rather than carcinogenic endpoints when considering the lower hazard quotient.

10.0 PROTECTIVENESS STATEMENTS

The following sections identify protectiveness statements for each of the remedies subject to this review.

10.1 AREA B-2

The remedy for Area B-2 is protective of human health and the environment.

The landfill cap and land use controls prevent direct human contact with elevated concentrations of contaminants of potential concern. Groundwater monitoring data confirms that the cap effectively reduces storm water infiltration and contaminant migration from soil to groundwater.

10.2 AREAS B-3, B-6 AND THE WESTERN DISPOSAL AREAS

The remedy for Area B-3, Area B-6, and the WDA is protective of human health and the environment.

The landfill cap and land use controls prevent direct human contact with elevated concentrations of contaminants of potential concern. Groundwater monitoring data confirms that the caps effectively reduce storm water infiltration and contaminant migration from soil to groundwater.

11.0 NEXT REVIEW

The next review for the Area B Landfills will be completed by 25 June 2024.

ATTACHMENT 1

Figures

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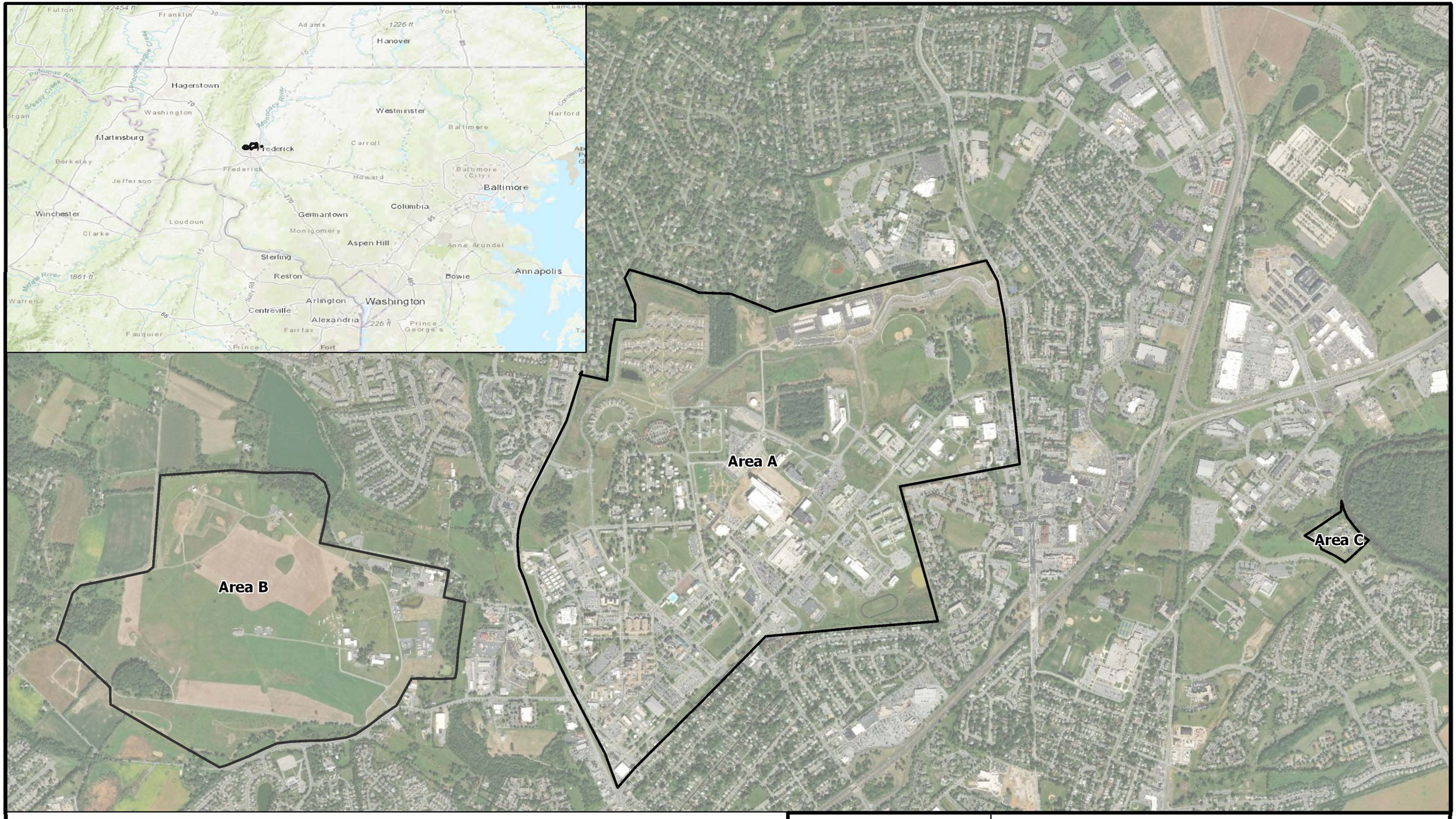

Fort Detrick Boundary

N
W E
S

0 660 1,320 2,640
Feet

U.S. Army Corps of Engineers
Buffalo District
Buffalo, New York

Document Name: FYR_19_Detrick.mxd
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Fort Derick Site Location

Five Year Review
Fort Derick
Frederick, Maryland

Figure A.1-1

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Environmental Sites

Area B Boundary

N
W E
S

0 375 750 1,500 Feet

US Army Corps of Engineers
Buffalo District

U.S. Army Corps of Engineers
Buffalo District
Buffalo, New York

Area B Inactive Landfills

Document Name: FYR_19_Detrick.mxd
Drawn By: H5TDEEMP

Five Year Review
Fort Detrick
Frederick, Maryland

Figure A.1-2

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Figure A.1-3 – New Landfill Monitoring Well & Lysimeters Locations Source: Area B Landfill Lysimeters, Monitoring Network Expansion and Replacement Wells

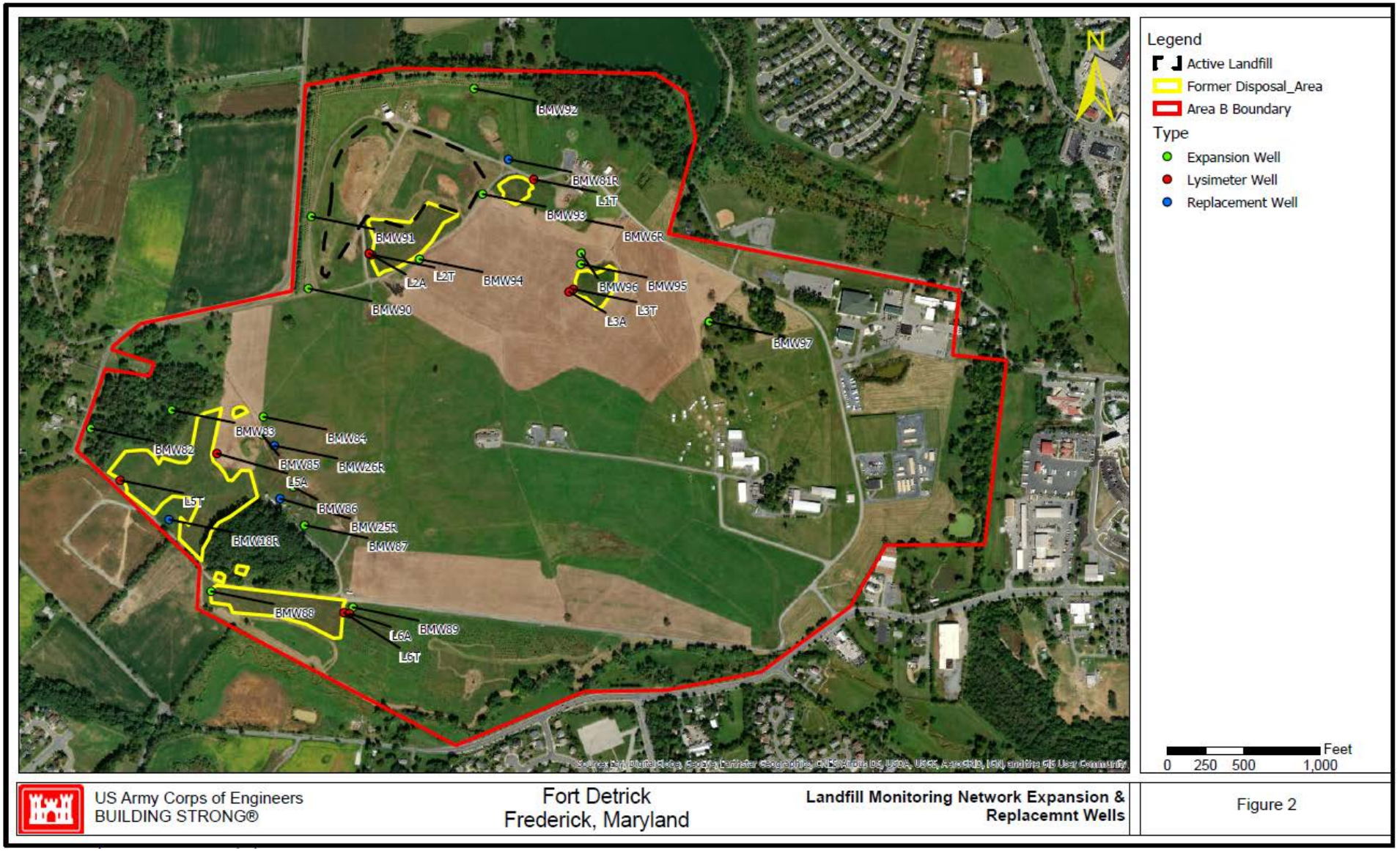

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Figure A.1-4 – Lysimeter Installation Details Source: Area B Landfill Lysimeters, Monitoring Network Expansion and Replacement Wells

Well ID	Lysimeter angle	Total Depth Drilled	Casing length	Screen Length	Bottom of Screen Depth	Sump Length	Bottom of Sump Depth
L1T	40°	28.0	12.5	10.0	22.5	5.0	27.5
L2A	40°	25.0	10.0	10.0	20.0	5.0	25.0
L2T	40°	25.0	10.0	10.0	20.0	5.0	25.0
L3A	40°	30.0	20.0	5.0	25.0	5.0	30.0
L3T	40°	27.0	15.5	5.0	20.5	5.0	25.5
L5A	40°	30.0	15.0	10.0	25.0	5.0	30.0
L5T	40°	29.0	14.0	10.0	24.0	5.0	29.0
L6A	40°	30.0	20.0	5.0	25.0	5.0	30.0
L6T	40°	30.0	20.0	5.0	25.0	5.0	30.0

All units are in feet

T - toward landfill

A - away from landfill

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Figure A.1-5 – Existing Monitoring Network, Area B Landfills Source: Draft Semi-Annual Landfill Cap Groundwater Monitoring Program Report, April 2017 Sampling Event

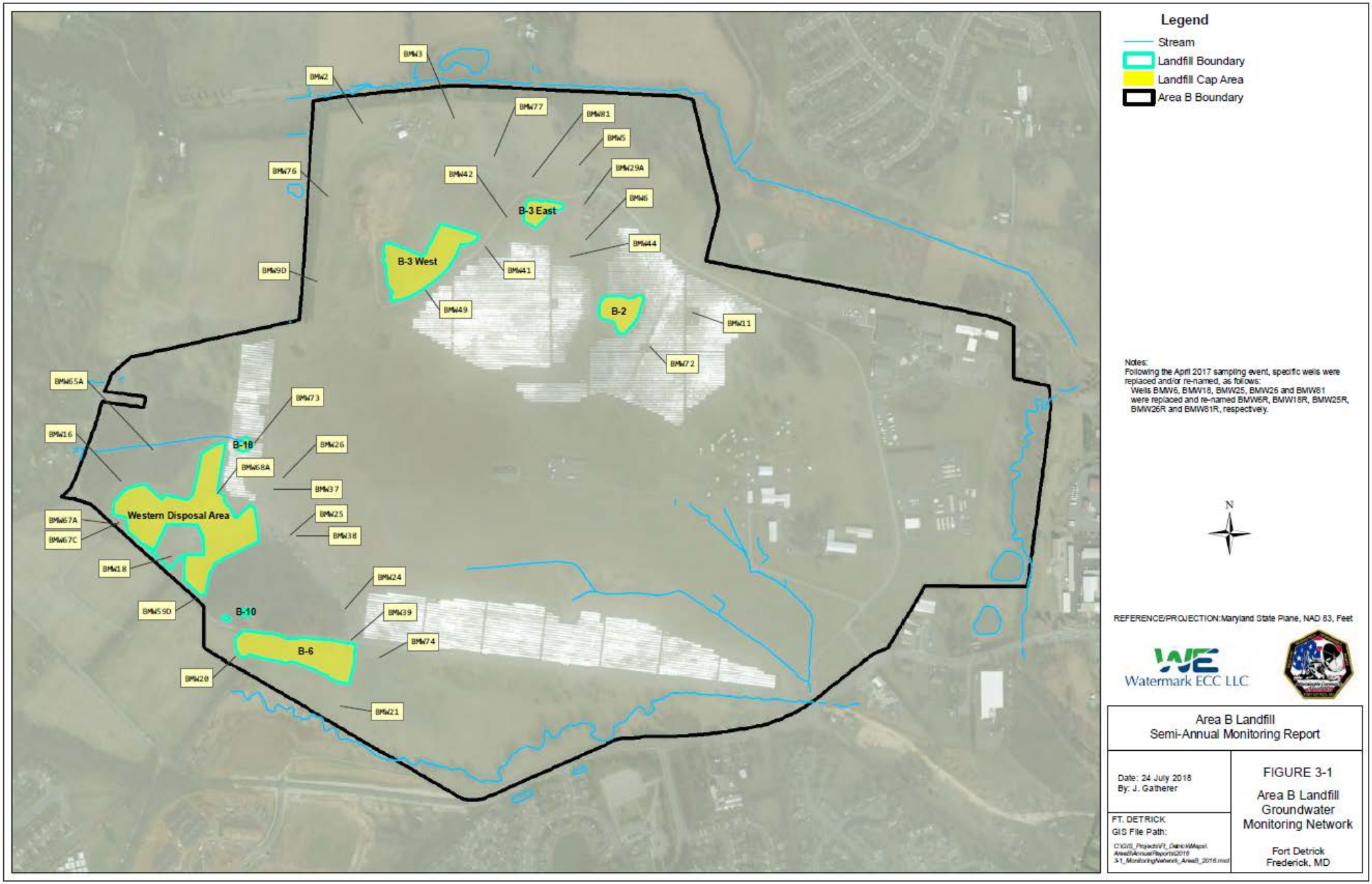

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Figure A.1-6 – Landfill Monitoring Network Well Details Source: Cap Inspection and Monitoring Work Plan

Table 2
Cap Inspection Monitoring Network
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

ARCADIS Design & Consultancy for natural and built assets

Existing Monitoring Well	Top of Screen (ft bTOC)	Bottom of Screen (ft bTOC)	Depth to Groundwater* (ft bTOC)	TOC Elevation (ft msl)	Groundwater Elevation (ft amsl)
BMW2	25	35	27.49	374.7	347.21
BMW3	25	35	23.42	367.49	344.07
BMW5	25	35	21.63	360.1	338.47
BMW6	25	35	Dry	380.9	345.9
BMW9D	91	106	35.56	387.88	352.32
BMW11	25	35	18.72	357.2	338.48
BMW16	25	35	34.55	390.7	356.15
BMW18	25	35	36.77	390.16	353.39
BMW20	25	35	12.2	368.7	356.5
BMW21[a]	25	35	7.75	357.94	350.19
BMW24	25	35	17.08	368.34	351.26
BMW25	25	35	21.55	369.4	347.85
BMW26	25	35	--	379.29	--
BMW29A	48	58	32.59	371.03	338.44
BWM37	39.5	59.5	25.51	380.85	355.34
BMW38	50.6	80.6	20.5	368.38	347.88
BMW39	21.1	51.1	20.04	370.45	350.41
BMW41	49	69	22.55	399.02	376.47
BMW42	48.5	68.5	29.54	397.78	368.24
BMW44	58.6	88.6	58.96	400.14	341.18
BMW49[b]	30	50	37.69	389.6	351.91
BMW59D	163	183	38.65	391.65	353
BMW65A	112	127	34.1	388.47	354.37
BMW67A	50	55	40.59	395.91	355.32
BMW67C	140	155	42.25	397.47	355.22
BMW68A	32	42	27.72	374.35	346.63
BMW72	85	95	18.59	355.04	336.45
BMW73	22.5	37.5	24.55	370.8	346.25
BMW74	59	69	17.36	366.65	349.29
BMW76	98	108	38.17	388.32	350.15
MW-81	25	35	--	--	--
BMW77	56	71	22.29	366.26	343.97

Proposed Monitoring Well	Monitoring Zone
BMW82	Overburden
BMW83	Overburden
BMW84	Overburden
BMW85	Shallow Bedrock
BMW86	Overburden
BMW87	Shallow Bedrock
BMW88	Shallow Bedrock
BMW89	Overburden
BMW90	Overburden
BMW91	Overburden
BMW92	Shallow Bedrock
BMW93	Overburden
BMW94	Overburden
BMW95	Overburden
BMW96	Shallow Bedrock
BMW97	Shallow Bedrock

[No Title]

Notes:
-- Data not available
ft bTOC: feet below top of casing
ft amsl: feet above mean sea level
*Groundwater elevations measured in December 2012
[a] Only monitored for GW Elevation
[b] Reclassified as overburden monitoring well

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Figure A.1-7 – New Landfill Monitoring Well Installation Details Source: Area B Landfill Lysimeters, Monitoring Network Expansion and Replacement Wells

Well ID	Target Depth	Depth to Bedrock	Depth to Water Encountered	Screened Interval	Screen Length	Total Drilled Depth	Voids Encountered
BMW6R	55	32.0	75.0	74.6 - 89.6	15	91.0	34.8 - 39.5, 46.0 - 47.0, 77.5 - 79.0
BMW18R	50	38.4	57.5	54.1 - 64.1	10	75.0	57.3 - 73.5
BMW25R	45	47.0	45	46.0 - 61.0	15	66.0	None Encountered
BMW26R	45	25.0	25.3	30.2 - 45.2	15	52.0	34.0 - 39.0
BMW81R	45	24.0	39.0	40.5 - 55.5	15	60.0	36.5 - 41.0, 44.0 - 45.0, 46.5 - 47.0, 51.0 - 52.0
BMW86	NA	22	36	31-46	15	50	35-36.5, 37-38.
BMW88	NA	33	42	44.5-59.5	15	61.5	36-44.5, 49-50.5, 52-54.
BMW89	NA	32	78	75-90	15	92	None Encountered
BMW90	NA	20.5	37.7	30-45	15	51	23.5 - 31, 46 - 47.
BMW91	NA	17	68	68-83	15	85	43 - 71 clay filled void
BMW92	NA	33	39	39-54	15	55	39-39.5, 47.5-50.
BMW93	NA	2.5	33.8	33-48	15	51	15-17, 25-27.5, 32.5-34.
BMW87	NA	22	31.5	31 - 46	15	47.5	31 - 35, 40 - 46.
BMW82	NA	47	65	60-75	15	75	59-65, 66.5-74.5
BMW83	NA	10	65	65-80	15	80	30-30.5
BMW97	NA	25	20	20-35	15	46	14 - 25.
BMW84	NA	27	25.5	25.8-40.8	15	40.5	28.5 - 31, 32 - 35
BMW85	NA	21	37.5	30-45	15	44.5	34 - 36, 37.5 - 42.5
BMW94	NA	39	80	39-54	15	85	None Encountered
BMW95	NA	31	72	72.5-87.5	15	89	48-50.
BMW96	NA	31	20	22-32	10	33	None Encountered

All units are in feet

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Figure A.1-8 – Landfill Monitoring Program Analyte List Source: Cap Inspection and Monitoring Work Plan

Table 4
Proposed Monitoring Parameters
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

ARCADIS Design & Consultancy for natural and built assets

Volatile Organic Compounds	PQL (ppb)
Acetone	5
Acrylonitrile	5
Benzene	1
Bromochloromethane	1
Bromodichloromet hane	1
Bromoform	1
Bromomethane	1
2-Butanone	5
Carbon disulfide	1
Carbon tetrachloride	1
Chlorobenzene	1
Ch.loroethane	1
Chloroform	1
Chloromethane	1
Dibromochloromethane	1
I,2-Dibromo-3-chloropropane	1
1,2 - Dibromoethane (EDB)	1
Dibromomethane	1
1,2 - Dichlorobenzene	1
1,4 - Dichlorobenzene	1
Trans-1,4-dichloro-2-butene	5
1,1-Dichloroethane	1
1,2-Dichloroethane	1
1,1-Dichloroethene	1
Cis-1,2-Dichloroethene	1
Trans-1,2-Dichloroethene	1
Methylene chloride	1
1,2-Dichloropropane	1
Trans-1,3-Dichloropropene	1
Cis-1,3-Dichloropropene	1
Ethylbenzene	1
2-Hexanone	5
Iodomethane	1
4-Methyl-2-penta none	5
Methyl Tertiary Butyl Ether	2
Styrene	1
1,1,1,2-Tetrachloroethane	1
1,1,2,2-Tetrachloroethane	1
Tetrachloroethene	1
Toluene	1
1,1,1 -Trichloroethane	1
1, 1,2-Trichloroethane	1
Trichloroethene	1
Trichlorofluoromethane	1
1,2,3-Trichloropropane	1
Vinyl acetate	1
Vinyl chloride	1
Xylene	1

Elements and Indicator Parameters	PQL (ppm)
Total Antimony	0.002
Total Arsenic	0.002
Total Barium	0.01
Total Beryllium	0.002
Total Cadmium	0.004
Total Chromium	0.01
Total Calcium	0.08
Total Cobalt	0.01
Total Copper	0.01
Total Iron	0.005
Total Lead	0.002
Total Nickel	0.011
Total Magnesium	0.004
Total Manganese	0.01
Total Mercury	0.0002
Total Potassium	0.39
Total Selenium	0.035
Total Silver	0.01
Total Sodium	0.2
Total Thallium	0.002
Total Vanadium	0.01
Total Zinc	0.01
PH	0.1 (SU)
Alkalinity	1
Hardness	0.5
Chloride	0.39
Specific conductance	1
Nitrate	0.06
Chemical oxygen demand	10
Turbidity	0.11 (NTU)
Ammonia	1
Sulfate	0.38
Total dissolved solids	10

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Figure A.1-9 –Sentinel Monitoring Program Locations Source:
2017 Annual Monitoring Report

Watermark ECC LLC

Table 3-4
Well Construction Details and
Groundwater Elevations – December 2017
Area B Landfills, Fort Detrick, Maryland

Monitoring Well	Zone	Ground Elevation[1] (ft msl)	TOC Elevation[1] (ft msl)	Total Depth[1] (ft msl)	Screened Interval[1] (ft msl)	Depth to Groundwater (ft BTOC)	Groundwater Elevation[1] (ft msl)
BMW20	Overburden	367.00	368.70	331.20	321.20 - 331.20	21.70	347.00
BMW20D	Shallow Bedrock	366.17	368.31	189.66	218.17 - 198.17	22.16	346.15
BMW24D	Shallow Bedrock	365.47	368.16	187.25	201.22 - 191.02	23.80	344.36
BMW32D	Shallow Bedrock	356.21	356.21	268.80	281.21 - 271.21	10.80	345.41
BMW53F	Deep Bedrock	349.10	351.69	41.47	54.10 - 44.10	14.70	336.99
BMW56D	Shallow Bedrock	380.86	382.86	282.58	309.86 - 289.86	42.75	340.11
BMW58D	Shallow Bedrock	387.40	388.65	256.91	277.90 - 257.90	42.67	345.98
BMW59D	Shallow Bedrock	389.91	391.65	204.26	226.91 - 206.91	46.79	344.86
BMW67C	Deep Bedrock	394.60	397.47	235.63	254.60 - 239.60	52.31	345.16
BMW68D	Deep Bedrock	371.70	374.22	191.99	204.70 - 194.70	33.33	340.89
BMW69A	Shallow Bedrock	337.90	340.51	303.13	315.90 - 305.90	5.87	334.64
BMW70A	Shallow Bedrock	327.50	330.06	288.41	296.50 - 291.50	7.09	322.97
BMW71C	Deep Bedrock	332.90	335.32	98.30	110.90 - 100.90	17.09	318.23
BMW77	Shallow Bedrock	363.30	366.26	289.79	307.30 - 292.30	28.59	337.67

Notes:

Depth to groundwater was measured on 18 December 2017.

[1] All elevations presented in feet relative to the North American Vertical Datum (1988).

TOC - Top of Casing

ft BTOC - Feet Below Top of Casing

ft msl - Feet Relative to Mean Sea Level

NA - Not Applicable

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Figure A.1-10 –Potable Well Sampling Locations Source:
Off-Post Well Investigation Report

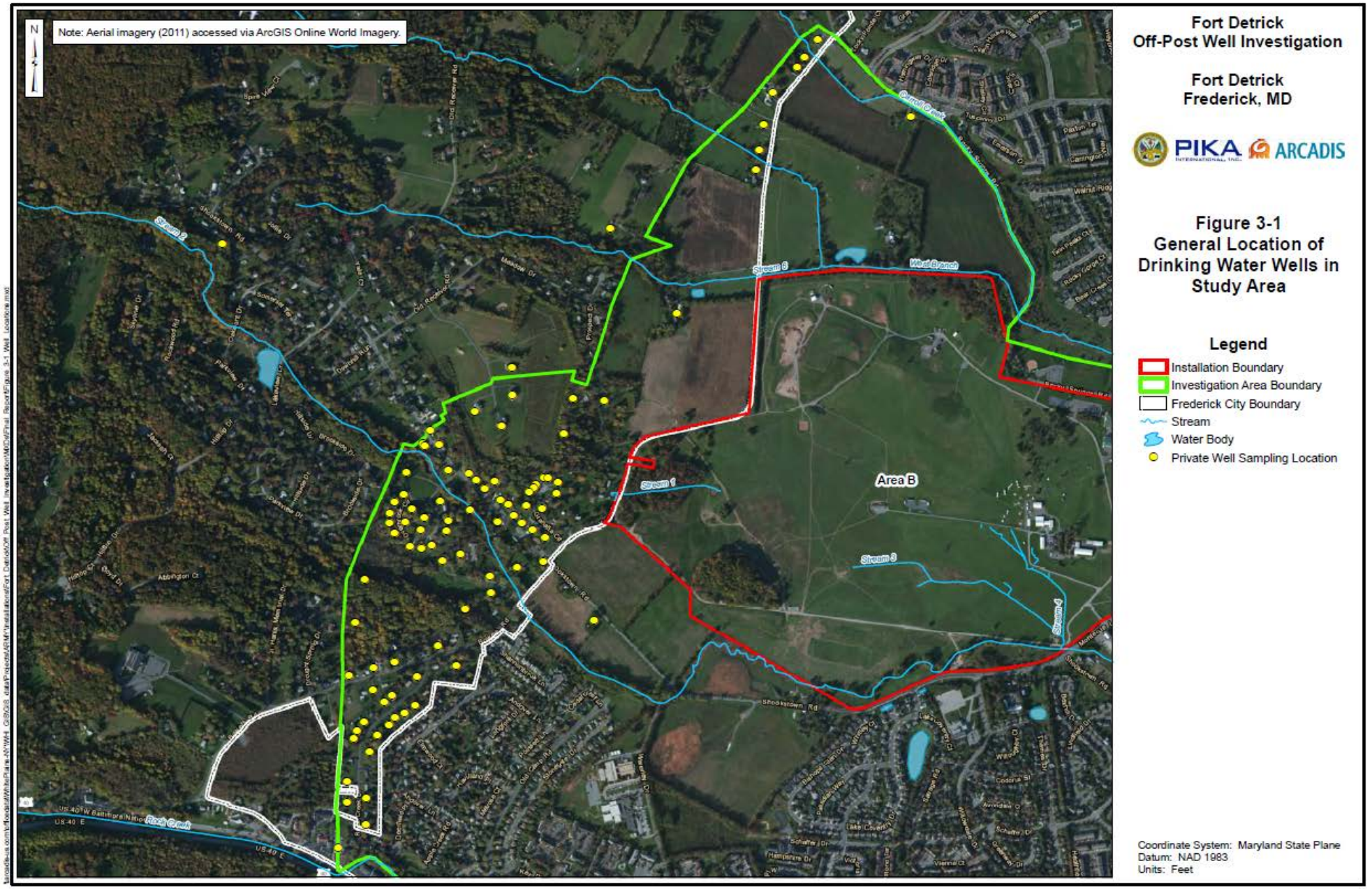

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Figure A.1-11 –Vapor Intrusion Sampling Locations Source:
Draft VI HHRA

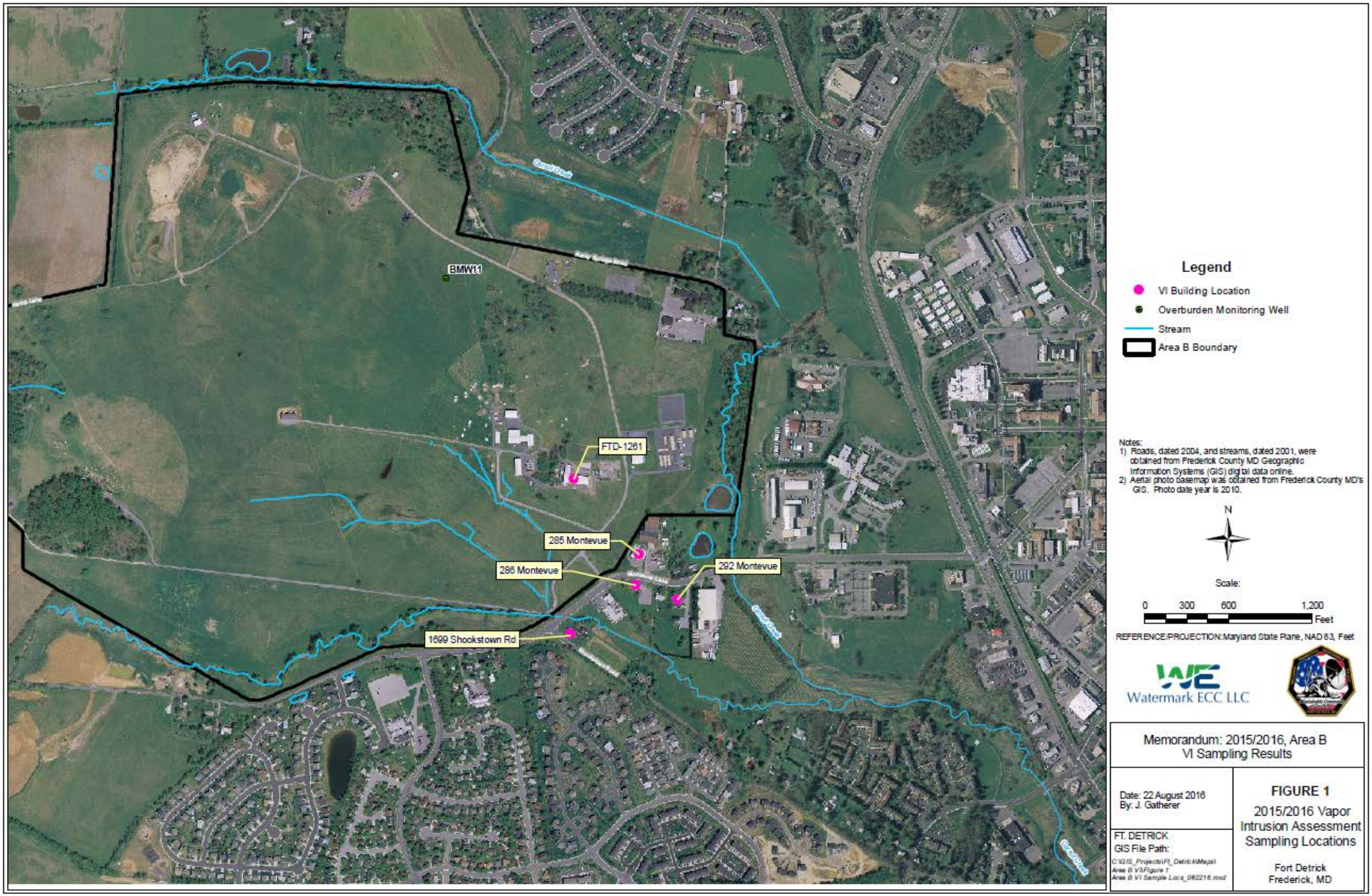

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Figure A.1-12 –Surface Water Sampling Locations Source:
Area B Site Conceptual Model

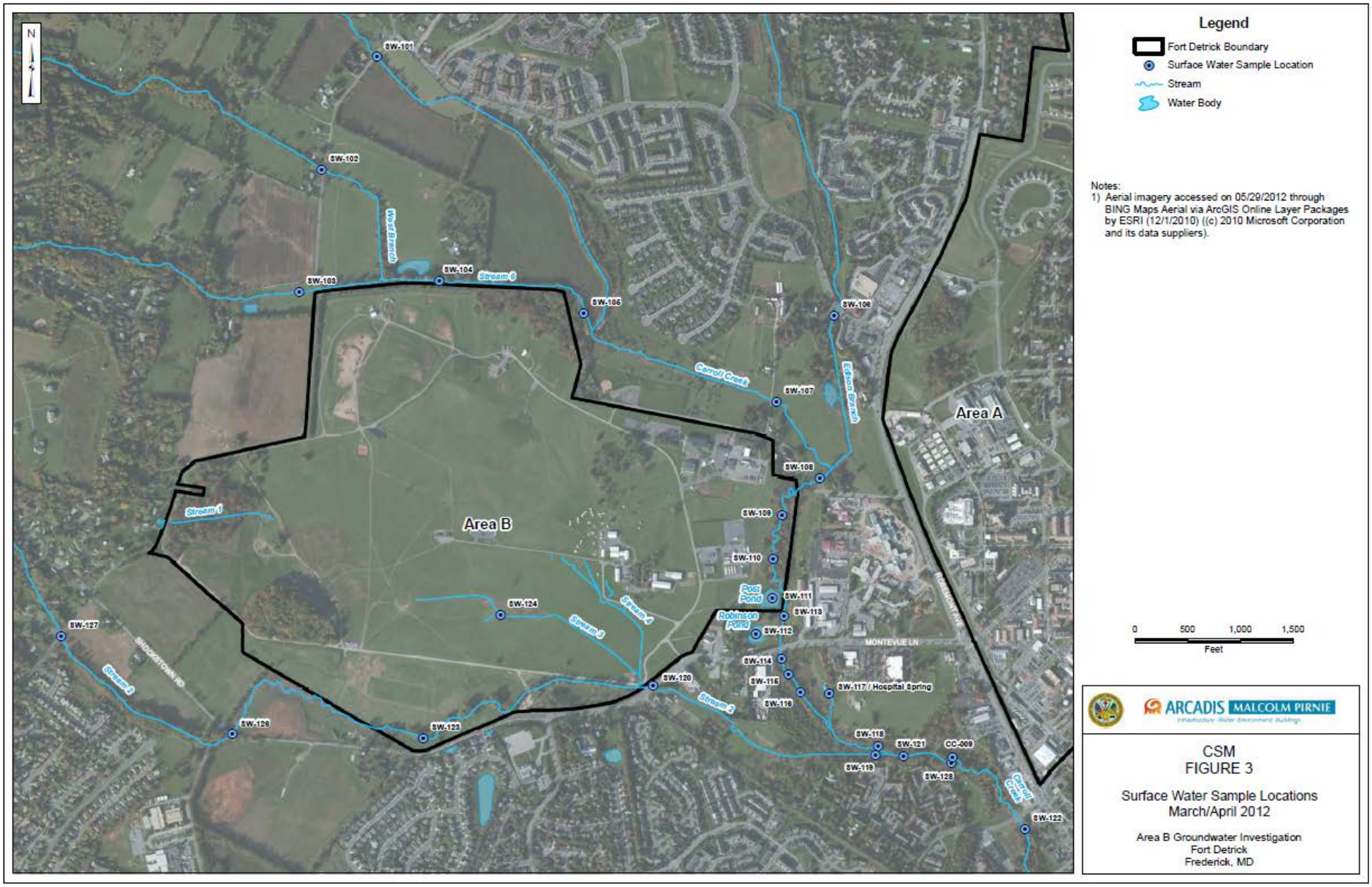

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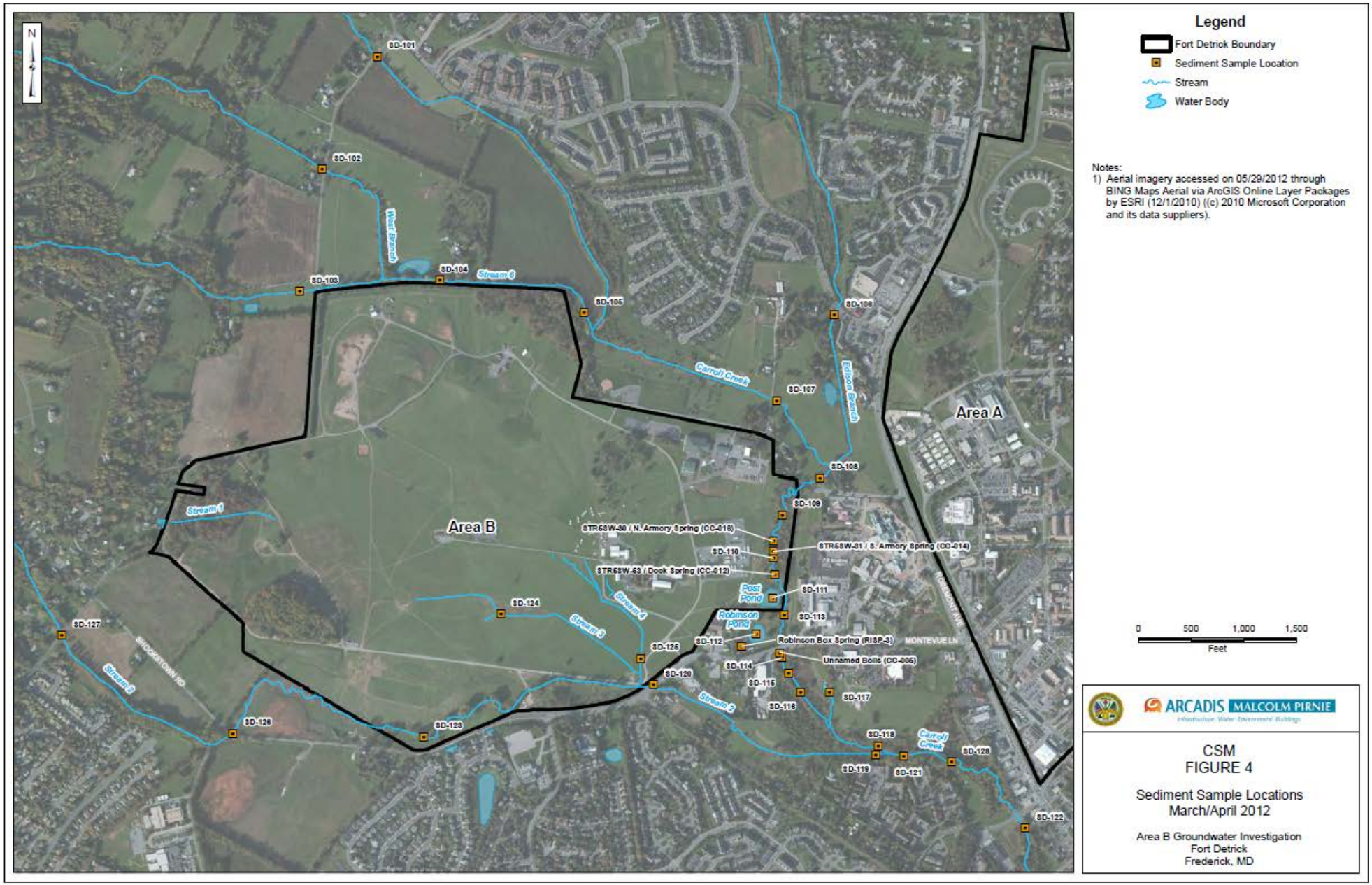
Figure A.1-13 –Sediment Sampling Locations Source:
Area B Site Conceptual Model



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ATTACHMENT 2

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ATTACHMENT 3

Area B Landfill Histories and Figures

Extracted from the Decision Documents with Minor Modifications

(Shaw Environmental Inc, 2008)

(Shaw Environmental Inc, 2009)

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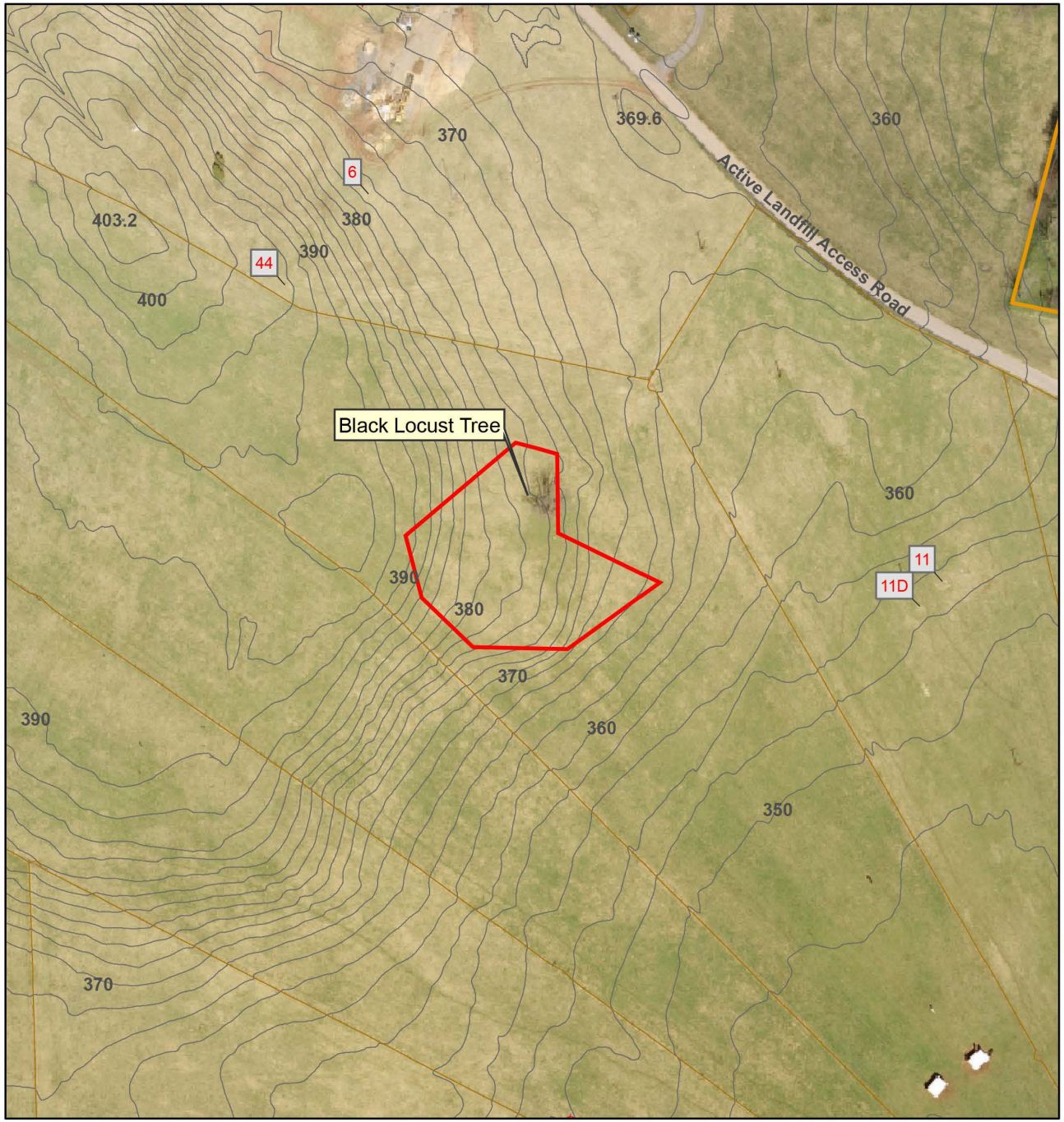
Area B-2

Area B-2 is located on the east side of a grassy mound within the animal farm pastures of USAMRIID. A series of animal fences currently encloses the site. Based on an analysis of historical maps, aerial photos, geophysical surveys, and soil borings, the preliminary limits of buried waste were delineated as a 0.9-acre area.

Elevations at the site range from 365 to 390 feet above mean sea level, and topography slopes primarily to the east at an average grade of approximately 8 percent. No streams, storm sewer systems, or wetlands lie within 1,000 feet of the site. Surface water runoff follows topography. Area B-2 is located within the silts and sands of the Penn series soil, which forms in place from decomposition of the underlying shale, siltstone and sandstone bedrock of the Triassic New Oxford Formation. Groundwater occurs in both overburden materials and bedrock, which are hydraulically connected. The groundwater flow direction is primarily to the east.

Based on historical records of waste disposal and analysis of soil and waste samples collected from the site, the types of material present are expected to include metal, wood, and general waste, possibly including decontaminated (sterilized) materials from Fort Detrick laboratories dismantled in the early 1950s. Although analytical sampling of soil identified contaminants of potential concern above screening levels, there were no indications of hot spots where gross contamination was evident. Contaminants of potential concern (COPCs) and their associated maximum concentrations were: arsenic [18 milligrams per kilogram (mg/kg)], chromium (70.7 mg/kg), iron (71000 mg/kg), manganese (6400 mg/kg), thallium (10 mg/kg), vanadium (260 mg/kg), aldrin [160 micrograms per kilogram (µg/kg)], Aroclor-1254 (1.29 mg/kg), benz(a)anthracene (6000 µg/kg), benzo(a)pyrene (5000 µg/kg), benzo(b)fluoranthene (5000 µg/kg), and heptachlor epoxide (82 µg/kg).



Legend

- 000 Monitoring Point
- Stream
- Fence
- 2 Ft Elevation Contour (Feet Above Mean Sea Level)
- Area B-2 Limits of Waste
- Area B Boundary

Notes:
1) Aerial photo dated 2004 was obtained from Fort Detrick.

N

REFERENCE/PROJECTION: Maryland State Plane, NAD 83, Feet

DEPARTMENT OF THE ARMY

Shaw Environmental, Inc.

FT. DETRICK
GIS File:
FTD_128_Fig3_B2-PP_Aerial.mxd
Date: *6/11/07*

FIGURE A.3-1

Area B-2
Aerial Photo

Fort Detrick
Frederick, MD

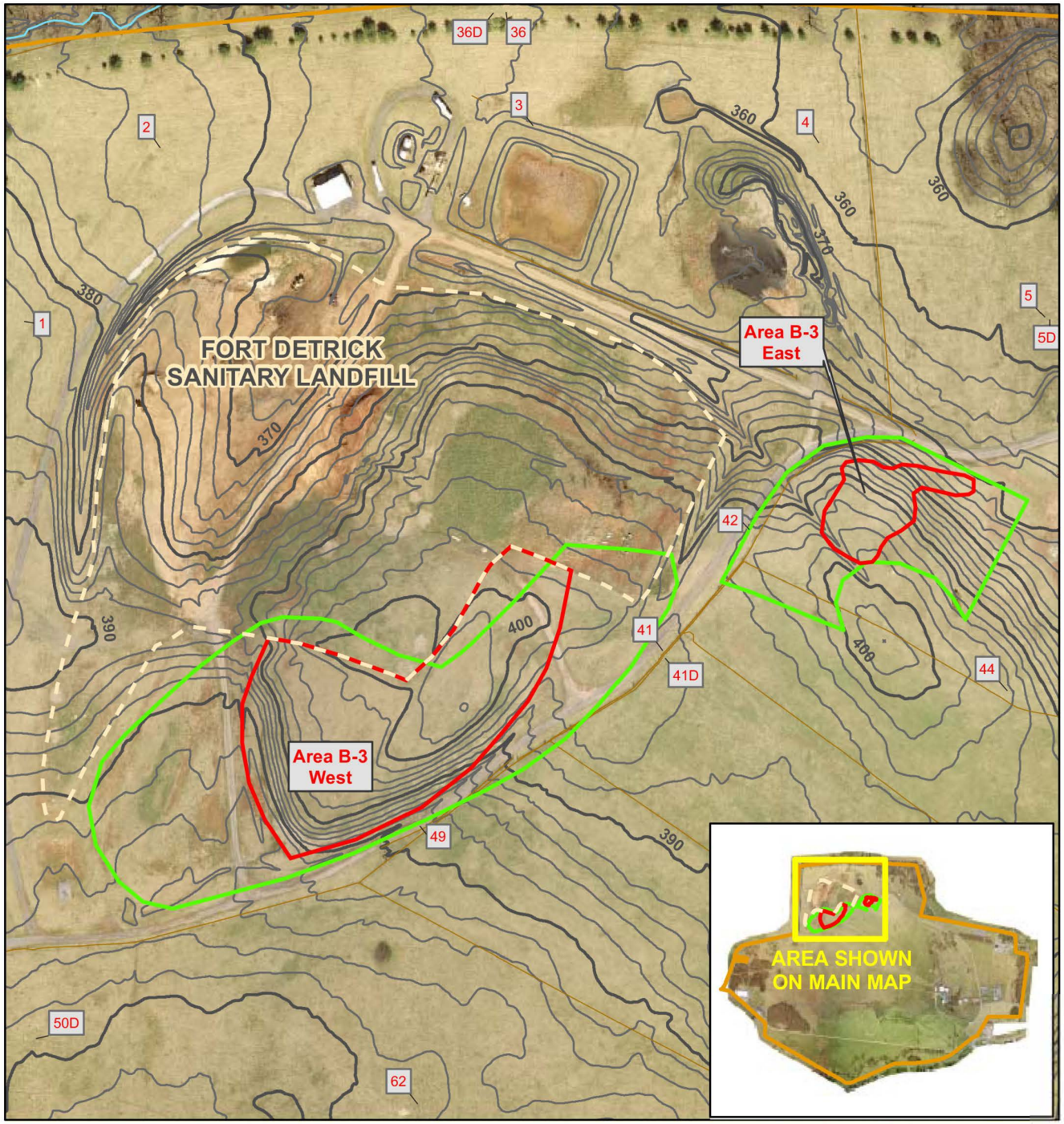
Area B-3 Inactive

Area B-3 Inactive consists of two separate areas, referred to as B-3 West and B-3 East. B-3 West is immediately adjacent to the operating landfill, with its northern border defined by the southern edge of the active landfill liner. This area operated as Fort Detrick's sanitary landfill from the 1970s through 1990 and received various types of waste. When the current, active landfill liner was installed in 1990, it effectively capped a portion of the older landfill, leaving the remainder, B-3 West, un-capped. The actual limits of B-3 West waste have been defined as a 2.8-acre area. Along the northern boundary of B-3 West, the geomembrane layer of the cap was welded to the liner of the active landfill. Along the western border, the anchor trench and cap was installed at the toe of the landfill slope, thus covering all areas of buried waste.

Area B-3 East is the older disposal area, located on the north side of a grassy slope near the active landfill gate. B-3 East is physically separated from B-3 West and the active landfill by an access road and fence. This site is believed to have been in operation during the late 1950s or early 1960s. Wastes reportedly included herbicide and insecticide waste, decontaminated drums, metal and general debris, and decontaminated (sterilized) materials from Area A laboratories. The actual limits of B-3 East waste have been defined as a 0.4-acre area.

Elevations range from 376 to 404 feet above mean sea level at Area B-3 Inactive, which represents a topographic high for all of Area B. No streams or wetlands lie within Area B-3 Inactive. Surface water runoff follows topography. There are artificially engineered storm water management ditches associated with the active landfill. The closest natural stream to Area B-3 Inactive is approximately 1,000 feet to the north. Area B-3 Inactive is predominantly located within the silts and sands of the Penn series soil, which forms in place from decomposition of the underlying shale, siltstone and sandstone bedrock of the Triassic New Oxford Formation. Groundwater occurs in both overburden materials and bedrock, which are hydraulically connected. Groundwater in the bedrock flows primarily to the east through bedrock and overburden.

Although analytical sampling of soil identified COPCs above screening levels, there were no indications of hot spots where gross contamination was evident. COPCs and their associated maximum concentrations were: arsenic [18 milligrams per kilogram (mg/kg)], chromium (89 mg/kg), iron (63,000 mg/kg), manganese (1,660 mg/kg), vanadium (240 mg/kg), and 4,4'-DDT [1,700 micrograms per kilogram (µg/kg)].



Legend

- 000 Monitoring Point
- Fence
- Stream
- 2 Ft Elevation Contour (Feet Above Mean Sea Level)
- 10 Ft Elevation Contour (Feet Above Mean Sea Level)
- Area B-3 Inactive Limits of Waste
- Active Landfill Liner Boundary
- Area B-3 Inactive Environmental Site Boundary
- Area B Boundary

Notes:
1) Aerial photo dated 2004 was obtained from Fort Detrick.

N

REFERENCE/PROJECTION: Maryland State Plane, NAD 83, Feet

DEPARTMENT OF THE ARMY

Shaw Shaw Environmental, Inc.

FIGURE A.3-2

Area B-3 Inactive Site Map

Fort Detrick
Frederick, MD

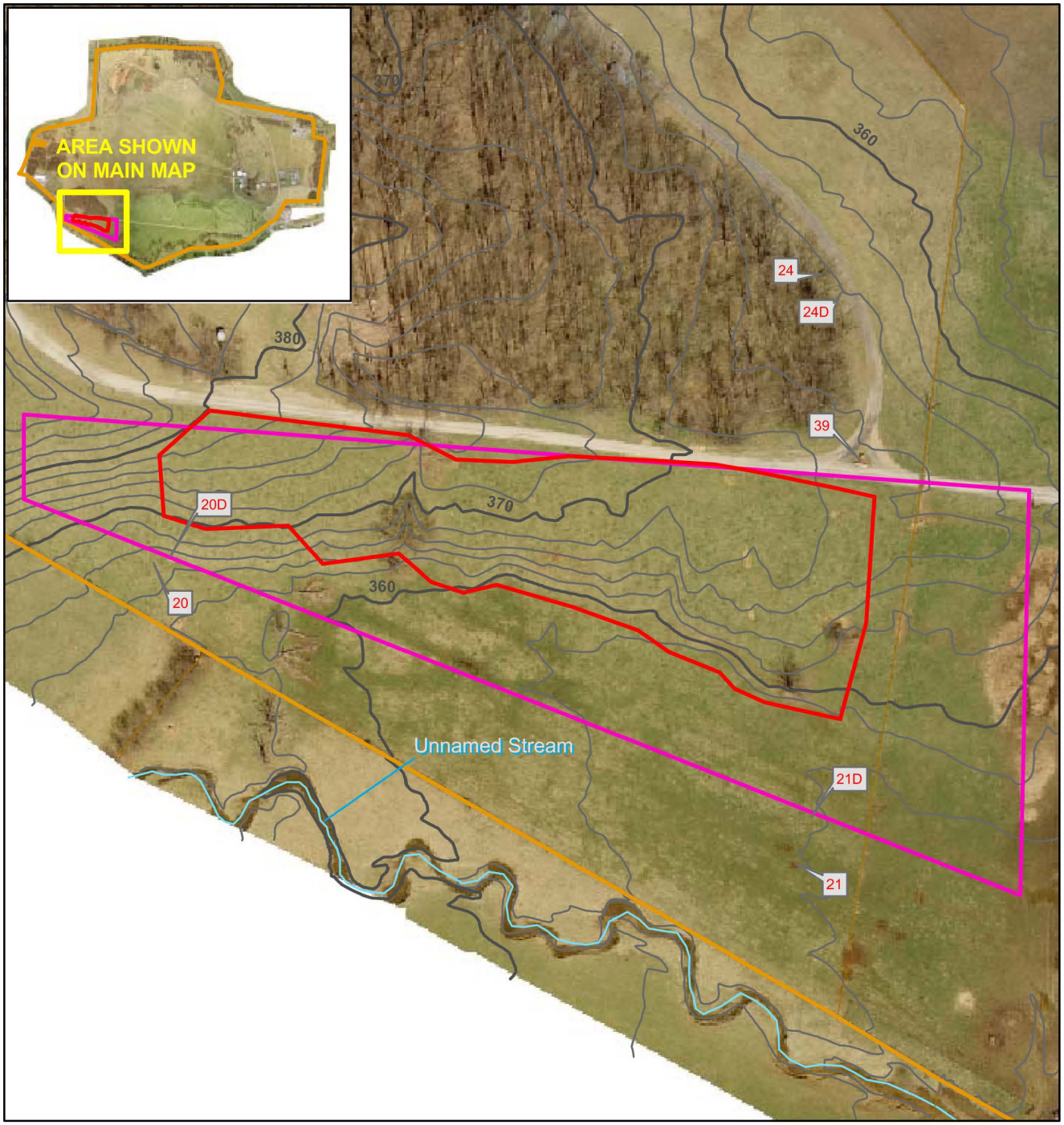
FT. DETRICK
GIS File:
FTD_170_Fig3_Area_B_PP_B3InactiveSiteMap.mxd
Date: *7/11/08*

Area B-6

Area B-6 is located in the southwest portion of Area B. A dirt access road essentially defines the northern border of Area B-6. Area B-6 was operational during the 1950s. Based on historical records of waste disposal and analysis of soil and waste samples collected from the site, the types of material present are expected to include metal, wood, and general debris from laboratory remodeling and building demolition, possibly including decontaminated (sterilized) materials from Fort Detrick laboratories dismantled in the early 1950s. This area also received autoclaved carcasses of animals ranging from mice to horses. Animals used in special operations, involving live biological agents, were routinely incinerated before burial. Some carcasses may not have been incinerated prior to disposal, but all were reportedly disinfected by autoclave prior to leaving the laboratory.

Based on an analysis of georeferenced historical maps, aerial photos, geophysical surveys, and soil borings, the limits of Area B-6 waste have been defined as a 2.6-acre area. Elevations at the site range from 355 to 385 feet above mean sea level, and topography slopes to the south and southeast at up to 10 percent. No streams lie within Area B-6. However, a small stream referred to as Stream 2 flows just south of Area B-6 and the Area B installation boundary (see Figure 5, Stream 2 is labeled Unnamed Stream). Portions of Area B-6 lie within the five-year floodplain of Stream 2 and minor wetlands are also present at the site. Surface water runoff follows topography. A review of soil boring logs, well installation logs, and geotechnical data collected from Area B-6 indicates that the undisturbed soils within the footprint of Area B-6 most likely represent Augusta series and Duffield series soils. Although groundwater flow generally follows topography which is to the south and southeast, static water level measurements indicate that groundwater flow is to the east and northeast.

Although analytical sampling of soil identified COPCs above screening levels, there were no indications of hot spots where gross contamination was evident. COPCs and their associated maximum concentrations were: arsenic (17 mg/kg), chromium (80.57 mg/kg), iron (88,000 mg/kg), vanadium (260 mg/kg), 2-methylnaphthalene (10,000 µg/kg), 3,3'-dichlorobenzidine (41 µg/kg), benzo(a)pyrene (10,000 µg/kg), chloroform (12 µg/kg), naphthalene (30,000 µg/kg), tetrachloroethene (PCE) (17 µg/kg), and trichloroethene (TCE) (500 µg/kg) in soil. No COPCs were identified for surface water or sediment.



Legend

- 000 Monitoring Point
- Fence
- Stream
- 2 Ft Elevation Contour (Feet Above Mean Sea Level)
- 10 Ft Elevation Contour (Feet Above Mean Sea Level)
- Area B-6 Environmental Site Boundary
- Area B-6 Limits of Waste
- Area B Boundary

Notes:
1) Aerial photo dated 2004 was obtained from Fort Detrick.

N

REFERENCE/PROJECTION: Maryland State Plane, NAD 83, Feet

DEPARTMENT OF THE ARMY

Shaw Environmental, Inc.

FT. DETRICK

GIS File:
FTD_171_Fig4_Area_B_PP_B6SiteMap.mxd

Date: *7/11/08*

FIGURE A.3-3

Area B-6
Site Map

Fort Detrick
Frederick, MD

Western Disposal Area (Area B-8, Trenches North of B-8, and Area B-18)

The Western Disposal Area (WDA) is located in the western portion of Area B and includes Areas B-8, the Trenches North of B-8, B-10, B-10 Grove, B-11, and B-18. Topography for Area B-10 and B-10 Grove slopes gently to the north and east. To the west of Area B-10 Grove is Area B-11, which runs parallel and adjacent to the Area B border fence. The topography at Area B-11 slopes gently to the northeast, towards Area B-8. Area B-8 lies north of Area B-10 Grove and northeast of Area B-11. The topography is relatively flat and slopes gently to the northeast. The Trenches North of Area B-8, as the name implies, are located to the north of Area B-8. Area B-18 is the northernmost site. The overall topography for the WDA slopes to the northeast at an average of 3 percent.

No streams or wetlands lie within the WDA. Surface water runoff follows topography. The closest natural stream to the WDA is an intermittent, disappearing stream that flows just north of the Trenches North of Area B-8 in a west to east direction, to one or more small sinkholes located to the west of Area B-18. No storm sewer systems or wetlands lie within the disposal sites. Most of Areas B-8 and B-11, and the Trenches North of Area B-8, are located within the Augusta soil type, while the remainder of the WDA is located within the Duffield and Frankstown soil type. Static water level measurements recorded during Area B periodic groundwater sampling events indicate that groundwater underlying Area B likely flows to the east-southeast towards the springs that drain into Carroll Creek, and ultimately, the Monocacy River.

Area B-8

Area B-8 is located approximately in the center of the WDA. Area B-8 is a grass-covered field bounded by Area B-10 Grove to the southeast and Area B-11 to the southwest. Based on an analysis of georeferenced historical maps, aerial photos, geophysical surveys, and soil borings, the limits of Area B-8 waste have been defined as a series of trenched areas comprising 2.4 acres.

Waste burial activities were conducted in Area B-8 from 1948 until 1972. Based on historical records of waste disposal and analysis of soil and waste samples collected from the site, the types of material present are expected to include metal, wood, and general debris from laboratory remodeling and building demolition, possibly including decontaminated (sterilized) materials from Fort Detrick laboratories dismantled in the early 1950s. Area B-8 also received sludge from the decontaminating plant that had been found to contain Bacillus anthracis. Hypochlorite was mixed with the sludge as it was removed from the holding tanks to sterilize it prior to burial. In addition to the sludge, Area B-8 may also have received radioactive carbon, sulfur, and phosphorus compounds.

Although analytical sampling of soil identified COPCs above screening levels, there were no indications of hot spots where gross contamination was evident. COPCs and their associated maximum concentrations were: arsenic (22 mg/kg), chromium (46.9 mg/kg), iron (98,000 mg/kg), vanadium (210 mg/kg), benz(a)anthracene (2,000 µg/kg), alpha-BHC (47.9 µg/kg), and delta-BHC (1.15 µg/kg).

Trenches North of Area B-8

The Trenches North of Area B-8 are located north of Area B-8. The site encompasses a 0.97-acre area and consists of three parallel, north-south trending, elongated depressions located to the north of Area B-8. The depressions range from approximately 250 to 350 feet in length, are 10 feet wide, 30 to 45 feet apart, 2 feet deep, and are located in a grassy field that borders a wooded area to the west-northwest.

The Trenches North of Area B-8 were not annotated on historical drawings and therefore disposal activities at these locations are unknown. Historical aerial photographs suggest that the trenches were created around 1958. Based on field observations, geophysical data and visual subsurface observations, it is likely that the three elongated depressions north of Area B-8 represent trenches that were used to bury animal bedding material.

Although analytical sampling of soil identified COPCs above screening levels, there were no indications of hot spots where gross contamination was evident. COPCs and their associated maximum concentrations were: arsenic (45.1 mg/kg), chromium (70.1 mg/kg), iron (100,000 mg/kg), thallium (9.02 mg/kg), and chloroform (5.4 µg/kg). The trenches were capped in 2009-2010 as part of the remedy, as shown on Figure 6 and discussed in Section 4.0.

Area B-10

Area B-10 is in the southern portion of the WDA. The site is a sparsely wooded open area surrounded by a grove of trees, which is referred to as B-10 Grove. Based on an analysis of georeferenced historical maps, aerial photos, geophysical surveys, and soil borings, the limits of Area B-10 waste have been defined as two small trenches.

Waste burial activities were reportedly conducted in Area B-10 from 1965 to 1970, and included refuse, primarily bedding from normal animal farm operations. Area B-10 may have also received animal carcasses and special operations materials. Animal burial reportedly occurred when a laboratory incinerator was overloaded or down for repairs. The carcasses were reportedly sterilized by autoclave prior to burial.

Although analytical sampling of soil identified COPCs above screening levels, there were no indications of hot spots where gross contamination was evident. COPCs and their associated maximum concentrations were: arsenic (21 mg/kg), iron (84,000 mg/kg), manganese (4,700 mg/kg), and vanadium (240 mg/kg).

Area B-10 Grove

Area B-10 Grove is a grove of trees surrounding Area-B-10. The grove of trees has been present for as long as the Army has owned the property, so there is no record of subsurface burial in the aerial photographic record. Analysis of georeferenced historical maps, aerial photos, and geophysical surveys indicates that subsurface burial has not occurred at the site.

Surface debris has been found in the area. In March 2002, a reconnaissance of Area B-10 Grove found a variety of items on the surface including two empty 1-gallon metal chlordane containers, various broken glass debris (pipettes, test tubes, syringes without needles, and bottles), mouse traps, a half buried crumpled drum and garbage can, and a plastic industrial syringe with no measurement markings. No hazardous materials were found. The items were generally found on

the margins of B-10 Grove rather than the interior. The landfill cap installed over Area B-8 encroached on the northwest side of B-10 Grove.

Area B-11

Area B-11 is the westernmost disposal area in the WDA. This site is an open field bordered by a stand of trees to the north, Area B-8 to the east, B-10/B-10 Grove to the southeast, and privately owned property to the southwest. Based on an analysis of georeferenced historical maps, aerial photos, geophysical surveys, soil borings, and test trenches, the site boundary has been defined as a 5.0-acre area.

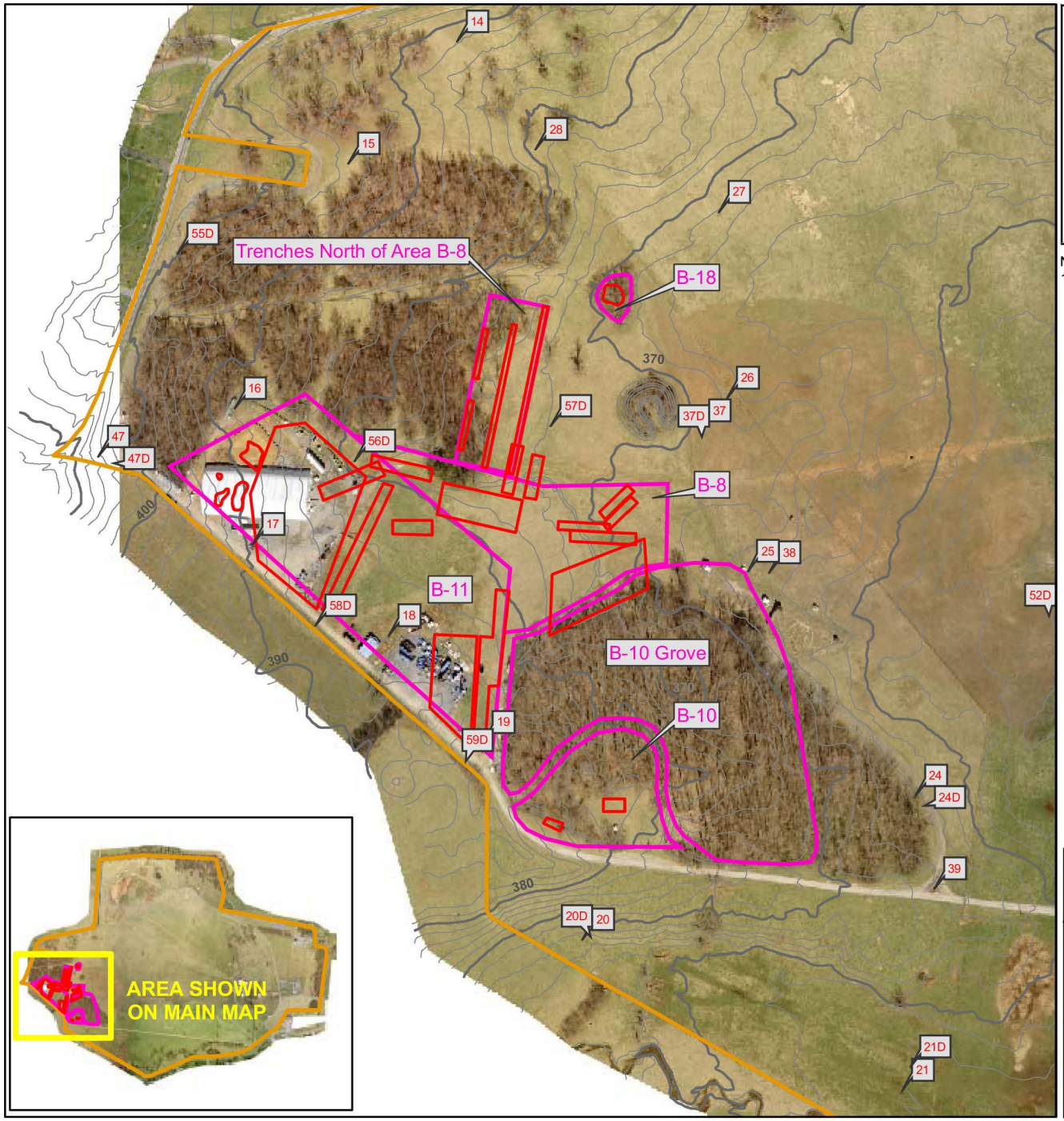
Area B-11 is composed of a variety of disposal sites created from the early 1950s through approximately 1972. The individual disposal sites include general refuse trenches, a sludge pit, and acid and chemical disposal pits. Wastes disposed include: metals, wood, general waste from laboratory modifications and building demolition, refuse from housing and animal farm operations, acids and chemicals, incinerated and non-incinerated medical waste, waste herbicides and insecticides, phosgene, and sludge. Wastes buried in Area B-11 have been identified as the primary source of trichloroethene (TCE) and tetrachloroethene (PCE) contamination in Area B groundwater and surface water. A hot spot removal action was performed on the westernmost portion of Area B-11 from 2001 to 2004 to remove the TCE and PCE waste source, during which vials of live pathogenic bacteria were discovered, as discussed in Section 3.2, below. All Area B-11 trenches were then capped in 2009-2010 as part of the remedy, as discussed in Section 4.0.

The following metals and their associated maximum concentrations were selected as COPCs in subsurface soil following excavation activities at Area B-11: arsenic (44.3 mg/kg), chromium (105 mg/kg), iron (51,000 mg/kg), lead (895 mg/kg), thallium (4.2 mg/kg), and vanadium (1,950 mg/kg). Organic compounds and their associated maximum concentrations selected as COPCs in post-excavation subsurface soil at Area B-11 include: 1,1,2,2-tetrachloroethane (4.2 µg/kg), 1,1,2-trichloroethane (3.4 µg/kg), 1,2-dibromo-3-chloropropane (3.7 µg/kg), EDB (8.3 µg/kg), 1,2-dichloroethane (10.3 µg/kg), benzene (255 µg/kg), bromomethane (590 µg/kg), carbon tetrachloride (129 µg/kg), chloroform (730 µg/kg), methylene chloride (397 µg/kg), PCE (175,000 µg/kg), TCE (153,000 µg/kg), xylenes (total) (73,100 µg/kg), 1,2,4-trichlorobenzene (532,000 µg/kg), 3,3'-dichlorobenzidine (46.2 µg/kg), bis(2-chloroethyl)ether (5,540 µg/kg), hexachlorobenzene (872 µg/kg), naphthalene (281 µg/kg), nitrobenzene (735 µg/kg), N-nitrosodi-n-propylamine (238 µg/kg), N-nitrosodiphenylamine (3,1204 µg/kg), 4,4'-DDD (2,780,000 µg/kg), 4,4'-DDE (11,600,000 µg/kg), 4,4'-DDT (6,178 µg/kg), aldrin (5,486 µg/kg), delta-BHC (682 µg/kg), dieldrin (3,830 µg/kg), endrin (524,000 µg/kg), heptachlor epoxide (10,873 µg/kg), heptachlor (1,098 µg/kg), and lindane (113 µg/kg).

Area B-18

Area B-18 is a former sinkhole located within a small patch of trees northeast of the Trenches North of Area B-8 that is no longer active. The site encompasses approximately 0.4 acres and was a former waste disposal site reportedly used by the Army until 1950 to dispose of various types of waste materials. Although surface debris was evident at the site, it was uncertain whether subsurface disposal activity by the Army occurred. Recent efforts to remove the surface debris have confirmed that subsurface waste is also present. Therefore, this site is included for proposed capping with the rest of the WDA.

An investigation in 1995 was conducted by collecting soil samples from five soil borings located in an area of apparently disturbed soils observed in a 1963 aerial photograph that was not attributed to another environmental site. No waste material was encountered in any of the borings. Analytical results from the soil samples indicated that only one volatile organic compound (acetone) and six semi-volatile organic compounds were detected at concentrations well below residential screening levels. One pesticide (dieldrin) was detected at an estimated concentration below the certified reporting limit. Polychlorinated biphenyls and herbicides were not detected. Metals detected above alluvial soil background and current residential screening levels included: aluminum, iron, thallium, and vanadium. These metals each only exceeded screening levels in two samples. Manganese was detected above alluvial soil background and current industrial screening levels in one soil sample.



Legend

- Monitoring Point
- Limits of Waste
- Environmental Site Boundary
- Area B Boundary

Notes:
1) Aerial photo, dated 2004, was obtained from Fort Detrick.

N

REFERENCE/PROJECTION: Maryland State Plane, NAD 83, Feet

DEPARTMENT OF THE ARMY

Shaw Environmental, Inc.

FT. DETRICK
GIS File:
FTD_191_Fig5_Area_B_PP_SiteMap.mxd
Date: *7/11/08*

Figure A.3-4

Western Disposal Areas Site Map

Fort Detrick
Frederick, MD

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ATTACHMENT 4

Decision Document Summary

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Table A.4-1 Decision Document Summary
Component: Background/Basis for Taking Action Area B-2
Sheet 1 of 2

Decision Document Title:	Decision Document for Area B-2 (FTD 50), Fort Detrick Maryland, Final Document, December 2007
Regulatory Framework:	CERCLA
Remedy Chosen:	Landfill Cap and Land Use Controls
Media of Concern:	Soil
Chemicals of Concern:	No COCs, COPCs: arsenic, chromium, iron, manganese, thallium, vanadium, aldrin, Aroclor-1254, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and heptachlor epoxide
Land Use:	Industrial
Receptors:	Site workers/visitors/off-site residents
Exposure Pathway:	Ingestion/dermal contact/inhalation
Ecological Risk:	None

Table A.4-2 Decision Document Summary
Component: Remedial Action Area B-2
Sheet 2 of 2

Decision Document Title:	Decision Document for Area B-2 (FTD 50), Fort Detrick Maryland, Final Document, December 2007
Remedy Chosen:	Landfill Cap and Land Use Controls
Remedial Action Objectives:	1. Prevent direct human contact with elevated concentrations of contaminants of potential concern, including: a. Site workers and visitors through ingestion, dermal contact, and inhalation of contaminants. b. Off-site residents through inhalation of airborne contaminants. c. Site workers, visitors, and off-site residents from ingestion, dermal contact, and inhalation of contaminants migrated via runoff and surface water. d. Off-site residents through ingestion, dermal contact, and inhalation of contaminants migrated via groundwater. 2. Comply with chemical-specific, location-specific, and action-specific ARARs.
Clean-Up Goals:	N/A
Applicable or Relevant and Appropriate Requirements:	See Attachment 10

Components of the Remedy:	Alternative 2 is the "Landfill Cap and Land Use Control" alternative, which includes a low permeability cap to contain the waste in place and minimize infiltration of rainwater. This alternative was developed according to EPA's Presumptive Remedy guidance for CERCLA Municipal Landfills (USEPA, 1993), and also meets the COMAR for landfill closure as defined in COMAR 26.04.07.21. Although the COMAR is not an "applicable" requirement for Area B-2 waste because the disposal predates the regulation, the Army has determined that Section H of the regulation, which provides closure cap requirements for industrial waste landfills, is a "relevant and appropriate" requirement for the site. Land Use Controls would also be implemented to prevent future land use that would compromise the integrity of the cap.

Table A.4-3 Decision Document Summary
Component: Background/Basis for Taking Action Area B-2
Sheet 1 of 2

Decision Document Title:	Decision Document for Area B-3 Inactive (FTD 51), Area B-6 (FTD69), and the Western Disposal Areas (FTDs 70, 71, 49), Fort Detrick, Maryland, Final Document, February 2009
Regulatory Framework:	CERCLA
Remedy Chosen:	Landfill Caps and Land Use Controls
Media of Concern:	Soil
Chemicals of Concern:	No COCs, COPCs: See Attachment 2
Land Use:	Industrial
Receptors:	Site workers/visitors/off-site residents
Exposure Pathway:	Ingestion/dermal contact/inhalation
Ecological Risk:	None

Table A.4-4 Decision Document Summary
Component: Remedial Action Area B-2
Sheet 2 of 2

Decision Document Title:	Decision Document for Area B-2 (FTD 50), Fort Detrick Maryland, Final Document, December 2007
Remedy Chosen:	Landfill Cap and Land Use Controls
Remedial Action Objectives:	1. Prevent direct human contact with elevated concentrations of contaminants of potential concern, including: a. Site workers and visitors through ingestion, dermal contact, and inhalation of contaminants. b. Off-site residents through inhalation of airborne contaminants. c. Site workers, visitors, and off-site residents from ingestion, dermal contact, and inhalation of contaminants migrated via runoff and surface water. d. Off-site residents exposure to groundwater by minimizing further infiltration of rainwater and migration of contaminants to groundwater. 2. Comply with chemical-specific, location-specific, and action-specific ARARs.
Clean-Up Goals:	N/A
Applicable or Relevant and Appropriate Requirements:	See Attachment 10

Components of the Remedy:	Alternative 2 is the "Landfill Cap and Land Use Control" alternative, which includes a low permeability cap to contain the waste (and potential biological contaminants) in place and minimize infiltration of rainwater. This alternative was developed according to EPA's Presumptive Remedy guidance for CERCLA Municipal Landfills (USEPA, 1993), and also meets the COMAR for landfill closure as defined in COMAR 26.04.07.21. Although the COMAR is not an "applicable" requirement for disposal sites that received wastes prior to the regulation, the Army has determined that Section H of the regulation, which provides closure cap requirements for industrial waste landfills, is a "relevant and appropriate" requirement for the site. Land Use Controls would also be implemented to prevent future land use that would compromise the integrity of the cap and prohibit residential development.

ATTACHMENT 5

Remedy Implementation Documentation (As Builts)

(CB&I Federal Services LLC, 2014)

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Figure A.5-1 – Existing Site Conditions

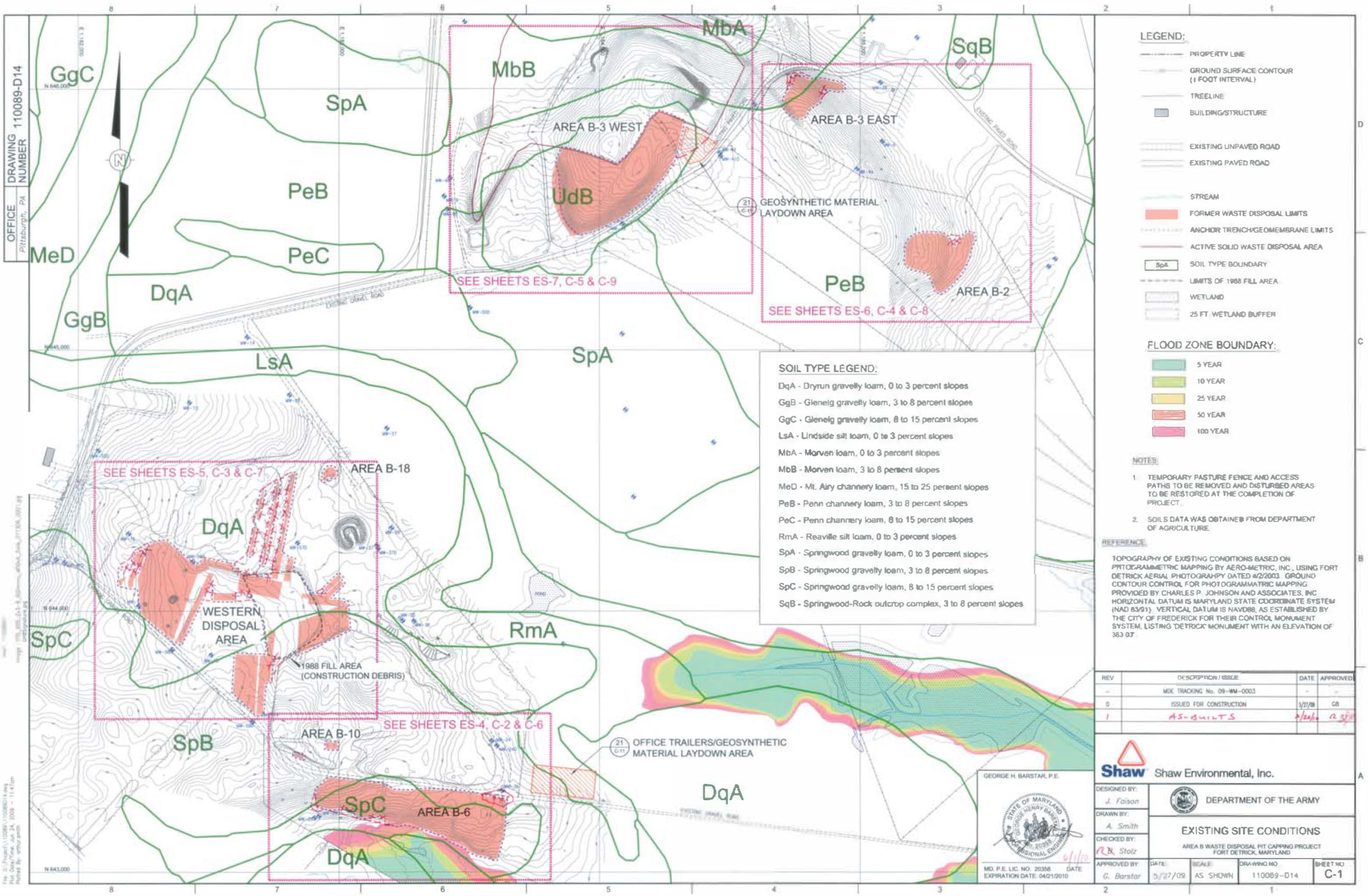


Figure A.5-2 – Top of Subgrade/Liner, Areas B-6 and B-10

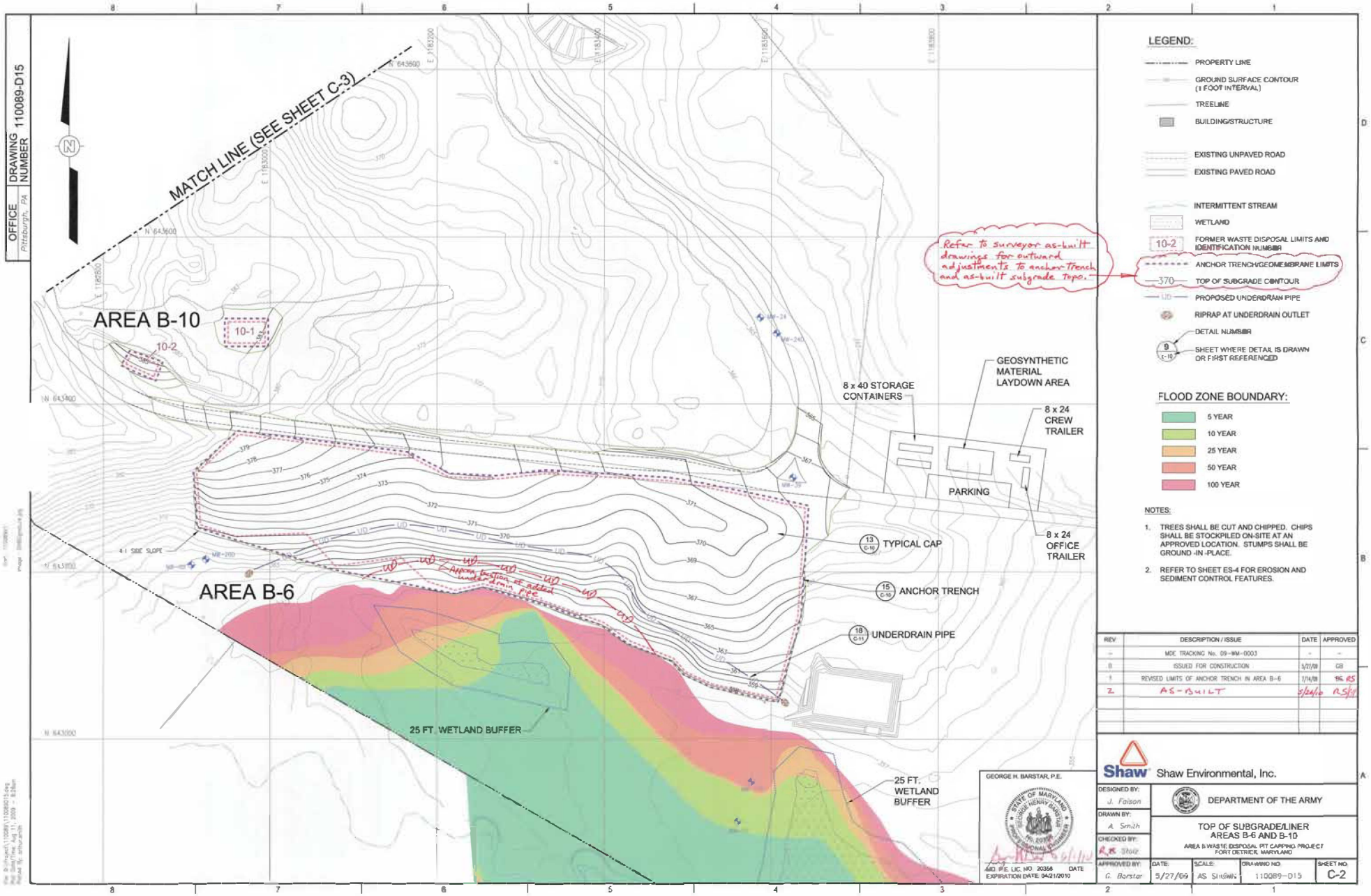


Figure A.5-3 – Top of Subgrade/Liner, Western Disposal Area and Area B-18

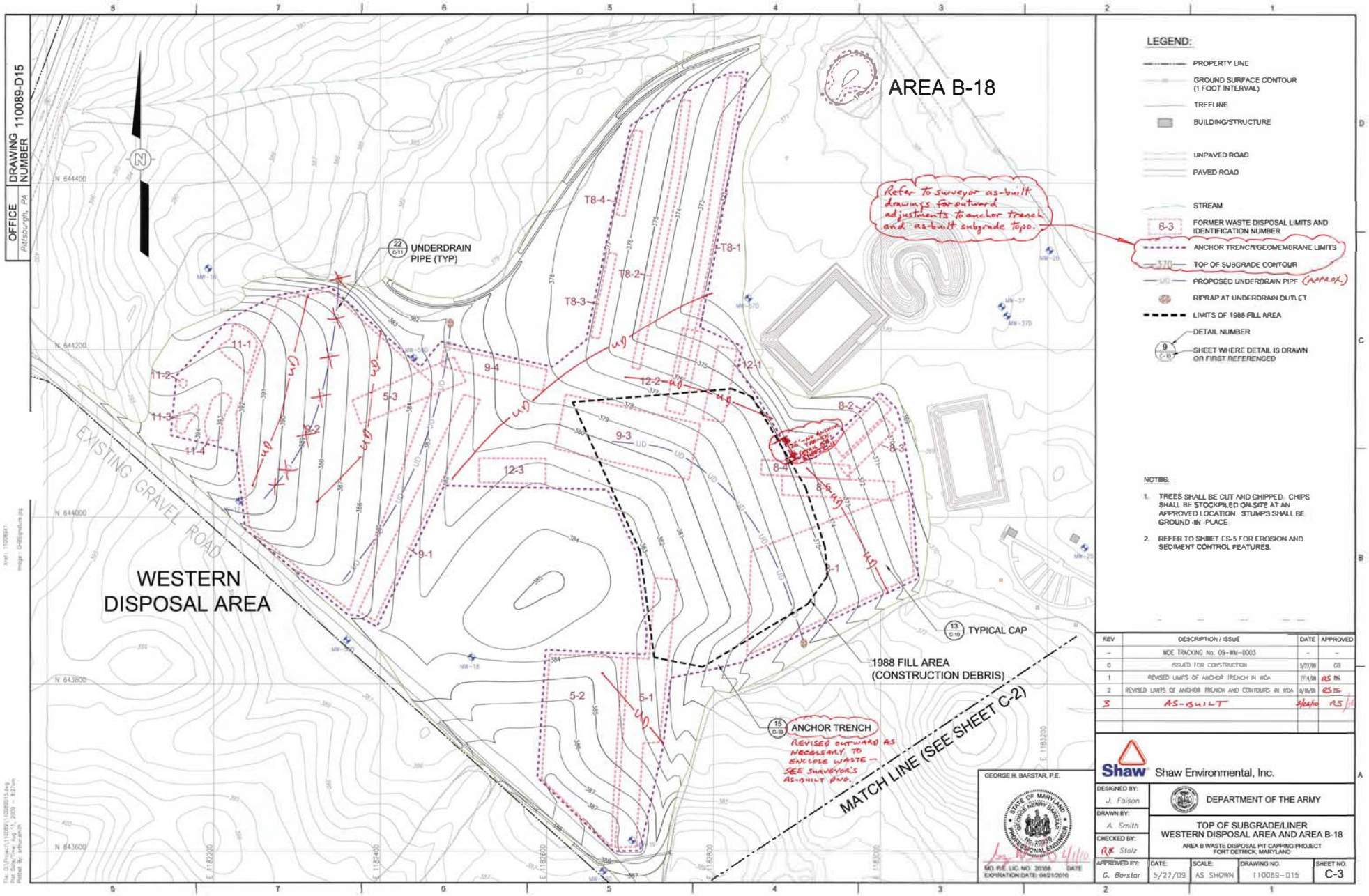


Figure A.5-4 – Top of Subgrade/Liner, Areas B-2 and B-3 East

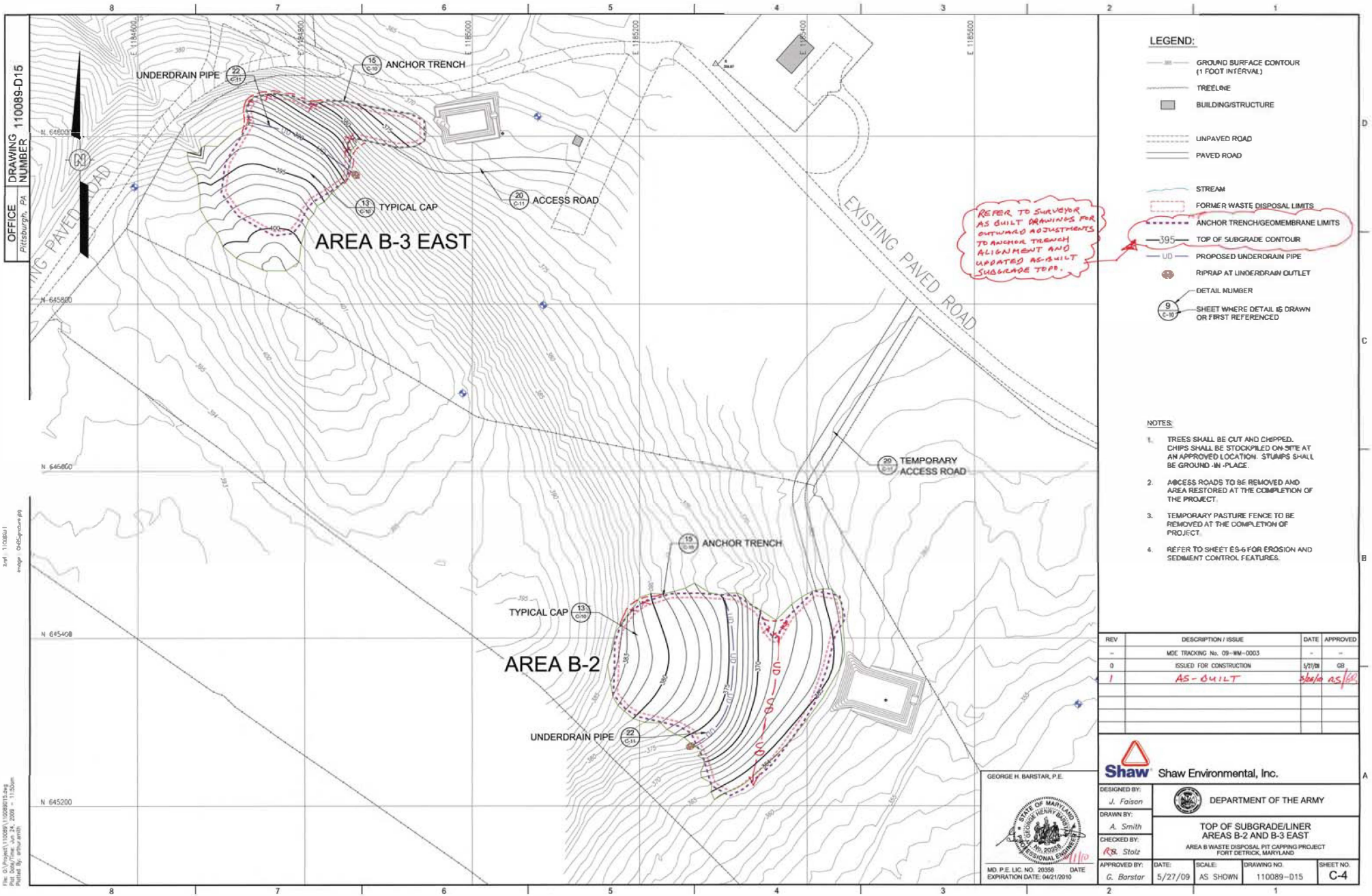


Figure A.5-5 – Top of Subgrade/Liner, Area B-3 West

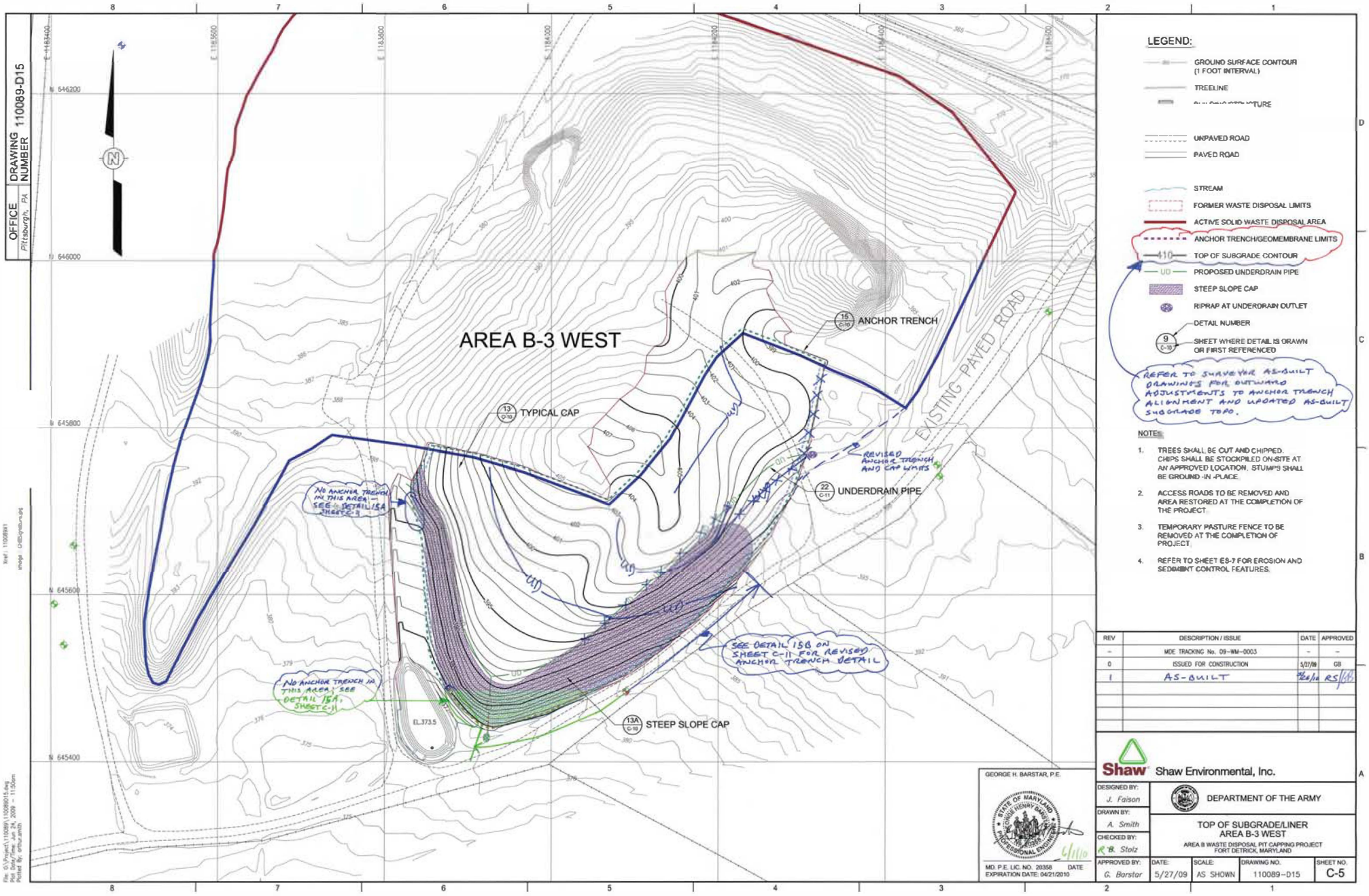


Figure A.5-6 – Top of Vegetative Cover Layer, Areas B-6 and B-10

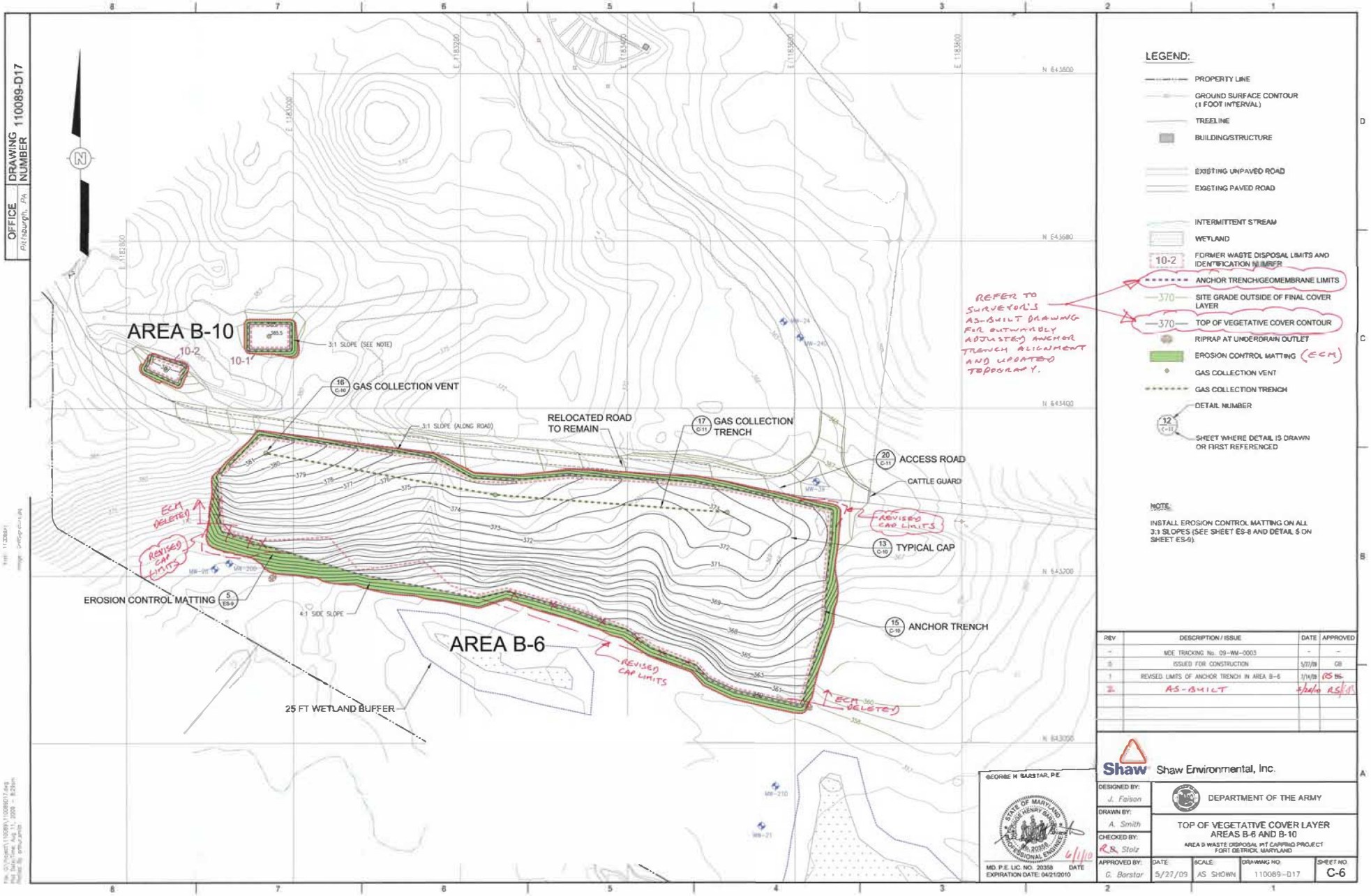


Figure A.5-7 – Top of Vegetative Cover Layer, Western Disposal Area and Areas B-18

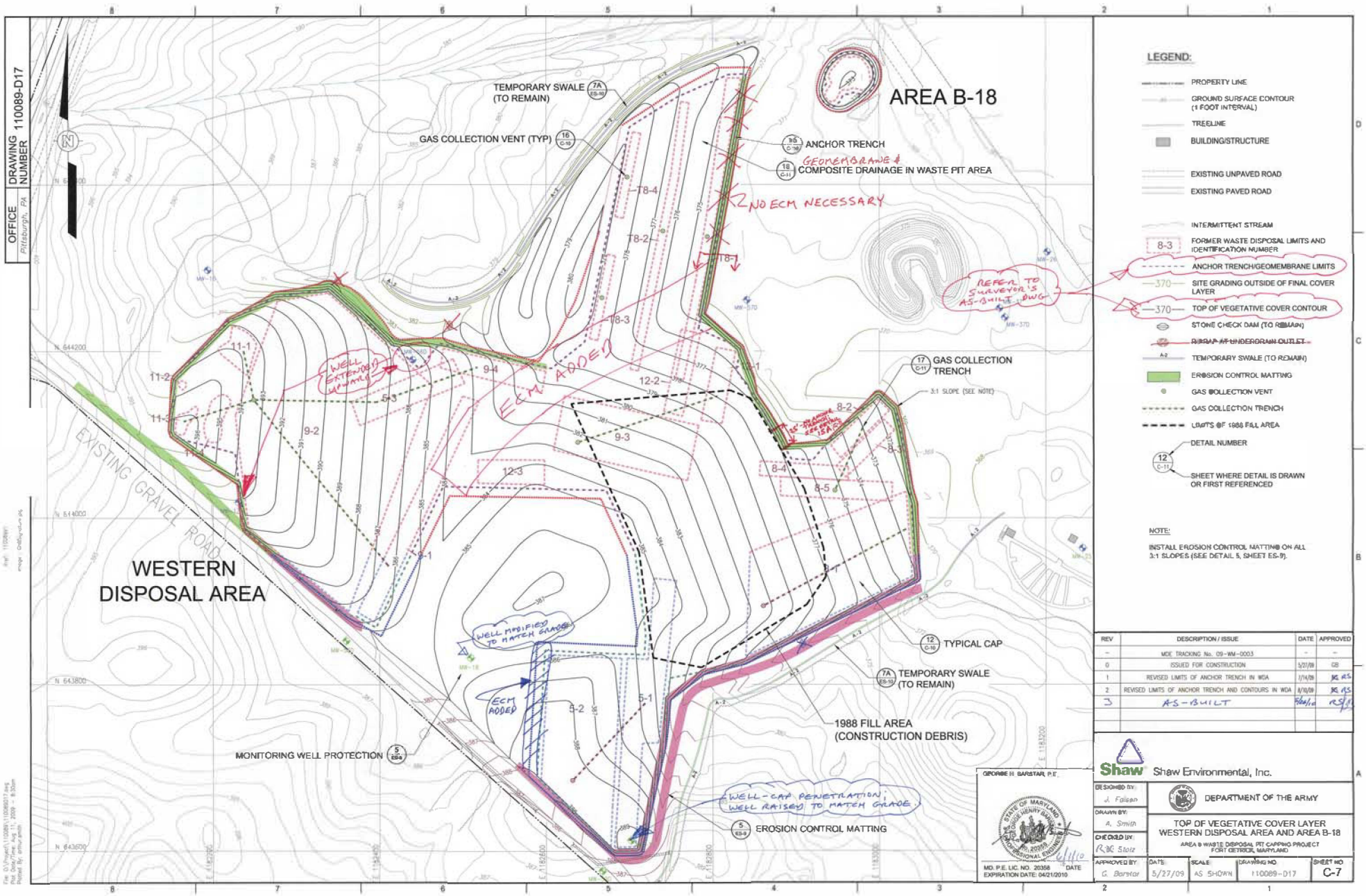


Figure A.5-8 – Top of Vegetative Cover Layer, Areas B-2 and B-3 East

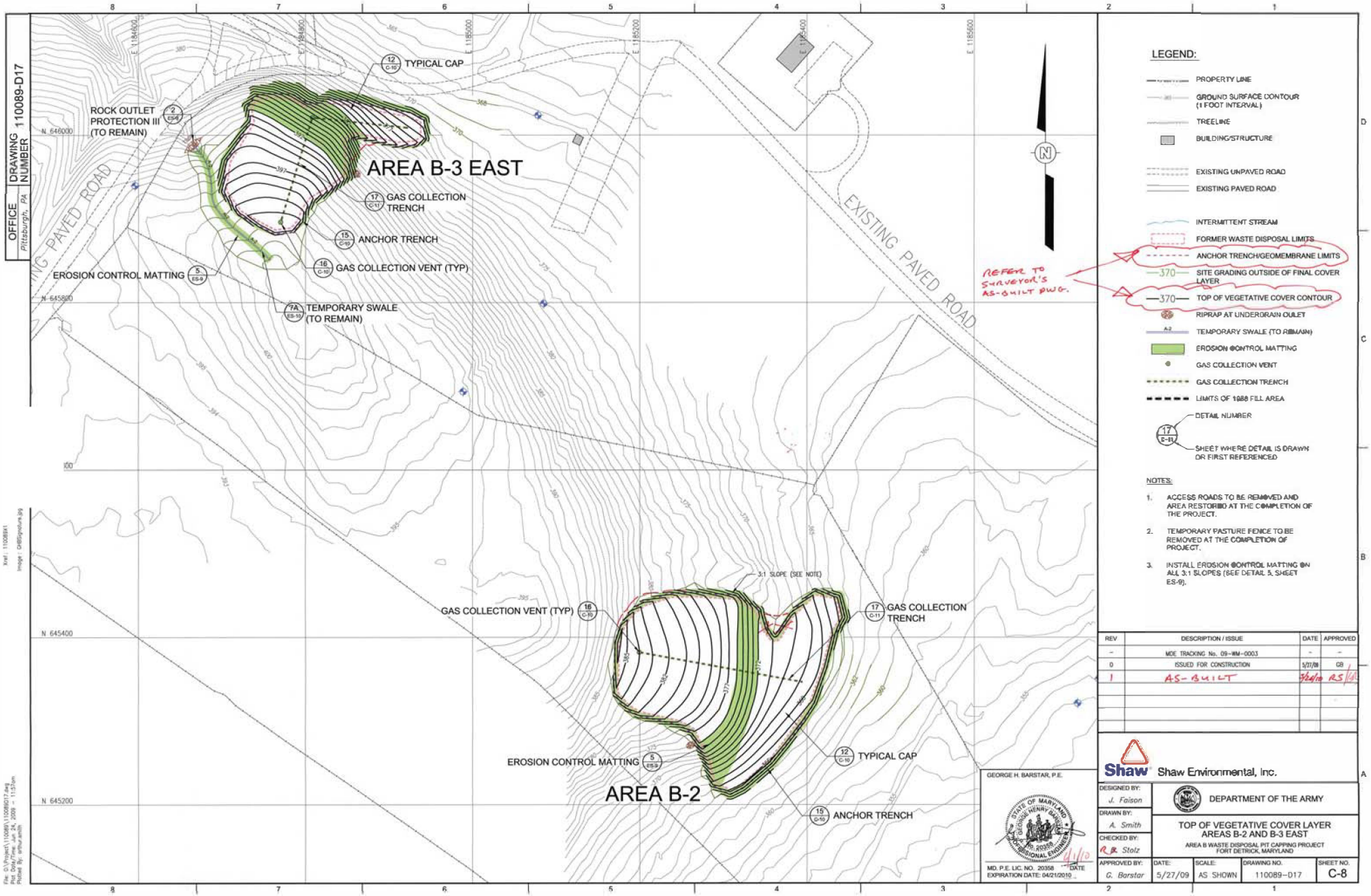


Figure A.5-9 – Top of Vegetative Cover Layer, Area B-3 West

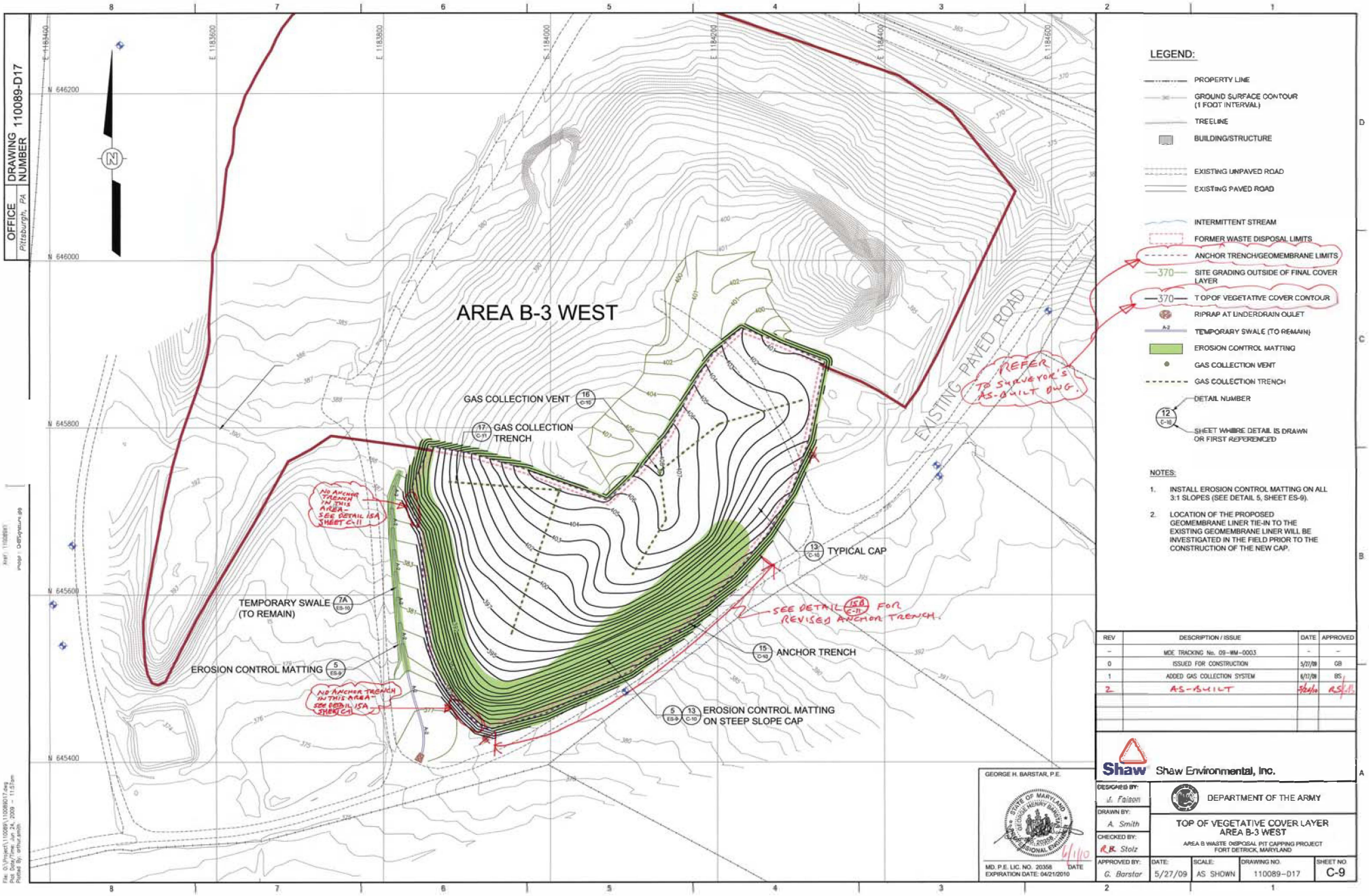


Figure A.5-10 – Details (Sheet 1 of 2)

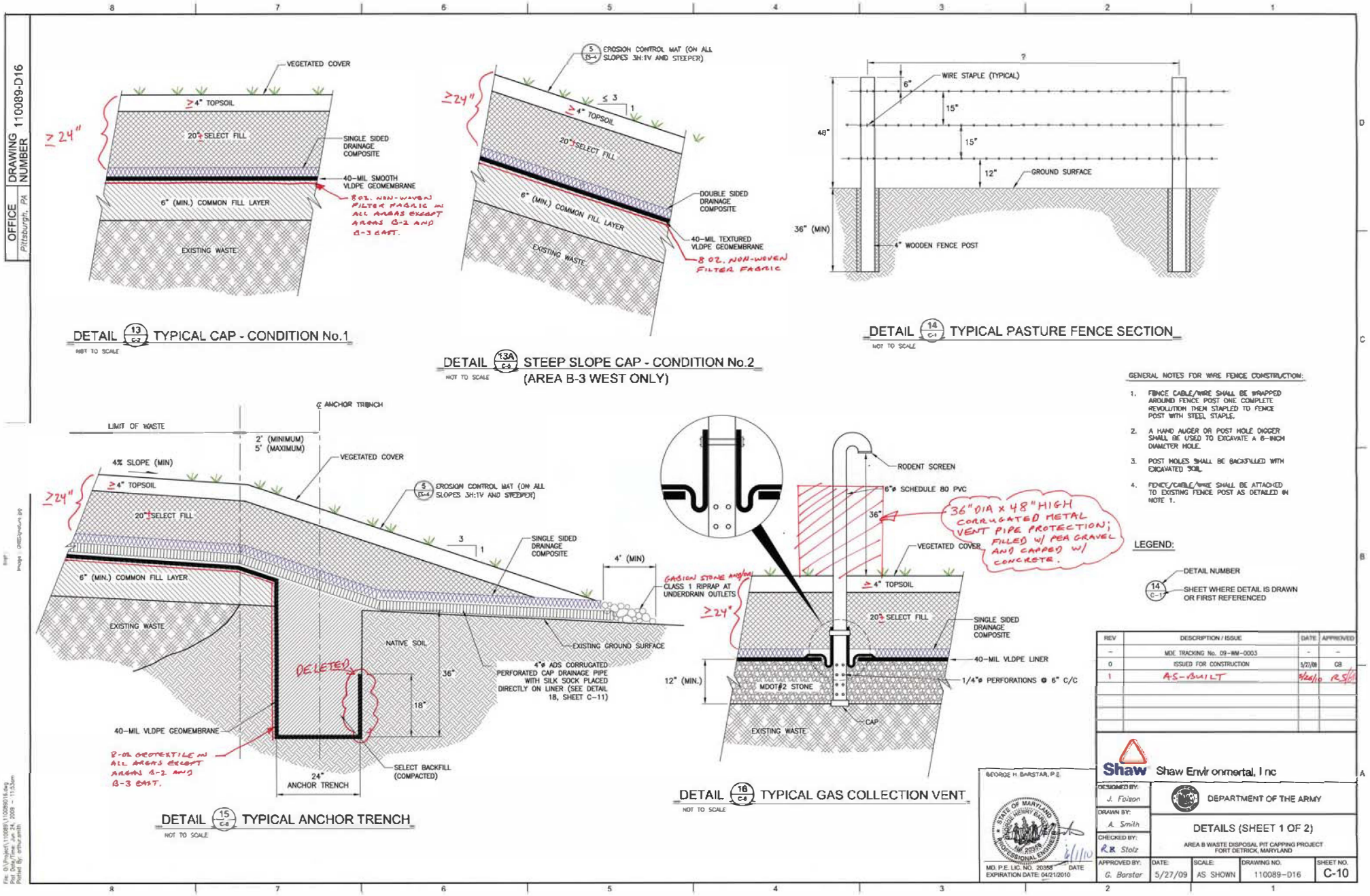


Figure A.5-11 – Details (Sheet 2 of 2)

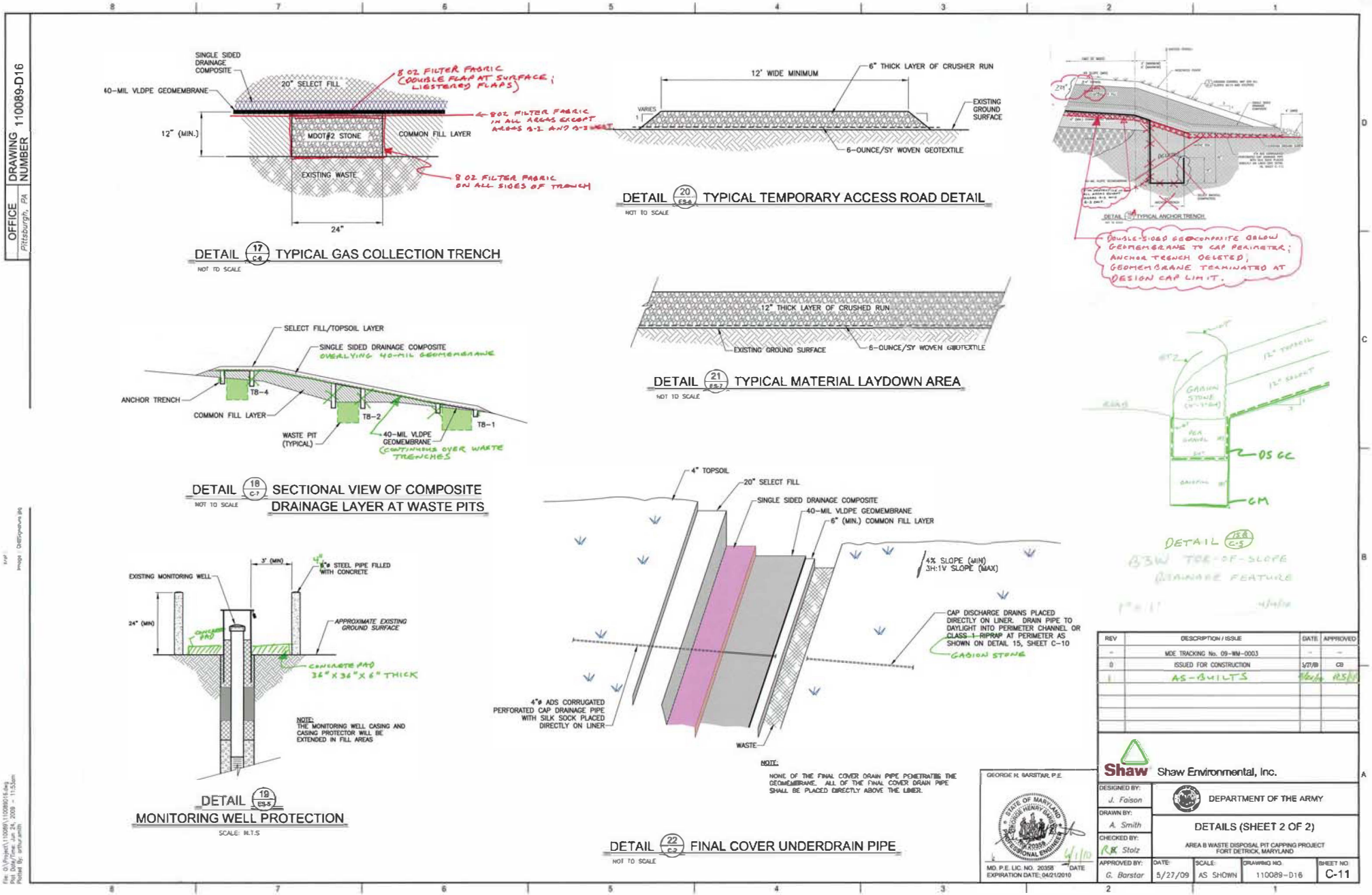
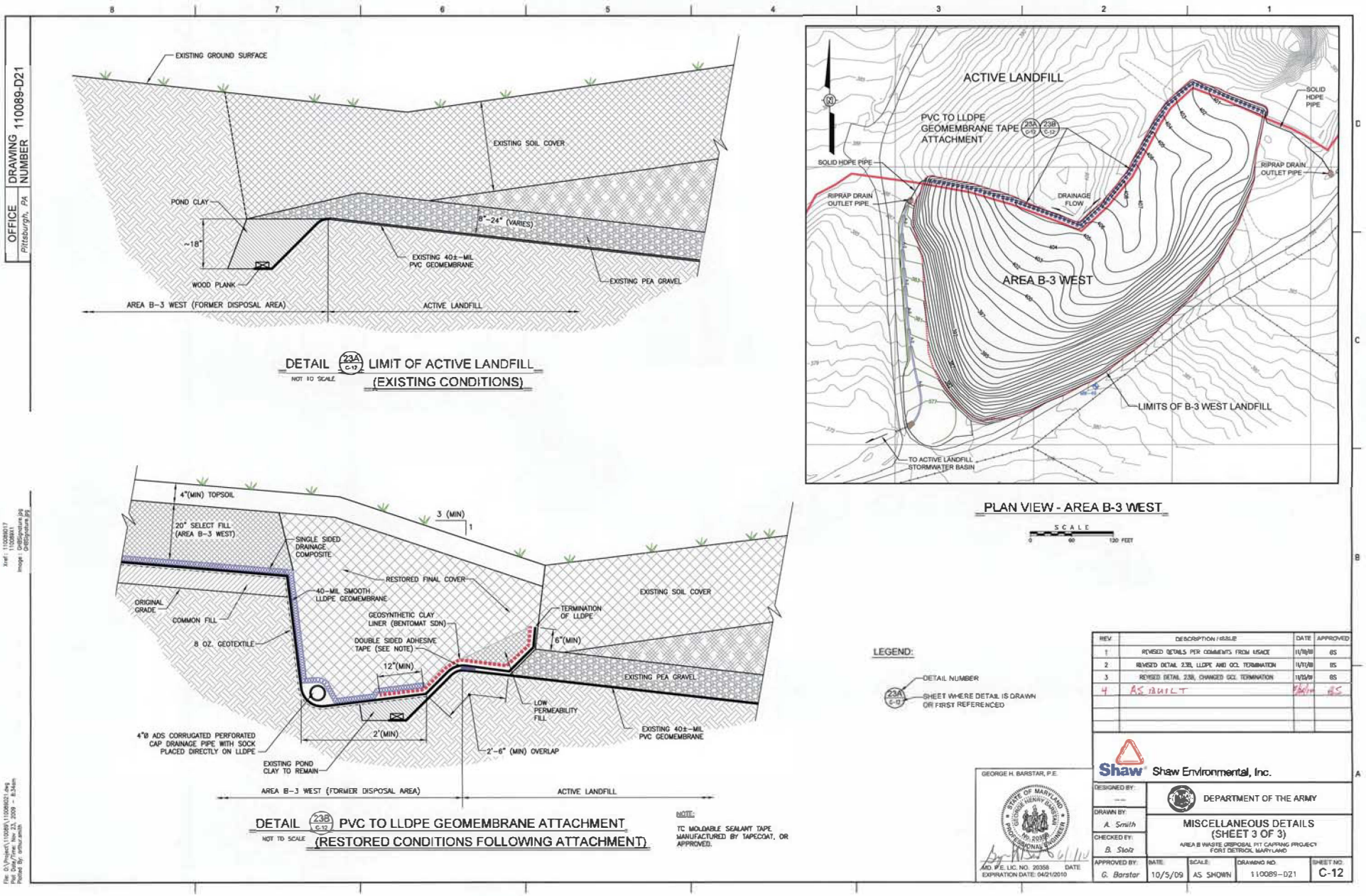


Figure A.5-12 – Miscellaneous Details



ATTACHMENT 6

Public Notice

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AFFP
Five Year Review Evaluates Cl

Affidavit of Publication

STATE OF MARYLAND }
COUNTY OF FREDERICK } SS

Dawn Dayhoff, being duly sworn, says:

That she is Dawn Dayhoff of the The Frederick News-Post, a daily newspaper of general circulation, printed and published in Frederick, Frederick County, Maryland; that the publication, a copy of which is attached hereto, was published in the said newspaper on the following dates:

September 21, 2018

That said newspaper was regularly issued and circulated on those dates.
SIGNED:

Dawn Dayhoff

Subscribed to and sworn to me this 21st day of September 2018.

Jennifer Lynn Brooks Leese, Notary Public, Frederick County, Maryland
My commission expires: March 10, 2019

JENNIFER LB LEESE
NOTARY Public-Maryland
Washington County
Commission Expires
March 10, 2019

00010047 00032383

Holly Akers
USACE Buffalo District (TSD-EE)
1776 Niagara Street
Buffalo, NY 14207

Five Year Review
Evaluates Cleanup at the Fort Detrick Building 568 TCE Spill Site, Area B Groundwater and
Landfills, and Area C WWTP Former Ash Disposal Area
The U.S. Army announces the start of the five year review process required under the Comprehensive Environmental Response, Compensation and Liability Act for the following environmental restoration sites at Fort Detrick:

- Area A – FTD-66 – Area A Groundwater: Bldg 568 Trichloroethylene (TCE) Spill
- Area B Groundwater and Landfills
  - o FTD-49 – Area B-11
  - o FTD-50 – Landfill B-2 (PKA 1.2 Acre)
  - o FTD-51 – Landfill B-3
  - Inactive (PKA 5 Acre)
  - o FTD-69 – Area B-6
  - o FTD-70 – Areas B-8, B-18, and Trenches N of B-8 and Area B-18
  - o FTD-71 – Area B-10 and B-Grove
- Area C – FTD-54 – Area C WWTP Former Ash Disposal Area

The purpose of the five year review is to determine if the remedy selected in the Decision Document for each of the above listed sites is and will continue to be protective of human health and the environment. The Army is required to evaluate the protectiveness of these remedies at least every five years because the selected remedies have hazardous substances, pollutants, or contaminants remaining in the soil or groundwater at Area A, the landfills at Area B, and the Waste Water Treatment Plant (WWTP) Ash Disposal Area at Area C.

These reviews do not include the ongoing investigation that is currently being conducted for the Area B groundwater, which will become part of a future five year review process once the cleanup remedy has been implemented. If you are interested in an update on the Area B groundwater investigation, please attend the next Fort Detrick Restoration Advisory Board meeting. Please contact the Fort Detrick Public Affairs Office for the next Restoration Advisory Board meeting date.

If you have any questions have the five year review being conducted at the sites listed above, please contact the Fort Detrick Public Affairs Office. The reports are scheduled for completion by the end of June 2019. Copies of the final five year review reports will be available at the information repository below.

Information Repository
C. Burr Artz Central Library
110 East Patrick Street
Frederick, MD 21701

For more information please contact:
Fort Detrick Public Affairs Office
810 Schreider Street
Fort Detrick, MD 21702
Phone: (301) 619-2018
Email: usarmy.detrick.usag.mbx.pao@mail.mil

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ATTACHMENT 7

Monitoring Data

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Attachment 7.1
Site Conceptual Model
(ARCADIS/Malcolm Pirnie, 2014)

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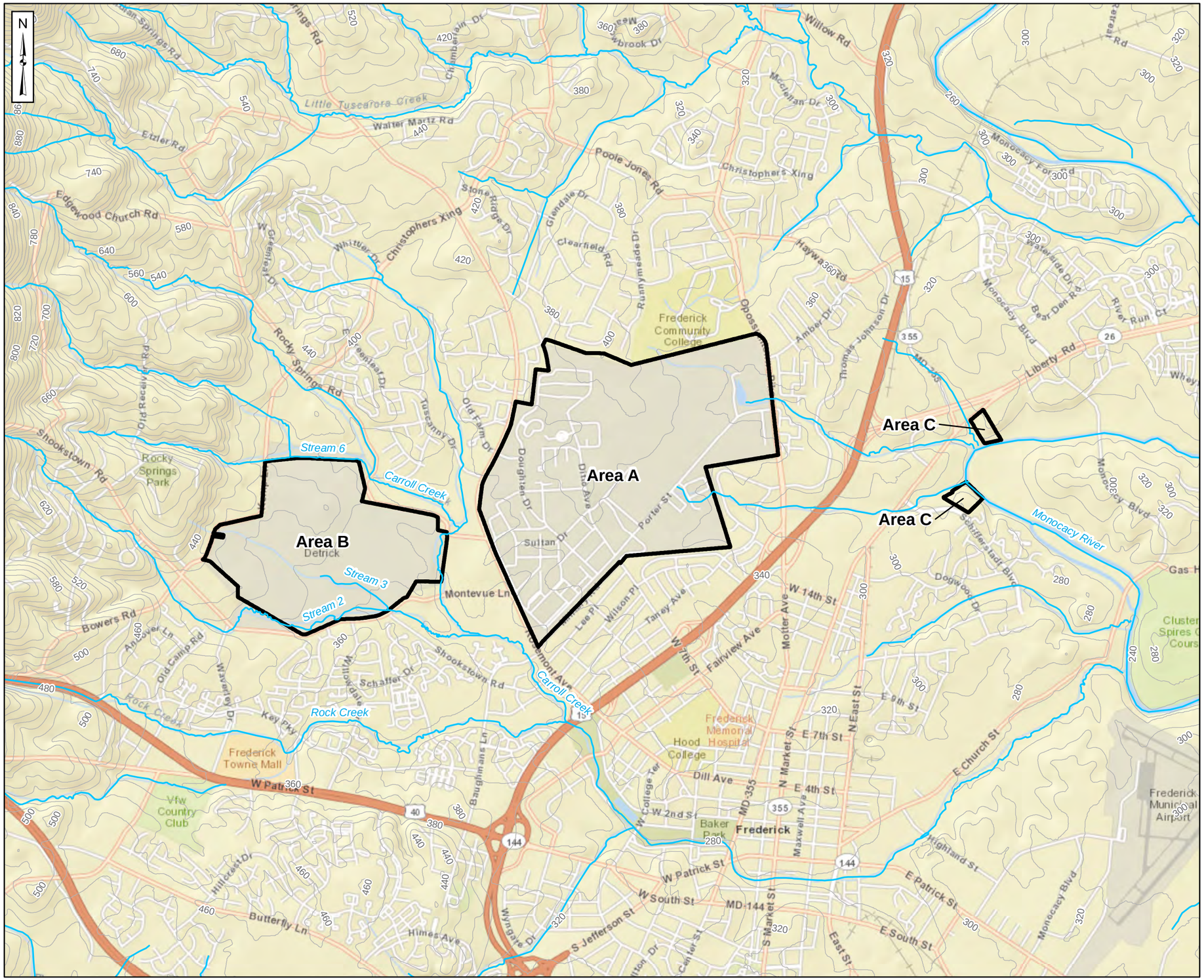


Legend

- Fort Detrick Boundary
- Stream
- Elevation Contour (ft)

Notes:

1) Streams were obtained from Frederick County MD Geographic Information Systems (GIS) digital data online (2001).
2) Basemap was obtained from ESRI ArcGIS Online Basemap Services (2006).
3) Topography was obtained from Maryland Department of Natural Resources (DNR), Maryland Geological Survey (2004). Layer derived from U.S. Geological Survey (USGS) 7.5-minute series (Topographic) Frederick Quadrangle, 1953 (photo revised 1983).

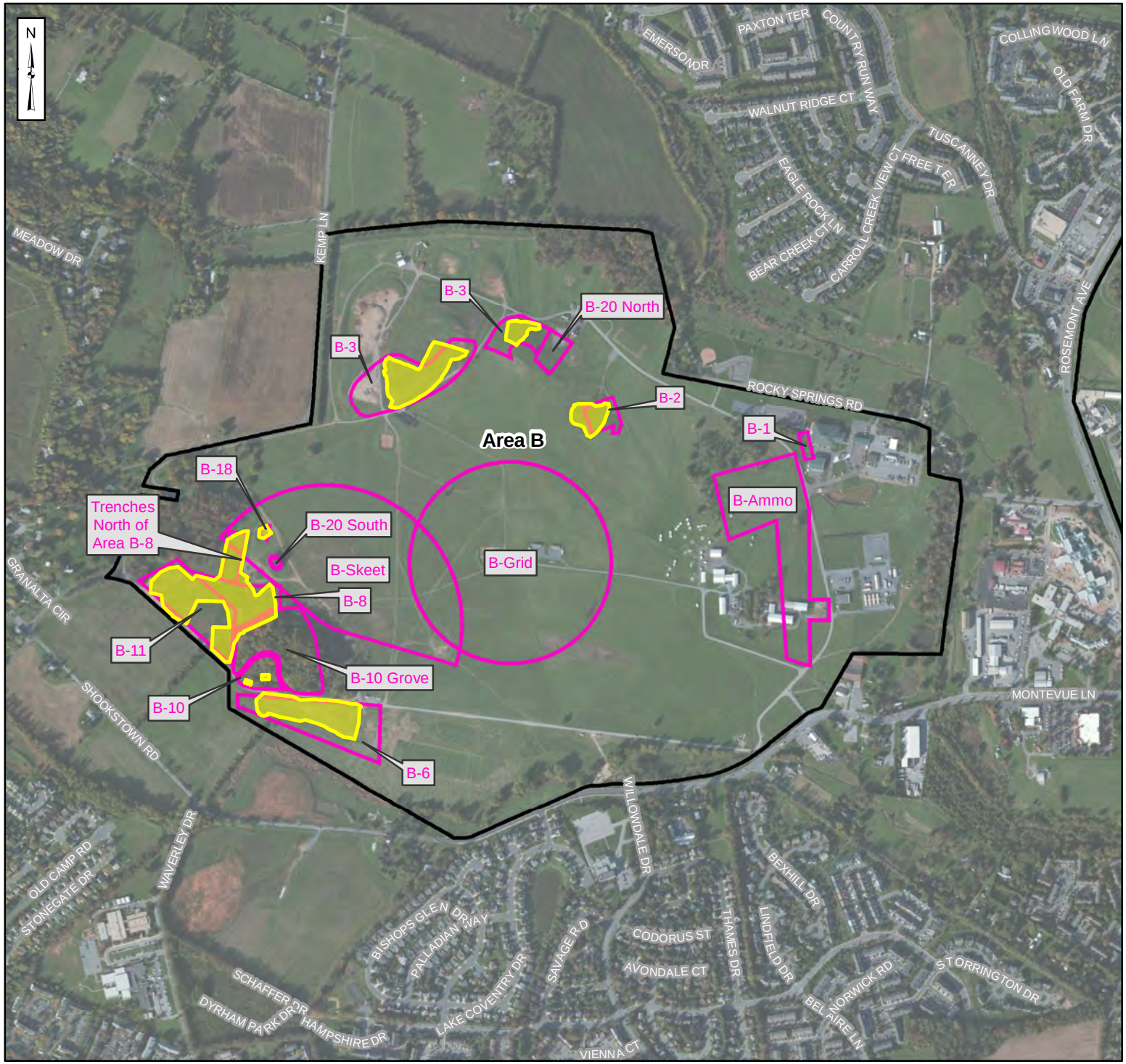
ARCADIS MALCOLM PIRNIE
Infrastructure · Water · Environment · Buildings

CSM
Figure A.7.1-1

Study Area

Area B Groundwater Investigation
Fort Detrick
Frederick, MD

\\arcadis-us.com\office\data\WhitePlains-NY\WHI_GIS\GIS_data\Projects\ARMY\Installations\Fort_Detrick\GW_RI\MXDs\CSM\Figure1_Study_Area.mxd



Legend

- Fort Detrick Boundary
- Landfill Cap Boundary
- Landfill Cap Area
- Environmental Sites

Notes:
1) Aerial imagery accessed on 05/29/2012 through BING Maps Aerial via ArcGIS Online Layer Packages by ESRI (12/1/2010) ((c) 2010 Microsoft Corporation and its data suppliers).

0 500 1,000
Feet

REFERENCE/PROJECTION:
Maryland State Plane, NAD 83, Feet

ARCADIS MALCOLM PIRNIE

CSM
FIGURE A.7.1-2

Area B Environmental Investigation Areas

Area B Groundwater Investigation
Fort Detrick
Frederick, MD

N

BMW36
BMW36D
BMW4
BMW77
BMW5
BMW34
BMW5D
BMW76
BMW29B
BMW29A
BMW42
BMW75
(Not Completed)
BMW41D
BMW44
BMW9D
BMW49
BMW33
BMW11
BMW11D
BMW63
BMW72
BMW62
BMW45
BMW64
BMW43
BMW78A
BMW78B
BMW55D
BMW73
BMW65B
BMW65A
BMW40
BMW56D
BMW16
BMW57D
BMW37
BMW37D
BMW68E
BMW47D
BMW67D
BMW67B
BMW67C
BMW67A
BMW18
BMW68C
BMW68A
BMW38
BMW52D
BMW53A
BMW53B
BMW53D
BMW53E
BMW53F
BMW54D
BMW59D
BMW58D
BMW24
BMW24D
BMW20
BMW20D
BMW74
BMW21D
BMW21
BMW32D
BMW69A
BMW31
BMW31D
BMW70C
BMW70A
BMW70B
DWSRD-1
BMW35
BMW35D
BMW71A
BMW71C
BMW71B
BMW66B
BMW66D
BMW61
DWSRD-26

New Oxford

Frederick Limestone

Bull Run Mtn. Fault

Robinson Pond

Post Pond

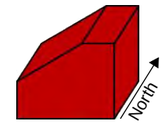
shallow rock

deep rock

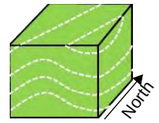
Legend

- Fort Detrick Boundary
- Area B Monitoring Wells
- Approximate Geologic Contact
- Streams

Schematic of bedding orientation



No dominant bedding orientation observed



Red: New Oxford Formation Conglomerate
Green: Frederick Formation Limestone

Notes:
1) Aerial imagery accessed through BING Maps Aerial via ArcGIS Online Layer Packages by ESRI (12/1/2010) (c) 2010 Microsoft Corporation and its data suppliers accessed on 07/20/2012 through ArcGIS 10.
2) Dominant bedding orientation based on optical and acoustic televiewer borehole geophysics completed in Site monitoring wells. Orientations are approximate.
3) BWMxx: Area B bedrock monitoring wells
4) Shallow and deep portions of BWM-67 schematic diagram reflect distinct bedding orientations shallower and deeper than 200 ft bgs.

0 700 1,400 2,100 Feet

REFERENCE/PROJECTION: Maryland State Plane, NAD 83, Feet

ARCADIS MALCOLM PIRNIE
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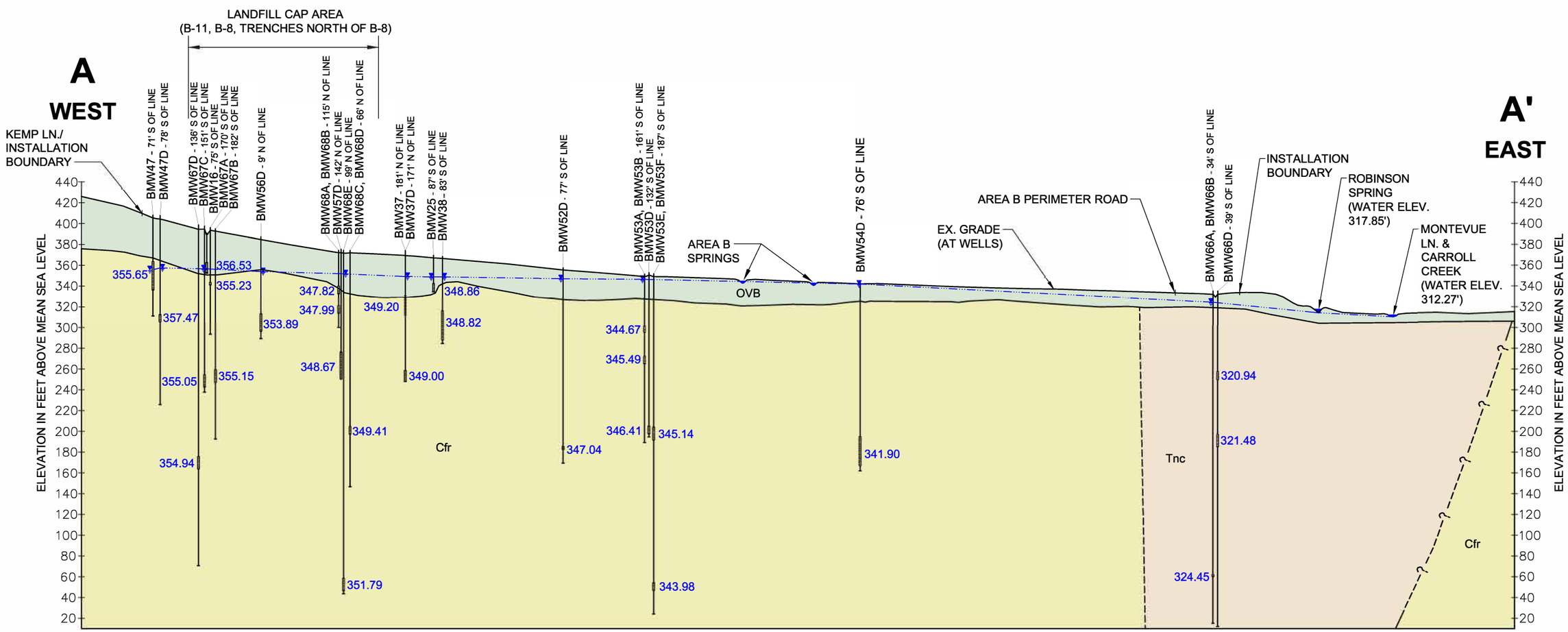
CSM
Figure A.7.1-3

Dominant Bedding Orientation in Frederick and New Oxford Formations

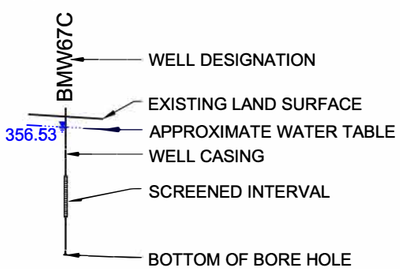
Area B Groundwater Investigation
Fort Detrick
Frederick, MD

CITY: DEN-TECH DIV/GROUP: ENV DB: R.MCKINNEY QC: M.COBB PIC: PM: J.CHERRY TM: K.WHITE Path: I:\FTDetrick\MapDocuments\GW_Dips.mxd



LEGEND:

- OVB = OVERBURDEN
- Tnc = TRIASSIC NEW OXFORD FORMATION
- Cfr = CAMBRIAN FREDERICK FORMATION



CROSS SECTION A-A'

HORIZONTAL GRAPHIC SCALE: 0 250' 500'

VERTICAL GRAPHIC SCALE: 0 50' 100'

NOTE:

WATER TABLE AND POSTED WATER-LEVEL ELEVATIONS FROM MARCH 2012 SITE-WIDE GAUGING EVENT.

ARCADIS MALCOLM PIRNIE

FIGURE A.7.1-4

Cross Section A-A'

Area B Groundwater Investigation
Fort Detrick
Frederick, MD

CITY: SYRACUSE, NY DIV/GROUP: ENV/IM-DV DB: N. SMITHGALL, P. LISTER PM/TM: S. MORRIS TR: M. COBB LYR: ON=*;OFF=*REF*
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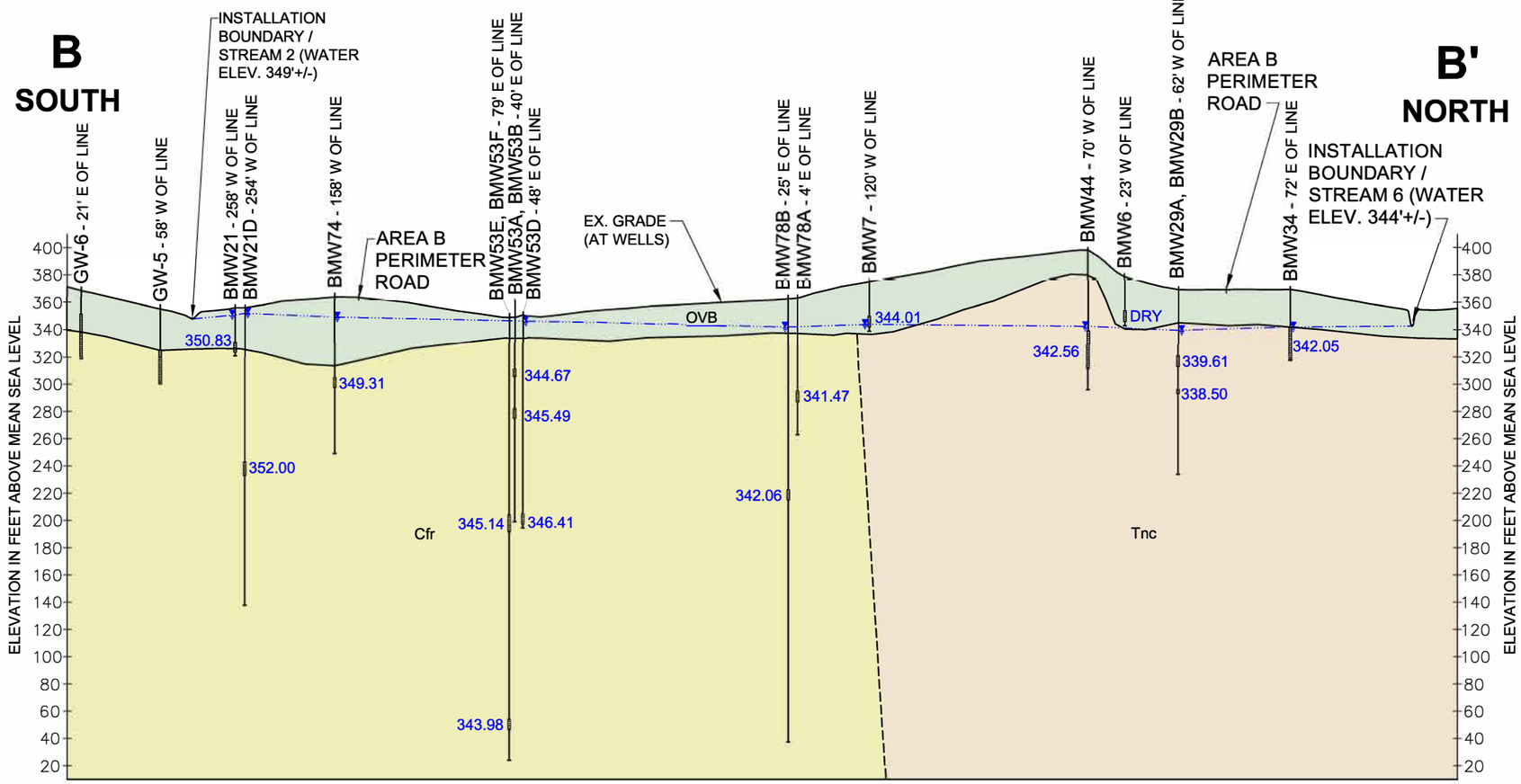


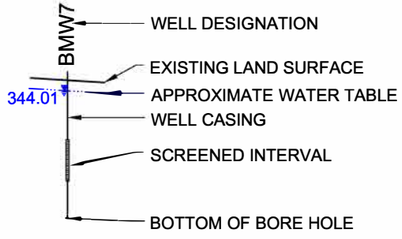
CROSS SECTION B-B'

LEGEND:

- OVB = OVERBURDEN
- Tnc = TRIASSIC NEW OXFORD FORMATION
- Cfr = CAMBRIAN FREDERICK FORMATION

HORIZONTAL GRAPHIC SCALE: 0 250' 500'

VERTICAL GRAPHIC SCALE: 0 50' 100'



NOTE:

WATER TABLE AND POSTED WATER-LEVEL ELEVATIONS FROM MARCH 2012 SITE-WIDE GAUGING EVENT.

ARCADIS MALCOLM PIRNIE

FIGURE A.7.1-5

Cross Section B-B'

Area B Groundwater Investigation
Fort Detrick
Frederick, MD

CITY: SYRACUSE, NY DIV/GROUP: ENV/IM-DV DB: N. SMITHGALL, P. LISTER PM/TM: S. MORRIS TR: K. WHITE LYR: ON=*;OFF=*REF*
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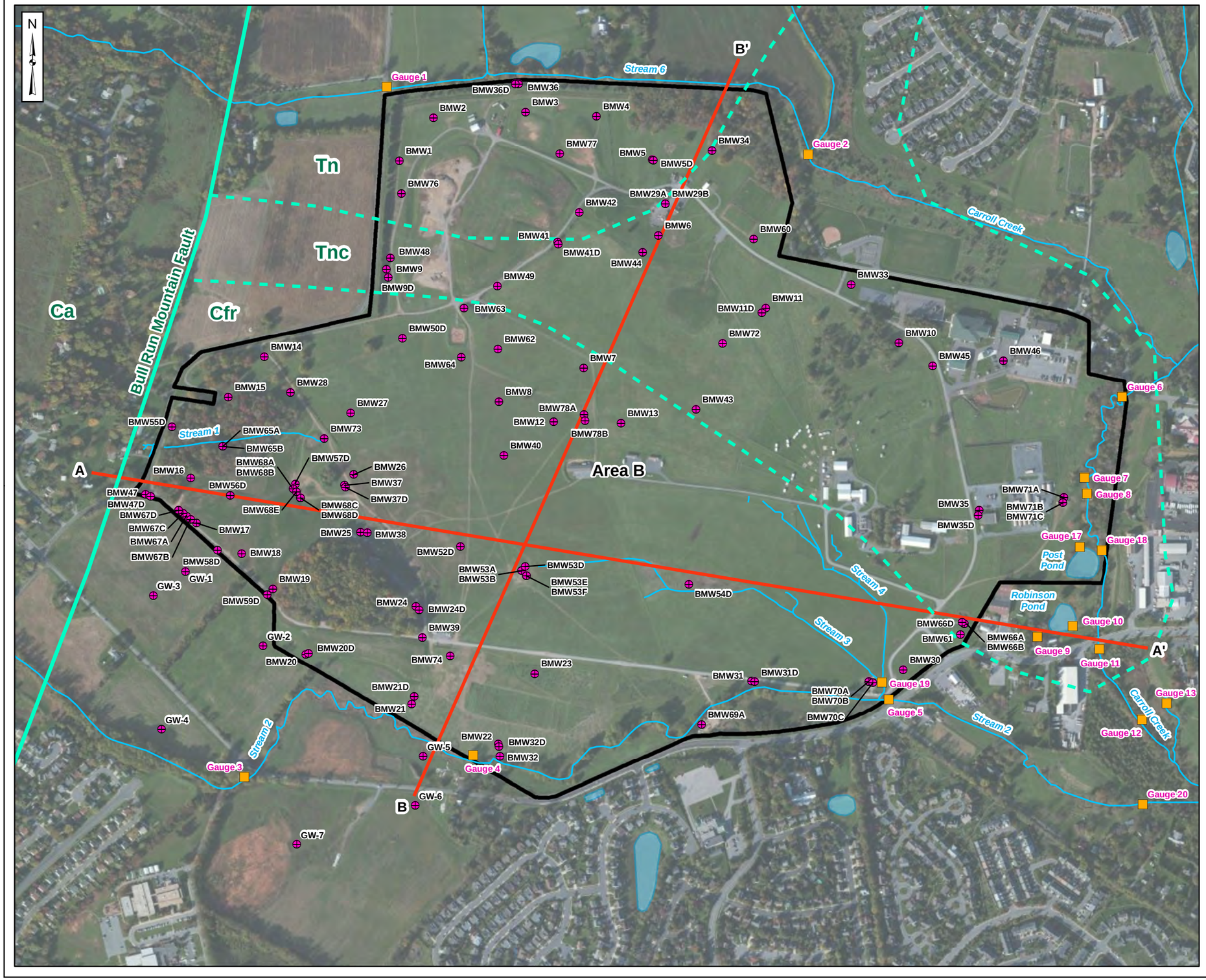
Army_Logo.bmp



Legend

- Fort Detrick Boundary
- Area B Monitoring Well
- Stream Gauge
- Cross Section
- Fault Line
- Geologic Contact
- Stream
- Water Body
- Trc — Bedrock Geologic Unit Abbreviation (see note)

Notes:

1) Aerial imagery accessed on 05/29/2012 through BING Maps Aerial via ArcGIS Online Layer Packages by ESRI (12/1/2010) ((c) 2010 Microsoft Corporation and its data suppliers).
2) Bedrock geologic unit abbreviations:
   - Tn = Triassic New Oxford Formation (sandstone & claystone)
   - Tnc = Triassic New Oxford Formation (basal conglomerate)
   - Cfr = Cambrian Frederick Formation Rocky Springs Station Member (limestone)
   - Ca = Cambrian Antietam Formation (metasandstone)

0 500 1,000
Feet

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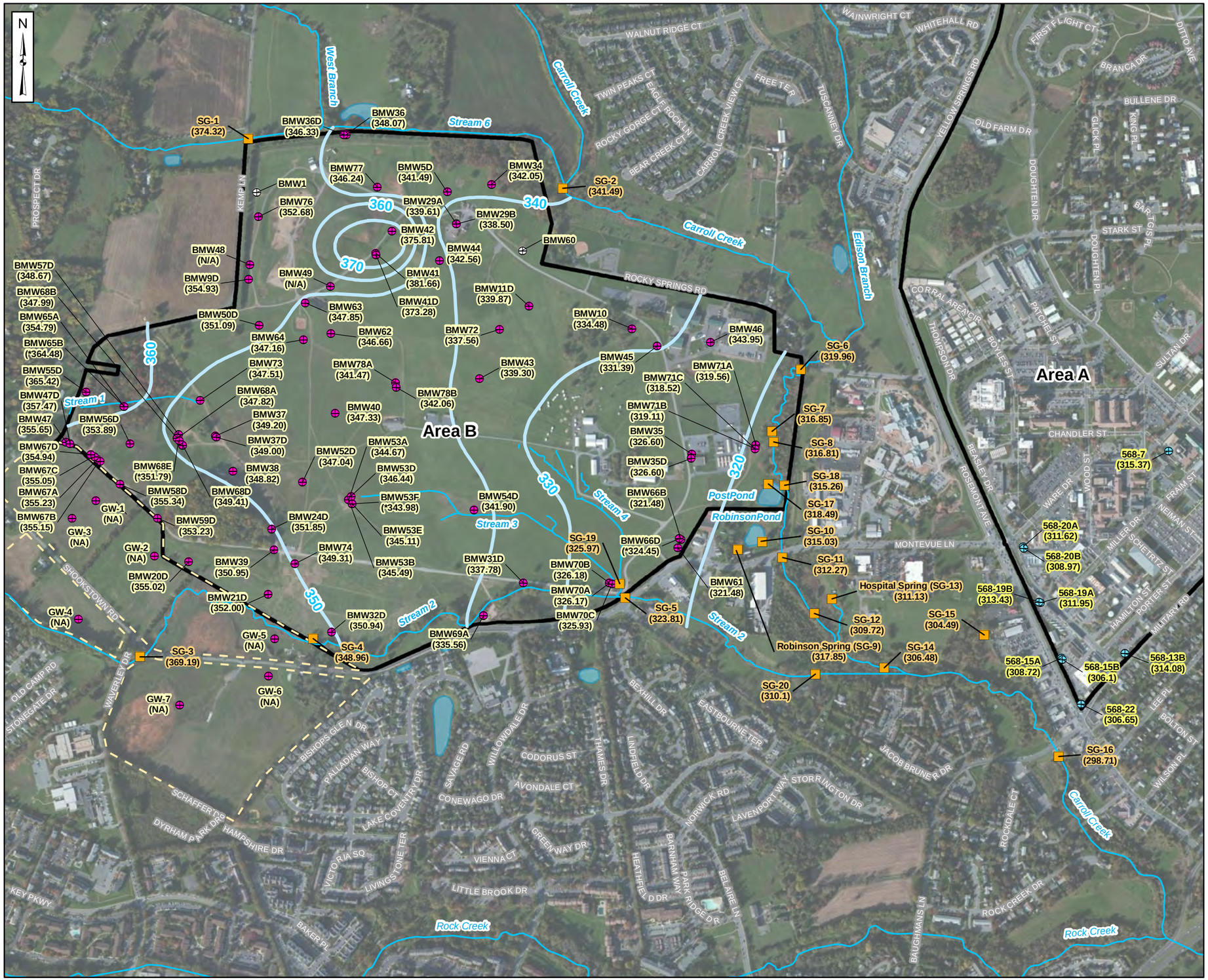
CSM
Figure A.7.1-6

Area B Cross-Section Locations

Area B Groundwater Investigation
Fort Detrick
Frederick, MD



Legend

- Fort Detrick Boundary
- Waverly View Property
- Area A Monitoring Well
- Area B Monitoring Well
- Abandoned Monitoring Well
- Stream Gauge
- Stream
- Water Body
- Groundwater Elevation Contour

BMW 2 Location ID
(349.20) Groundwater Elevation (March 2012) (ft msl)

Notes:
1) Roads and streams were obtained from Frederick County MD Geographic Information Systems (GIS) digital data online (roads, 2010; streams, 2001).
2) Aerial imagery accessed on 05/29/2012 through BING Maps Aerial via ArcGIS Online Layer Packages by ESRI (12/1/2010) ((c) 2010 Microsoft Corporation and its data suppliers).
3) * Levels of deep monitoring wells BMW-53F, -65B, -66D and -68E that are screened at depths greater than 250 ft bgs not contoured explicitly. Levels posted for reference.

0 500 1,000
Feet

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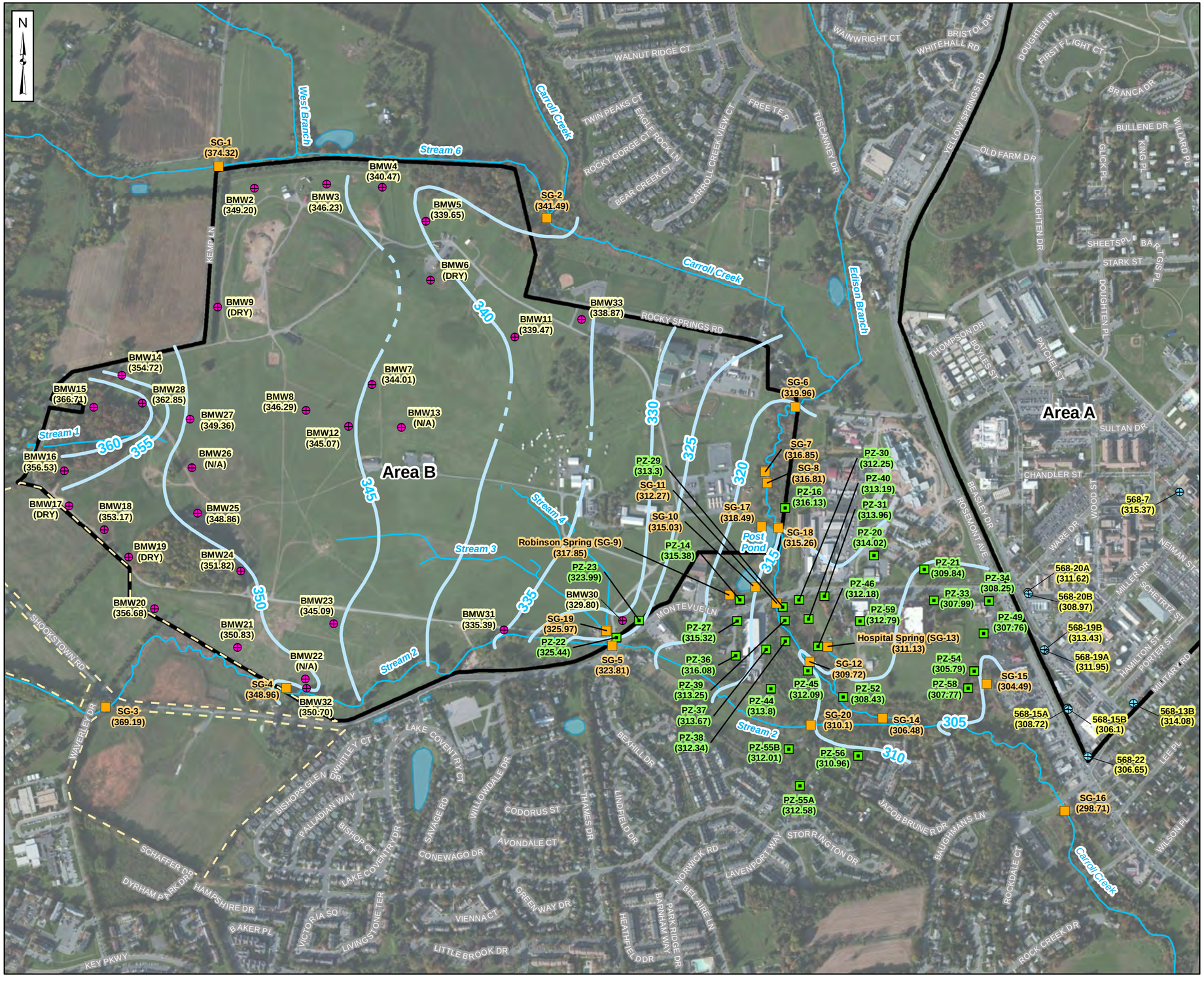
CSM
Figure A.7.1-7

Potentiometric Surface in Shallow Bedrock
March 26/27, 2012

Area B Groundwater Investigation
Fort Detrick
Frederick, MD

W:\Projects\ARMY\Installations\Fort_Detrick\GW_RIMXDs\CSMFigure7_Potentiometric_Shallow_Bedrock.mxd



Legend

- Fort Detrick Boundary
- Waverly View Property
- Area A Monitoring Well
- Area B Monitoring Well
- Stream Gauge
- Piezometer
- Stream
- Water Body
- Groundwater Elevation Contour

BMW 2 Location ID
(349.20) Groundwater Elevation (March 2012) (ft msl)

Notes:
1) Roads and streams were obtained from Frederick County MD Geographic Information Systems (GIS) digital data online (roads, 2010; streams, 2001).
2) Aerial imagery accessed on 05/29/2012 through BING Maps Aerial via ArcGIS Online Layer Packages by ESRI (12/1/2010) ((c) 2010 Microsoft Corporation and its data suppliers).

0 500 1,000
Feet

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CSM
Figure A.7.1-8

Potentiometric Surface in the Overburden
March 26/27, 2012

Area B Groundwater Investigation
Fort Detrick
Frederick, MD

W:\Projects\ARMY\Installations\Fort_Detrick\GW_RI\MXDs\CSM\Figure8_Potentiometric_Overburden.mxd

Legend

- Fort Detrick Boundary
- Stream
- Water Body
- Elevation Contour (ft)
- Spring (identified during March 2012 Stream Survey)

Dye Tracing Sample Station and Recovery

- Epikarstic Dye Injection Point
- Dye Monitoring Location
- Eosine Detection
- Fluorescein Detection

Dye Tracing Sample Recovery Line

- Eosine
- Fluorescein

Notes:

1) Streams were obtained from Frederick County MD Geographic Information Systems (GIS) digital data online (2001).
2) Basemap was obtained from ESRI ArcGIS Online Basemap Services (2006).
3) Topography was obtained from Maryland Department of Natural Resources (DNR), Maryland Geological Survey (2004). Layer derived from U.S. Geological Survey (USGS) 7.5-minute series (Topographic) Frederick Quadrangle, 1953 (photo revised 1983).
4) Dye tracing completed in 1995 by Ozark Underground Laboratory (report dated April 1997).
5) Trace vectors drawn assuming dye transport from nearest dye injection point. Locations marked as detections without vectors are judged to be either inconclusive, or are surface water locations where dye arrival inferred to reflect stream transport.

0 1,000 2,000
Feet

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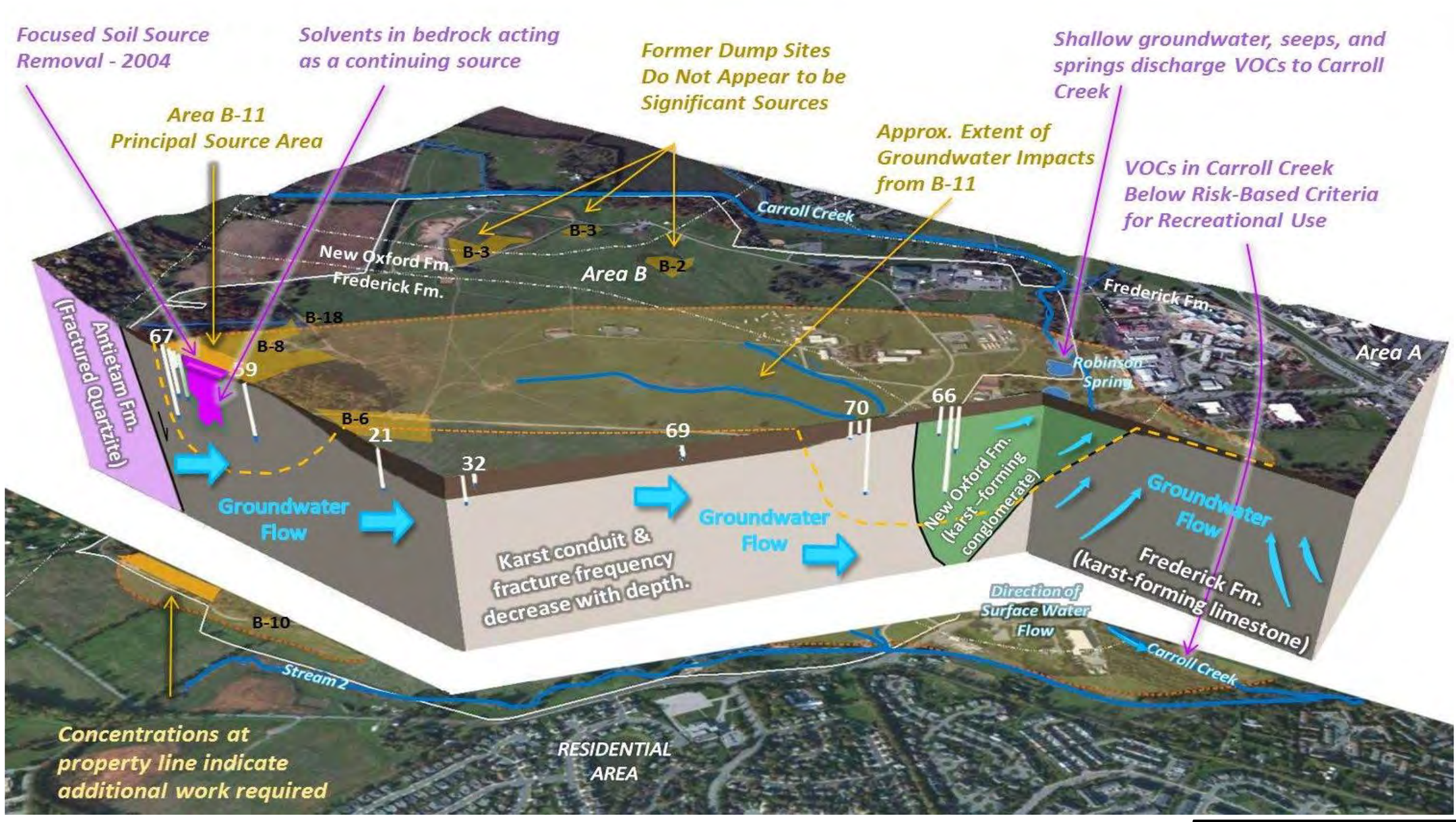
CSM
Figure A.7.1-9

1995 Dye Trace Study Results

Area B Groundwater Investigation
Fort Detrick
Frederick, MD

\\arcadis-us.com\office\data\WhitePlains-NY\WHI_GIS\GIS_data\Projects\ARMY\Installations\Fort_Detrick\GW_RI\MXDs\CSMFigure9_DyeTraceStudy.mxd



Legend

- Streams
- Former Disposal Area
- Approximate Area of Groundwater Impacts from B-11
- Groundwater Flow Direction
- Geologic Contact

Aerial Source: ArcGIS Online Bing Imagery accessed 6/13/2012 via ArcGIS 10.

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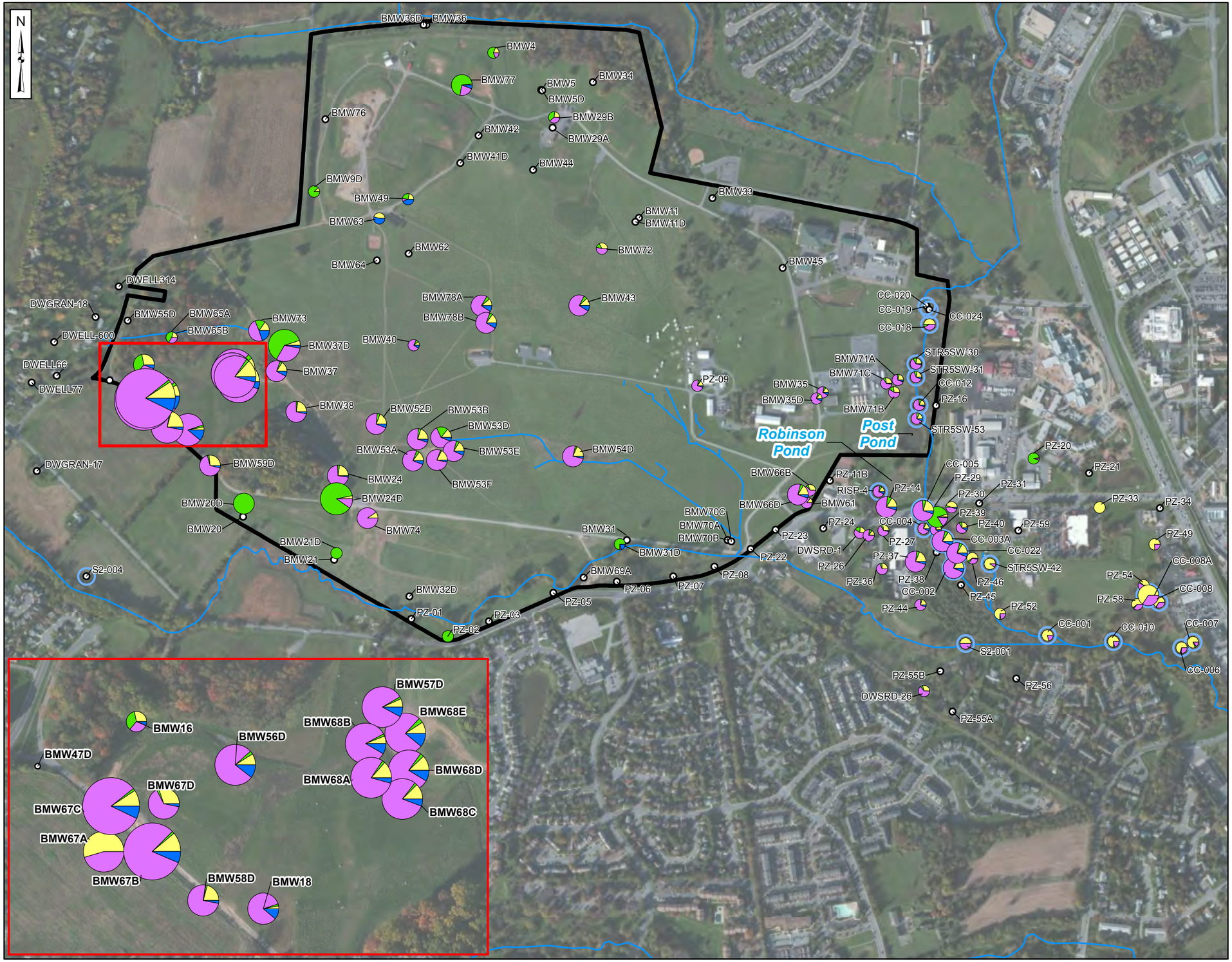
CSM
Figure A.7.1-10

Conceptual Site Model

Area B Groundwater Investigation
Fort Detrick
Frederick, MD



Legend

- Fort Detrick Boundary
- Streams

Concentration Pie Charts (micrograms per liter - ug/L)

- Sample Results <1
- Sample Results 1-9
- Sample Results 10-99
- Sample Results 100-999
- Sample Results 1,000-9,999
- Sample Results > 10,000

- Chloroform
- Tetrachlorethene (PCE)
- Trichlorethene (TCE)
- cis-1,2-Dichlorethene (DCE)
- Spring Location

Notes:

1) Aerial imagery accessed through BING Maps Aerial via ArcGIS Online Layer Packages by ESRI (12/1/2010) (c) 2010 Microsoft Corporation and its data suppliers accessed on 07/20/2012 through ArcGIS 10.
2) Pie charts are centered on the sampling location; except in areas of dense data, where they have been adjusted slightly for clarity.
3) CC-006 = Sewerline spring
   CC-007 = Upsurgent spring
   CC-008 = Spearmint spring
   STR5SW-53 = Dock spring
   STR5SW-31=South Armory Spring
   STR5SW-30=North Armory Spring
   STR5SW-42=Hospital spring
   RISP-4=Robinson Rock Spring
4) TCE, PCE, DCE, and chloroform were identified as volatile organic compound (VOC) constituents of concern (COCs) in the Conceptual Site Model (CSM) report for the purposes of discussing contaminant distribution at Area B and in surrounding areas.
5) BWMxx: Area B bedrock monitoring wells
6) PZ-xx: Shallow overburden sample locations completed with direct push technology (DPT) drilling.
7) DWSRD, DWELL, DWGRAN-xx: Off-post wells including former and current residential wells.
8) CC-xx; S2-xxx: Spring/seep samples (March 2012)

0 700 1,400 2,100 Feet

REFERENCE/PROJECTION: Maryland State Plane, NAD 83, Feet

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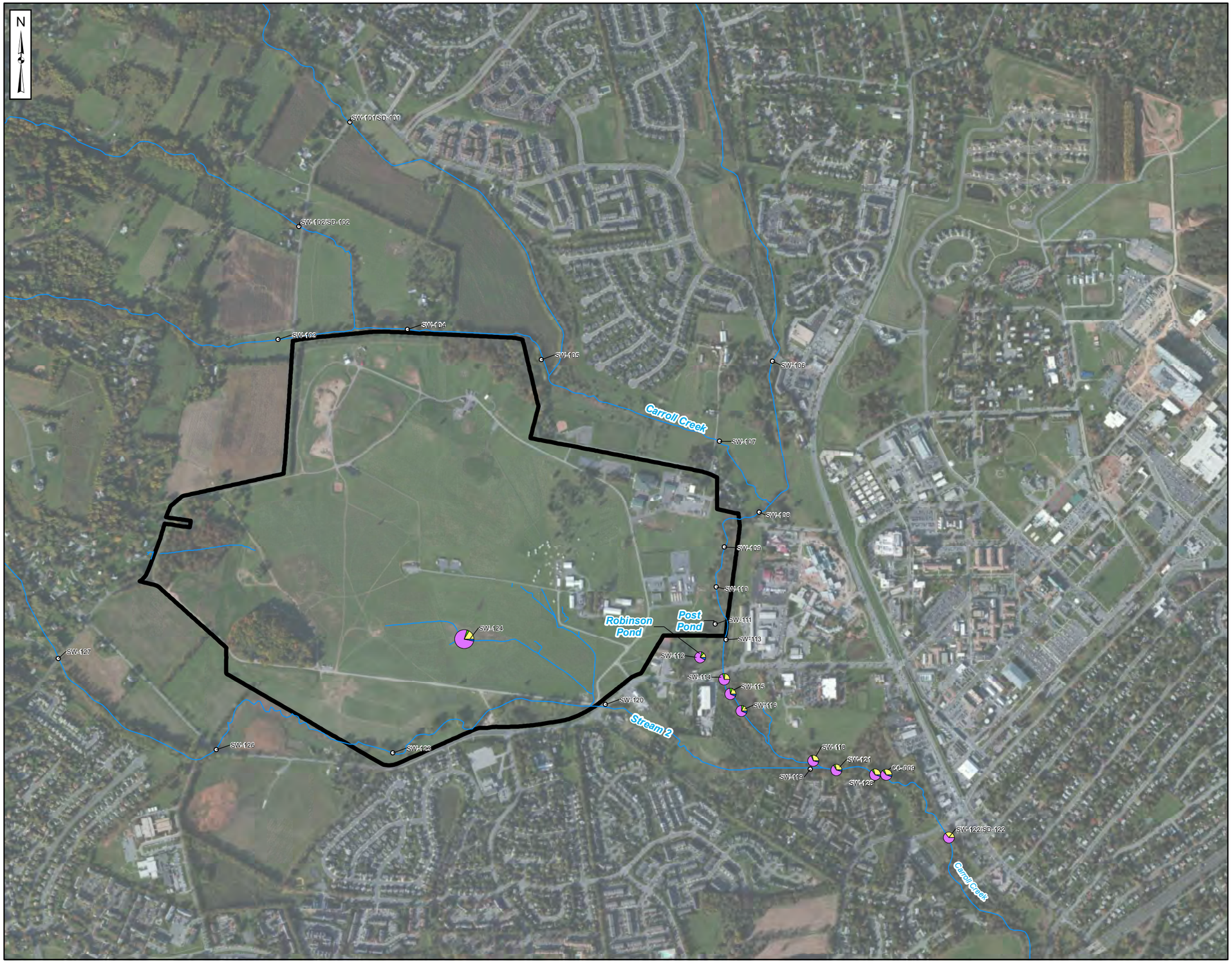
CSM
FIGURE A.7.1-11

TCE, PCE, DCE, and Chloroform Pie Charts for Area B Groundwater and Spring Samples (March/April 2012)

Area B Groundwater Investigation
Fort Detrick
Frederick, MD

CITY: DEN-TECH DIV/GROUP: ENV DB: R.MCKINNEY QC: M.COBB PIC: PM: J.CHERRY TM: K.WHITE Path: I:\FTDetrick\MapDocuments\GW_VOC_Pies.mxd



Legend

- Fort Detrick Boundary
- Streams

Concentration Pie Charts (micrograms per liter - ug/L)

- Sample Results <1
- Sample Results 1-9
- Sample Results 10-99
- Chloroform
- Tetrachlorethene (PCE)
- Trichlorethene (TCE)
- cis-1,2-Dichlorethene (DCE)

Notes:
1) Aerial imagery accessed through BING Maps Aerial via ArcGIS Online Layer Packages by ESRI (12/1/2010) (c) 2010 Microsoft Corporation and its data suppliers accessed on 07/20/2012 through ArcGIS 10.
2) Pie charts are centered on the sampling location unless pies overlap, then they are visually adjusted to prevent overlap.
3) Location CC-09 was originally mapped as a possible spring; however, bypass of creek water through the creek bank was suspected at the time of mapping. Based on the field observations and subsequent water-quality data, CC-009 is determined to represent flow-through of creek water through the creek bank, and not a true spring.

0 500 1,000 1,500
Feet

REFERENCE/PROJECTION: Maryland State Plane, NAD 83, Feet

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CSM
FIGURE A.7.1-12
TCE, PCE, DCE, and Chloroform Pie Charts for Area B Surface Water Samples (March/April 2012)
Area B Groundwater Investigation
Fort Detrick
Frederick, MD

CITY: DEN-TECH DIV/GROUP: ENV DB: R.MCKINNEY QC: M.COBB PIC: PM: J.CHERRY TM: K.WHITE Path: I:\FTDetrick\MapDocuments\SW_VOC_Pies.mxd

Attachment 7.2
Area B Landfill Monitoring Program Details

(ARCADIS, 2016)

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Table A.7.2-1
Proposed Monitoring Parameters
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

ARCADIS Design & Consultancy for natural and built assets

Volatile Organic Compounds	PQL (ppb)
Acetone	5
Acrylonitrile	5
Benzene	1
Bromochloromethane	1
Bromodichloromet hane	1
Bromoform	1
Bromomethane	1
2-Butanone	5
Carbon disulfide	1
Carbon tetrachloride	1
Chlorobenzene	1
Ch.loroethane	1
Chloroform	1
Chloromethane	1
Dibromochloromethane	1
l,2-Dibromo-3-chloropropane	1
1,2 - Dibromoethane (EDB)	1
Dibromomethane	1
1,2 - Dichlorobenzene	1
1,4 - Dichlorobenzene	1
Trans-1,4-dichloro-2-butene	5
1,1-Dichloroethane	1
1,2-Dichloroethane	1
1,1-Dichloroethene	1
Cis-1,2-Dichloroethene	1
Trans-1,2-Dichloroethene	1
Methylene chloride	1
1,2-Dichloropropane	1
Trans-1,3-Dichloropropene	1
Cis-1,3-Dichloropropene	1
Ethylbenzene	1
2-Hexanone	5
Iodomethane	1
4-Methyl-2-penta none	5
Methyl Tertiary Butyl Ether	2
Styrene	1
1,1,1,2-Tetrachloroethane	1
1,1,2,2-Tetrachloroethane	1
Tetrachloroethene	1
Toluene	1
1,1,1 -Trichloroethane	1
1, 1,2-Trichloroethane	1
Trichloroethene	1
Trichlorofluoromethane	1
1,2,3-Trichloropropane	1
Vinyl acetate	1
Vinyl chloride	1
Xylene	1

Elements and Indicator Parameters	PQL (ppm)
Total Antimony	0.002
Total Arsenic	0.002
Total Barium	0.01
Total Beryllium	0.002
Total Cadmium	0.004
Total Chromium	0.01
Total Calcium	0.08
Total Cobalt	0.01
Total Copper	0.01
Total Iron	0.005
Total Lead	0.002
Total Nickel	0.011
Total Magnesium	0.004
Total Manganese	0.01
Total Mercury	0.0002
Total Potassium	0.39
Total Selenium	0.035
Total Silver	0.01
Total Sodium	0.2
Total Thallium	0.002
Total Vanadium	0.01
Total Zinc	0.01
PH	0.1 (SU)
Alkalinity	1
Hardness	0.5
Chloride	0.39
Specific conductance	1
Nitrate	0.06
Chemical oxygen demand	10
Turbidity	0.11 (NTU)
Ammonia	1
Sulfate	0.38
Total dissolved solids	10

Table A.7.2-2
Cap Inspection Monitoring Network
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

ARCADIS Design & Consultancy for natural and built assets

Existing Monitoring Well	Top of Screen (ft bTOC)	Bottom of Screen (ft bTOC)	Depth to Groundwater* (ft bTOC)	TOC Elevation (ft msl)	Groundwater Elevation (ft amsl)
BMW2	25	35	27.49	374.7	347.21
BMW3	25	35	23.42	367.49	344.07
BMW5	25	35	21.63	360.1	338.47
BMW6	25	35	Dry	380.9	345.9
BMW9D	91	106	35.56	387.88	352.32
BMW11	25	35	18.72	357.2	338.48
BMW16	25	35	34.55	390.7	356.15
BMW18	25	35	36.77	390.16	353.39
BMW20	25	35	12.2	368.7	356.5
BMW21[a]	25	35	7.75	357.94	350.19
BMW24	25	35	17.08	368.34	351.26
BMW25	25	35	21.55	369.4	347.85
BMW26	25	35	--	379.29	--
BMW29A	48	58	32.59	371.03	338.44
BWM37	39.5	59.5	25.51	380.85	355.34
BMW38	50.6	80.6	20.5	368.38	347.88
BMW39	21.1	51.1	20.04	370.45	350.41
BMW41	49	69	22.55	399.02	376.47
BMW42	48.5	68.5	29.54	397.78	368.24
BMW44	58.6	88.6	58.96	400.14	341.18
BMW49[b]	30	50	37.69	389.6	351.91
BMW59D	163	183	38.65	391.65	353
BMW65A	112	127	34.1	388.47	354.37
BMW67A	50	55	40.59	395.91	355.32
BMW67C	140	155	42.25	397.47	355.22
BMW68A	32	42	27.72	374.35	346.63
BMW72	85	95	18.59	355.04	336.45
BMW73	22.5	37.5	24.55	370.8	346.25
BMW74	59	69	17.36	366.65	349.29
BMW76	98	108	38.17	388.32	350.15
MW-81	25	35	--	--	--
BMW77	56	71	22.29	366.26	343.97

Proposed Monitoring Well	Monitoring Zone
BMW82	Overburden
BMW83	Overburden
BMW84	Overburden
BMW85	Shallow Bedrock
BMW86	Overburden
BMW87	Shallow Bedrock
BMW88	Shallow Bedrock
BMW89	Overburden
BMW90	Overburden
BMW91	Overburden
BMW92	Shallow Bedrock
BMW93	Overburden
BMW94	Overburden
BMW95	Overburden
BMW96	Shallow Bedrock
BMW97	Shallow Bedrock

Notes:
-- Data not available
ft bTOC: feet below top of casing
ft amsl: feet above mean sea level
*Groundwater elevations measured in December 2012
[a] Only monitored for GW Elevation
[b] Reclassified as overburden monitoring well

Attachment 7.3.1
Area B Landfill Monitoring
May 2016 Monitoring Report Tables and Figures
(Watermark ECC LLC, 2017)

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Attachment 7.3.1
TABLES

Table A.7.3.1-1
Water Level Survey Data
Area B Landfill, Fort Detrick, Maryland

Monitoring Well	Top of Screen (ft BTOC)	Bottom of Screen (ft BTOC)	Depth to Groundwater (ft BTOC)	TOC Elevation (ft msl)	Groundwater Elevation (ft msl)
BMW2	25	35	24.79	376.30	351.51
BMW3	25	35	21.10	366.90	345.80
BMW5	25	35	21.07	362.01	340.94
BMW6	25	35	Dry	380.90	N/A
BMW9D	91	106	32.55	387.88	355.33
BMW11	25	35	18.10	357.20	339.10
BMW16	25	35	36.32	390.70	354.38
BMW18	25	35	38.52	386.00	347.48
BMW20	25	35	14.08	368.70	354.62
BMW21	25	35	7.92	359.84	351.92
BMW24	25	35	17.48	368.34	350.86
BMW25	25	35	21.92	369.40	347.48
BMW29A	48	58	30.90	371.03	340.13
BMW38	50.6	80.6	20.99	368.38	347.39
BMW39	21.1	51.1	20.48	370.45	349.97
BMW41	49	69	13.97	399.02	385.05
BMW42	48.5	68.5	25.42	397.78	372.36
BMW44	58.6	88.6	57.80	400.14	342.34
BMW49	30	50	37.90	386.60	348.70
BMW59D	163	183	39.87	391.65	351.78
BMW65A	112	127	30.29	388.47	358.18
BMW67A	50	55	42.87	395.91	353.04
BMW67C	140	155	44.42	397.47	353.05
BMW68A	32	42	28.15	374.35	346.20
BMW72	85	95	17.78	355.04	337.26
BMW73	22.5	37.5	24.72	370.80	346.08
BMW74	59	69	17.77	366.65	348.88
BMW76	98	108	35.38	388.32	352.94
BMW77	56	71	20.14	366.26	346.12
MW-81*	25	35	32.18	DNA	DNA
MW-82**	DNA	DNA	33.12	DNA	DNA

Notes:

* = Well BMW81 was subsequently re-named BMW80 and is no longer part of the monitoring program

** = Well BMW82 was subsequently re-named BMW81.

Depth to groundwater was measured on May 3, 2016.

ft BTOC = Feet Below Top of Casing

ft msl = Feet Relative to Mean Sea Level

N/A = Not Applicable

DNA = Data Not Available

Table A.7.3.1-2
Analytical Samples Collected
Area B Landfill, Fort Detrick, Maryland

Sample Identification	Description	Pesticides/Herbicides	Dissolved Metals	Metals	Water Quality Parameters	VOCs	SVOCs	Dioxins/Furans	PCBs	Radiochemistry
Quality Assurance Samples										
AREA BLF-RB-001-050316	Rinse Blank	X	X	X	X	X	X	X	X	X
AREA BLF-RB-002-050516	Rinse Blank	X	X	X	X	X	X	X	X	X
AREA BLF-RB-003-050616	Rinse Blank	X	X	X	X	X	X	X	X	X
AREA BLF-RB-004-050916	Rinse Blank	X	X	X	X	X	X	X	X	X
AREA BLF-RB-005-051016	Rinse Blank	X	X	X	X	X	X	X	X	X
FTD72-TB-001-050316	Trip Blank					X				
FTD72-TB-002-050516	Trip Blank					X				
FTD72-TB-003-050916	Trip Blank					X				
FTD72-TB-004-051016	Trip Blank					X				
FTD72-DUP001-050916	Duplicate Sample - BMW67A	X	X	X	X	X	X	X	X	X
FTD72-DUP002-050916	Duplicate Sample - BMW67C	X	X	X	X	X	X	X	X	X
AREA BLF-IDW-001-051016	IDW Sample					X				
AREA BLF-IDW-002-051016	IDW Sample					X				
Monitoring Wells										
FTD72-BMW2-050316	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW3-050317	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW5-050916	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW9D-050916	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW11-050916	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW16-050916	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW20-050616	Groundwater Sample	X	X	X	X	X	X	X	X	X

Table A.7.3.1-2
Analytical Samples Collected
Area B Landfill, Fort Detrick, Maryland

Sample Identification	Description	Pesticides/Herbicides	Dissolved Metals	Metals	Water Quality Parameters	VOCs	SVOCs	Dioxins/Furans	PCBs	Radiochemistry
Monitoring Wells (Continued)										
FTD72-BMW21-050516	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW24-051016	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW25-050616	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW29A-051016	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW38-051016	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW39-051016	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW41-050616	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW42-050616	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW44-050916	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW49-050916	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW59-050916	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW65A-050916	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW67A-050916	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW67C-050916	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW68A-050916	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW72-050916	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW73-051016	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW74-051016	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW76-050516	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-BMW77-050516	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-MW81-050516	Groundwater Sample	X	X	X	X	X	X	X	X	X
FTD72-MW82-050516	Groundwater Sample	X	X	X	X	X	X	X	X	X

Table A.7.3.1-2
Analytical Samples Collected
Area B Landfill, Fort Detrick, Maryland

Notes:

Water quality parameters include ammonia/nitrogen, chemical oxygen demand, chloride, total alkalinity, total nitrite/nitrogen, total dissolved solids, turbidity, pH, sulfate, total hardness,and specific conductance.

Total and dissolved metnals include antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, thallium, vanadium and zinc.

Samples were not collected from BMW6 because there was no water in the well and from BMW18 because water was only present in the sump of the well and would not be representative of the aquifer.

Samples were analyzed using EPA Methods SW-846/8260B (VOCs), SW-846/8270C (SVOCs), SW-846/8270 SIM (PAHs), SW-846/8290A (dioxins/furans), SW-846/8081A (pesticides), SW-846/8151A (herbicides), SW-846/8082 (PCBs), SW-846/6010B/6020/7470A (total and dissolved metals), EPA 900.0 (radiochemistry), SM 4500-H+/B-2000 (pH), SM 2320/B-1997 (alkalinity), SM 2340/B-1997 (total hardness), SW-846/9056 (chloride), SM 2510/B-1997 (specific conductance), EPA 353.2 (nitrate), EPA 410.4 (COD), SM 2130/B-2001 (turbidity), EPA 350.1 (ammonia), SW-846/9056 (sulfate), and SM 2540/C-1997 (TDS).

VOCs = Volatile Organic Compounds
SVOCs = Semi-Volatile Organic Compounds
PCBs = Polychlorinated Biphenyls
Radiochemistry includes alpha and beta particles

IDW = Investigation Derived Waste
EPA = U.S Environmental Protection Agency
SIM = Selective Ion Monitoring

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Table A.7.3.1-3
Duplicate Analysis - BMW67A
Area B Landfill, Fort Detrick, Maryland

Location	Sample Date	Analyte	Unit	Sample		Duplicate		Relative Percent Difference
				Sample Result	Validation Qualifier	Duplicate Result	Validation Qualifier	
BMW67A	5/9/2016	**Total Metals**						
		Barium	mg/L	0.0496	-	0.0501	-	1.00%
		Calcium	mg/L	102	-	103	-	0.98%
		Cobalt	mg/L	0.0017	J	0.0014	J	19.35%
		Magnesium	mg/L	29.3	-	29.5	-	0.68%
		Manganese	mg/L	0.957	-	0.985	-	2.88%
		Nickel	mg/L	0.0090	J	0.0123	J	30.99%
		Arsenic	mg/L	0.00067	J	0.00070	J	4.38%
		Chromium	mg/L	0.0039	J	0.0049	J	22.73%
		Iron	mg/L	0.566	-	0.609	-	7.32%
		Potassium	mg/L	2.36	-	2.37	-	0.42%
		Sodium	mg/L	12.6	-	12.6	-	0.00%
		Dissolved Metals						
		Barium	mg/L	0.0506	-	0.0510	-	0.79%
		Calcium	mg/L	97.5	-	97.8	-	0.31%
		Cobalt	mg/L	0.0023	J	0.0019	J	19.05%
		Copper	mg/L	0.0034	J	--	-	-
		Magnesium	mg/L	28.5	-	29.1	-	2.08%
		Manganese	mg/L	0.964	-	1.01	-	4.66%
		Nickel	mg/L	0.0081	J	0.0065	J	21.92%
		Arsenic	mg/L	0.00058	J	0.00061	J	5.04%
		Iron	mg/L	0.498	-	0.479	-	3.89%
		Potassium	mg/L	2.42	-	2.32	-	4.22%
		Sodium	mg/L	13.2	-	12.4	-	6.25%
		Pesticides / Herbicides						
		Dalapon	µg/L	0.93	J	1.0	J	7.25%
		Dicamba	µg/L	0.32	-	0.33	-	3.08%
		Picloram	µg/L	--	-	0.83	J	-
		2,4,5-T	µg/L	0.17	-	0.18	-	5.71%
		2,4,5-TP	µg/L	0.047	J	0.042	J	11.24%
		Alpha BHC	µg/L	0.018	-	0.018	-	0.00%
		Gamma BHC - Lindane	µg/L	0.0095	J	0.011	J	14.63%
		SVOCs						
		1,4-Dioxane	µg/L	15	-	17	-	12.50%
		Hexachlorobutadiene	µg/L	0.6	J	0.7	J	15.38%
		Naphthalene	µg/L	0.081	-	0.072	-	11.76%
		VOCs						
		Benzene	µg/L	--	-	1.8	J	-
		Bromoform	µg/L	3.9	J	4.9	J	22.73%
		Carbon Tetrachloride	µg/L	--	-	1.4	J	-
		Chloroform	µg/L	**610**	-	**630**	-	3.23%
		1,2-Dichloroethane	µg/L	**16**	-	**17**	-	6.06%
		1,1-Dichloroethene	µg/L	**31**	-	**37**	-	17.65%
		cis-1,2-Dichloroethene	µg/L	7.2	J	8.7	-	18.87%
		1,2-Dichloropropane	µg/L	--	-	1.2	J	-
		Tetrachloroethene	µg/L	**18**	-	**21**	-	15.38%
		1,1,1-Trichloroethane	µg/L	4.1	J	4.6	J	11.49%
		Trichloroethene	µg/L	**580**	-	**600**	-	3.39%
		Trichlorofluoromethane	µg/L	470	-	440	-	6.59%
		Water Quality Parameters						
		Total Hardness as CaCO3	mg/L	376	-	377	-	0.27%
		Ammonia Nitrogen	mg/L	0.24	-	0.24	-	0%
		Total Nitrite/Nitrate Nitroger	mg/L	2.9	-	2.6	-	10.91%
		Chloride	mg/L	33.7	-	33.8	-	0.30%
		Sulfate	mg/L	71.8	-	75	-	4.36%
		Temperature of pH	Degrees Celsius	22.2	-	21.7	-	2.28%
		Turbidity	NTU	0.27	J	2.2	J	156.28%
		Total Alkalinity to pH 4.5	mg/L as CaCO3	274	-	275	-	0.36%
		Specific Conductance	umhos/cm	725	-	727	-	0.28%
		Total Dissolved Solids	mg/L	469	-	473	-	0.85%
		pH	Standard Units	7.6	-	7.5	-	1.32%

Notes:

-- Indicates that an analyte was analyzed for but was not detected at or above laboratory reporting limits.
Results in **bold** and shaded gray have exceeded their respective MCL of the MCLG.

SVOCs = Semi-Volatile Organic Compounds
VOCs = Volatile Organic Compounds
CaCO3 = Calcium Carbonate
MCLG = Maximum Contaminant Level Goal
MCL = Maximum Contaminant Level
NTU = Nephelometric Turbidity Unit
umhos/cm = Micromhos per Centimeter
µg/L = Micrograms per Liter
mg/L = Milligrams per Liter

Data Qualifier:
J = Estimated Value

Table A.7.3.1-4
Duplicate Analysis - BMW67C
Area B Landfill, Fort Detrick, Maryland

Location	Sample Date	Analyte	Unit	Sample		Duplicate		Relative Percent Difference
				Sample Result	Validation Qualifier	Duplicate Result	Validation Qualifier	
BMW67C	5/9/2016	**Total Metals**						
		Barium	mg/L	0.287	-	0.299	-	4.10%
		Calcium	mg/L	78.6	-	79.1	-	0.63%
		Magnesium	mg/L	31.2	-	31.5	-	0.96%
		Manganese	mg/L	0.220	-	0.210	-	4.65%
		Nickel	mg/L	0.0065	J	0.0061	J	6.35%
		Chromium	mg/L	0.00071	J	--	-	-
		Iron	mg/L	0.0900	J	0.0994	J	9.93%
		Potassium	mg/L	1.58	-	1.64	-	3.73%
		Sodium	mg/L	9.60	-	9.89	-	2.98%
		Thallium	mg/L	0.00042	J	0.00037	J	12.66%
		Zinc	mg/L	0.0288	-	0.0277	-	3.89%
		Dissolved Metals						
		Barium	mg/L	0.288	-	0.292	-	1.38%
		Calcium	mg/L	77.4	-	78.6	-	1.54%
		Copper	mg/L	--	-	0.0041	J	-
		Magnesium	mg/L	32.2	-	32.5	-	0.93%
		Manganese	mg/L	0.231	-	0.231	-	0.00%
		Nickel	mg/L	0.0059	J	0.0060	J	1.68%
		Iron	mg/L	0.0284	J	0.0260	J	8.82%
		Potassium	mg/L	1.66	-	1.61	-	3.06%
		Sodium	mg/L	10.0	-	9.87	-	1.31%
		Thallium	mg/L	0.00043	J	0.00040	J	7.23%
		Zinc	mg/L	0.0307	-	0.0300	-	2.31%
		Pesticides / Herbicides						
		Dicamba	µg/L	0.31	-	0.31	-	0.00%
		MCCP	µg/L	50	J	--	-	-
		Picloram	µg/L	6.6	J	5.0	J	27.59%
		2,4,5-T	µg/L	0.094	J	0.076	J	21.18%
		Gamma BHC - Lindane	µg/L	0.0048	J	0.0049	J	2.06%
		Heptachlor	µg/L	--	-	0.0060	J	-
		SVOCs						
		1,4-Dioxane	µg/L	29	-	27	-	7.14%
		2,4,5-Trichlorophenol	µg/L	0.5	J	--	-	-
		Naphthalene	µg/L	0.052	J	0.056	J	7.41%
		VOCs						
		Benzene	µg/L	**6.4**	J	**5.8**	J	9.84%
		Chloroform	µg/L	**760**	-	**780**	-	2.60%
		1,1-Dichloroethane	µg/L	3.4	J	2.8	J	19.35%
		1,2-Dichloroethane	µg/L	**15**	-	**14**	-	6.90%
		1,1-Dichloroethene	µg/L	**120**	-	**110**	-	8.70%
		cis-1,2-Dichloroethene	µg/L	**130**	-	**110**	-	16.67%
		Tetrachloroethene	µg/L	**42**	-	**40**	-	4.88%
		1,1,1-Trichloroethane	µg/L	41	-	35	-	15.79%
		Trichloroethene	µg/L	**1,800**	-	**1,700**	-	15.79%
		Trichlorofluoromethane	µg/L	620	-	600	-	3.28%
		Water Quality Parameters						
		Total Hardness as CaCO3	mg/L	325	-	327	-	0.61%
		Ammonia Nitrogen	mg/L	0.13	-	0.15	-	14.29%
		Total Nitrite/Nitrate Nitrogen	mg/L	1.2	-	1.3	-	8.00%
		Chloride	mg/L	33.9	-	31.7	-	6.71%
		Sulfate	mg/L	16.8	-	13.8	-	19.61%
		Temperature of pH	Degrees Celsius	21.3	-	21.7	-	1.86%
		Turbidity	NTU	6.8	-	7.3	-	7.09%
		Total Alkalinity to pH 4.5	mg/L as CaCO3	286	-	284	-	0.70%
		Specific Conductance	umhos/cm	633	-	626	-	1.11%
		Total Dissolved Solids	mg/L	373	-	367	-	1.62%
		pH	Standard Units	7.6	-	7.7	-	1.31%
		Dioxins / Furans						
		OCDD	pg/L	--	-	12	J	-
		Radiological Analysis						
		Beta	pCi/L	5.77	J	--	-	-

Notes:

-- Indicates that an analyte was analyzed for but was not detected at or below laboratory reporting limits.
Results in **bold** and shaded gray have exceeded their respective MCL or their MCLG.

SVOCs = Semi-Volatile Organic Compounds
VOCs = Volatile Organic Compounds
CaCO3 = Calcium Carbonate
MCLG = Maximum Contaminant Level Goal
MCL = Maximum Contaminant Level
NTU = Nephelometric Turbidity Unit
umhos/cm = Micromhos per Centimeter
µg/L = Micrograms per Liter
mg/L = Milligrams per Liter
pg/L = Picograms per Liter
pCi/L = PicoCuries per Liter

Data Qualifier:
J = Estimated Value

Watermark ECC LLC

Table A.7.3.1-5
Volatile Organic Compound Results
Area B Landfill, Fort Detrick, Maryland

Analyte			Location	BMW2	BMW3	BMW5	BMW9D	BMW11	BMW16	BMW20	BMW21	BMW24	BMW25	BMW29A
			Sample ID	FTD72-BMW2-050316	FTD72-BMW3-050316	FTD72-BMW5-050916	FTD72-BMW9D-050516	FTD72-BMW11-050916	FTD72-BMW16-050916	FTD72-BMW20-050616	FTD72-BMW21-050516	FTD72-BMW24-051016	FTD72-BMW25-050616	FTD72-BMW29A-051016
			Date	5/3/16	5/3/16	5/9/16	5/5/16	5/9/16	5/9/16	5/6/16	5/5/16	5/10/16	5/6/16	5/10/16
	Unit	**MCL**	**RSL Tapwater**											
Acetone	µg/L	-	14,000	--	--	--	--	--	--	--	--	--	--	--
Acrolein	µg/L	-	0.042	--	--	--	--	--	--	--	--	--	--	--
Acrylonitrile	µg/L	-	0.052	--	--	--	--	--	--	--	--	--	--	--
Benzene	µg/L	5	0.46	--	--	--	--	--	--	--	--	--	--	--
Bromochloromethane	µg/L	-	83	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	µg/L	80[1]	0.13	--	--	--	--	--	--	--	--	--	--	--
Bromoform	µg/L	80[1]	3.3	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	µg/L	-	7.5	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--
Carbon Disulfide	µg/L	-	810	--	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	µg/L	5	0.46	--	0.2 J	--	--	--	--	--	--	--	--	--
Chlorobenzene	µg/L	100	78	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	µg/L	-	21,000	--	--	--	--	--	--	--	--	--	--	--
Chloroform	µg/L	70[1]	0.22	--	**0.9**	0.1 J	--	--	**1.5**	--	--	**0.3 J**	--	--
Chloromethane	µg/L	-	190	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	µg/L	0.2	0.00033	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	µg/L	60[1]	0.87	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	µg/L	0.05	0.0075	--	--	--	--	--	--	--	--	--	--	--
Dibromomethane	µg/L	-	8.3	--	--	--	--	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	µg/L	-	0.0013	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	600	300	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	µg/L	75	0.48	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	µg/L	-	2.8	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	µg/L	5	0.17	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	µg/L	7	280	--	3.3	0.1 J	--	--	0.2 J	--	--	--	--	--
cis-1,2-Dichloroethene	µg/L	70	36	--	--	--	--	--	0.1 J	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	100	360	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	5	0.44	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	µg/L	700	1.5	--	--	--	0.2 J	--	--	--	--	--	--	--
2-Hexanone	µg/L	-	38	--	--	--	--	--	--	--	--	--	--	--
Methyl Iodide	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--
Methyl Tertiary Butyl Ether	µg/L	-	14	--	--	--	--	--	0.1 J	--	--	--	--	--
4-Methyl-2-pentanone	µg/L	-	6,300	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	µg/L	5	11	--	--	--	--	--	--	--	--	--	--	--
Styrene	µg/L	100	1,200	--	--	--	--	--	--	--	--	--	--	--
1,1,1,2-Tetrachloroethane	µg/L	-	0.57	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	-	0.076	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	µg/L	5	11	--	0.6	0.4 J	0.8	--	2.4	--	--	--	--	--
Toluene	µg/L	1,000	1,100	--	--	--	0.4 J	--	--	--	--	--	--	0.1 J
1,1,1-Trichloroethane	µg/L	200	8,000	--	0.2 J	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	µg/L	5	0.28	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	µg/L	5	0.49	--	0.2 J	--	--	--	**1.3**	--	--	**0.9**	0.2 J	--
Trichlorofluoromethane	µg/L	-	5,200	--	1.0	0.1 J	--	--	17	--	--	0.5	0.1 J	21
1,2,3-Trichloropropane	µg/L	-	0.00075	--	--	--	--	--	--	--	--	--	--	--
Vinyl Acetate	µg/L	-	410	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	µg/L	2	0.019	--	--	--	--	--	--	--	--	--	--	--
m+p-Xylene	µg/L	10,000[2]	-	--	--	--	0.5	--	--	--	--	--	--	0.3 J
o-Xylene	µg/L	10,000[2]	190	--	--	--	0.2 J	--	--	--	--	--	--	0.1 J

Table A.7.3.1-5
Volatile Organic Compound Results
Area B Landfill, Fort Detrick, Maryland

Analyte				Location	BMW38	BMW39	BMW41	BMW42	BMW44	BMW49	BMW59D	BMW65A	BMW67A	BMW67C
				Sample ID	FTD72-BMW38-051016	FTD72-BMW39-051016	FTD72-BMW41-050616	FTD72-BMW42-050616	FTD72-BMW44-050916	FTD72-BMW49-050916	FTD72-BMW59D-050516	FTD72-BMW65A-050916	FTD72-BMW67A-050916	FTD72-BMW67C-050916
				Date	5/10/16	5/10/16	5/6/16	5/6/16	5/9/16	5/9/16	5/5/16	5/9/16	5/9/16	5/9/16
	Unit	MCL	RSL Tapwater											
Acetone	µg/L	-	14,000	--	--	3.1 J	--	--	--	--	15	-- (--)	-- (--)
Acrolein	µg/L	-	0.042	--	--	--	--	--	--	--	--	-- (--)	-- (--)
Acrylonitrile	µg/L	-	0.052	--	--	--	--	--	--	--	--	-- (--)	-- (--)
Benzene	µg/L	5	0.46	--	--	--	--	--	--	--	0.1 J	-- **(1.8 J)**	**6.4 J (5.8 J)**
Bromochloromethane	µg/L	-	83	--	--	--	--	--	--	--	--	-- (--)	-- (--)
Bromodichloromethane	µg/L	80[1]	0.13	--	--	--	--	--	--	--	--	-- (--)	-- (--)
Bromoform	µg/L	80[1]	3.3	--	--	--	--	--	--	--	--	**3.9 J (4.9 J)**	-- (--)
Bromomethane	µg/L	-	7.5	--	--	--	--	--	--	--	--	-- (--)	-- (--)
2-Butanone	µg/L	-	-	--	--	--	--	--	--	--	1.7 J	-- (--)	-- (--)
Carbon Disulfide	µg/L	-	810	--	--	--	--	--	--	--	1.0	-- (--)	-- (--)
Carbon Tetrachloride	µg/L	5	0.46	--	--	--	--	--	--	--	--	-- **(1.4 J)**	-- (--)
Chlorobenzene	µg/L	100	78	--	--	--	--	--	--	--	--	-- (--)	-- (--)
Chloroethane	µg/L	-	21,000	--	--	--	--	--	--	--	--	-- (--)	-- (--)
Chloroform	µg/L	70[1]	0.22	**2.7**	0.1 J	--	--	--	0.1 J	**6.1**	**1.1**	**610 J (630 J)**	**760 (780)**
Chloromethane	µg/L	-	190	--	--	--	--	--	--	--	1.2	-- (--)	-- (--)
1,2-Dibromo-3-chloropropane	µg/L	0.2	0.00033	--	--	--	--	--	--	--	--	-- (--)	-- (--)
Dibromochloromethane	µg/L	60[1]	0.87	--	--	--	--	--	--	--	--	-- (--)	-- (--)
1,2-Dibromoethane	µg/L	0.05	0.0075	--	--	--	--	--	--	--	--	-- (--)	-- (--)
Dibromomethane	µg/L	-	8.3	--	--	--	--	--	--	--	--	-- (--)	-- (--)
trans-1,4-Dichloro-2-butene	µg/L	-	0.0013	--	--	--	--	--	--	--	--	-- (--)	-- (--)
1,2-Dichlorobenzene	µg/L	600	300	--	--	--	--	--	--	--	--	-- (--)	-- (--)
1,4-Dichlorobenzene	µg/L	75	0.48	--	--	--	--	--	--	--	--	-- (--)	-- (--)
1,1-Dichloroethane	µg/L	-	2.8	--	--	--	--	--	--	--	--	-- (--)	**3.4 J** (2.8 J)
1,2-Dichloroethane	µg/L	5	0.17	0.1 J	--	--	--	--	--	**0.2 J**	--	**16 (17)**	**15 (14)**
1,1-Dichloroethene	µg/L	7	280	0.5	--	--	--	--	--	1.3	--	**31 (37)**	**120 (110)**
cis-1,2-Dichloroethene	µg/L	70	36	0.2 J	--	--	--	--	0.1 J	0.6	--	7.2 J (8.7)	**130 (110)**
trans-1,2-Dichloroethene	µg/L	100	360	--	--	--	--	--	--	--	--	-- (--)	-- (--)
1,2-Dichloropropane	µg/L	5	0.44	--	--	--	--	--	--	--	--	-- **(1.2 J)**	-- (--)
cis-1,3-Dichloropropene	µg/L	-	-	--	--	--	--	--	--	--	--	-- (--)	-- (--)
trans-1,3-Dichloropropene	µg/L	-	-	--	--	--	--	--	--	--	--	-- (--)	-- (--)
Ethylbenzene	µg/L	700	1.5	--	--	--	--	--	--	--	--	-- (--)	-- (--)
2-Hexanone	µg/L	-	38	--	--	--	--	--	--	--	--	-- (--)	-- (--)
Methyl Iodide	µg/L	-	-	--	--	--	--	--	--	--	--	-- (--)	-- (--)
Methyl Tertiary Butyl Ether	µg/L	-	14	--	--	--	--	--	--	--	--	-- (--)	-- (--)
4-Methyl-2-pentanone	µg/L	-	6,300	--	--	--	--	--	--	--	--	-- (--)	-- (--)
Methylene Chloride	µg/L	5	11	--	--	--	--	--	--	--	0.7	-- (--)	-- (--)
Styrene	µg/L	100	1,200	--	--	--	--	--	--	--	--	-- (--)	-- (--)
1,1,1,2-Tetrachloroethane	µg/L	-	0.57	--	--	--	--	--	--	--	--	-- (--)	-- (--)
1,1,2,2-Tetrachloroethane	µg/L	-	0.076	--	--	--	--	--	--	--	--	-- (--)	-- (--)
Tetrachloroethene	µg/L	5	11	0.3 J	0.1 J	--	--	--	0.1 J	0.6	2.3	**18 (21)**	**42 (40)**
Toluene	µg/L	1,000	1,100	--	--	--	--	--	--	--	2.1	-- (--)	-- (--)
1,1,1-Trichloroethane	µg/L	200	8,000	0.1 J	--	--	--	--	--	0.3 J	--	4.1 J (4.6 J)	41 (35)
1,1,2-Trichloroethane	µg/L	5	0.28	--	--	--	--	--	--	--	--	-- (--)	-- (--)
Trichloroethene	µg/L	5	0.49	**7.3**	**1.4**	--	--	--	--	**16**	**1.2**	**580 (600)**	**1,800 (1,700)**
Trichlorofluoromethane	µg/L	-	5,200	3.3	0.8	--	--	--	0.8	8.8	0.2 J	470 J (440 J)	620 (600)
1,2,3-Trichloropropane	µg/L	-	0.00075	--	--	--	--	--	--	--	--	-- (--)	-- (--)
Vinyl Acetate	µg/L	-	410	--	--	--	--	--	--	--	--	-- (--)	-- (--)
Vinyl Chloride	µg/L	2	0.019	--	--	--	--	--	--	--	**0.2 J**	-- (--)	-- (--)
m+p-Xylene	µg/L	10,000[2]	-	--	--	--	--	0.2 J	0.1 J	--	0.1 J	-- (--)	-- (--)
o-Xylene	µg/L	10,000[2]	190	--	--	--	--	--	--	--	--	-- (--)	-- (--)

Table A.7.3.1-5
Volatile Organic Compound Results
Area B Landfill, Fort Detrick, Maryland

Analyte			Location	BMW68A	BMW72	BMW73	BMW74	BMW76	BMW77	MW81	MW82
			Sample ID	FTD72-BMW68A-050916	FTD72-BMW72-050916	FTD72-BMW73-051016	FTD72-BMW74-051016	FTD72-BMW76-050516	FTD72-BMW77-050516	FTD72-MW81-050516	FTD72-MW82-050516
			Date	5/9/16	5/9/16	5/10/16	5/10/16	5/5/16	5/5/16	5/5/16	5/5/16
	Unit	MCL	RSL Tapwater								
Acetone	µg/L	-	14,000	--	--	--	4.5 J	--	--	--	--
Acrolein	µg/L	-	0.042	--	--	--	--	--	--	--	--
Acrylonitrile	µg/L	-	0.052	--	--	--	--	--	--	--	--
Benzene	µg/L	5	0.46	**2.9**	--	--	--	--	0.2 J	--	--
Bromochloromethane	µg/L	-	83	--	--	--	--	--	--	--	--
Bromodichloromethane	µg/L	80[1]	0.13	--	--	--	--	--	--	--	--
Bromoform	µg/L	80[1]	3.3	--	--	--	--	--	--	--	--
Bromomethane	µg/L	-	7.5	--	--	--	--	--	--	--	--
2-Butanone	µg/L	-	-	--	--	--	--	--	--	--	--
Carbon Disulfide	µg/L	-	810	--	--	--	--	--	--	--	--
Carbon Tetrachloride	µg/L	5	0.46	--	--	--	--	--	--	--	--
Chlorobenzene	µg/L	100	78	0.4 J	--	--	--	--	0.3 J	--	--
Chloroethane	µg/L	-	21,000	--	--	--	--	--	--	--	--
Chloroform	µg/L	70[1]	0.22	**16**	0.1 J	**0.4 J**	**0.9**	--	**1.4**	--	**0.9**
Chloromethane	µg/L	-	190	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	µg/L	0.2	0.00033	--	--	--	--	--	--	--	--
Dibromochloromethane	µg/L	60[1]	0.87	--	--	--	--	--	--	--	--
1,2-Dibromoethane	µg/L	0.05	0.0075	--	--	--	--	--	--	--	--
Dibromomethane	µg/L	-	8.3	--	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	µg/L	-	0.0013	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	600	300	0.3 J	--	--	--	--	0.2 J	--	--
1,4-Dichlorobenzene	µg/L	75	0.48	0.4 J	--	--	--	--	0.4 J	--	--
1,1-Dichloroethane	µg/L	-	2.8	**3.7**	--	--	--	--	0.3 J	--	--
1,2-Dichloroethane	µg/L	5	0.17	**2.4**	--	--	--	--	0.1 J	--	--
1,1-Dichloroethene	µg/L	7	280	**34**	--	--	0.2 J	0.5 J	**7.2**	--	--
cis-1,2-Dichloroethene	µg/L	70	36	**64**	--	0.3 J	0.2 J	--	1.5	--	--
trans-1,2-Dichloroethene	µg/L	100	360	0.3 J	--	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	5	0.44	0.4 J	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	-	-	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	-	-	--	--	--	--	--	--	--	--
Ethylbenzene	µg/L	700	1.5	--	0.1 J	--	--	--	--	--	0.1 J
2-Hexanone	µg/L	-	38	--	--	--	--	--	--	--	--
Methyl Iodide	µg/L	-	-	--	--	--	--	--	--	--	--
Methyl Tertiary Butyl Ether	µg/L	-	14	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	µg/L	-	6,300	--	--	--	--	--	--	--	--
Methylene Chloride	µg/L	5	11	--	--	--	--	--	--	--	--
Styrene	µg/L	100	1,200	--	--	--	--	--	--	--	--
1,1,1,2-Tetrachloroethane	µg/L	-	0.57	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	-	0.076	**0.1 J**	--	--	--	--	--	--	--
Tetrachloroethene	µg/L	5	11	**17**	--	0.6	0.1 J	--	**22**	--	--
Toluene	µg/L	1,000	1,100	--	0.2 J	--	--	--	0.1 J	--	0.2 J
1,1,1-Trichloroethane	µg/L	200	8,000	7.4	--	--	--	--	0.1 J	--	--
1,1,2-Trichloroethane	µg/L	5	0.28	0.2 J	--	--	--	--	--	--	--
Trichloroethene	µg/L	5	0.49	**520**	0.2 J	**1.0**	**17**	--	**8.6**	--	0.1 J
Trichlorofluoromethane	µg/L	-	5,200	25	0.6	0.2 J	1.0	--	--	--	--
1,2,3-Trichloropropane	µg/L	-	0.00075	0.2 J	--	--	--	--	--	--	--
Vinyl Acetate	µg/L	-	410	--	--	--	--	--	--	--	--
Vinyl Chloride	µg/L	2	0.019	**3.7**	--	--	--	--	--	--	--
m+p-Xylene	µg/L	10,000[2]	-	--	0.5 J	--	--	--	0.3 J	0.1 J	0.4 J
o-Xylene	µg/L	10,000[2]	190	--	0.2 J	--	--	--	0.1 J	--	0.1 J

Notes:

Duplicate sample results are presented in parenthesis adjacent to the parent sample result.

Results in **bold** and shaded gray have exceeded both their respective MCL and RSL.

Results in **bold** have exceeded both their respective MCL or RSL.

-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.

[1] = 80 µg/L is the MCL for total trihalomethanes (total of bromodichloromethane, bromoform, dibromochloromethane, and chloroform) and is applicable to public drinking water supplies that use disinfection products.

Chloroform has a MCLG of 70 µg/L.
Dibromochloromethane has a MCLG of 60 µg/L.

[2] = 10,000 µg/L is the MCL for total xylenes

µg/L = Micrograms per Liter
MCL = Maximum Contaminant Level
MCLG = Maximum Contaminant Level Goal
RSL = Regional Screening Level

Data Qualifier:
J = Estimated Value

Watermark ECC LLC

Table A.7.3.1-6
Semi-Volatile Organic Compound and Polycyclic Aromatic Hydrocarbon Results
Area B Landfill, Fort Detrick, Maryland

Analyte				Location	BMW2	BMW3	BMW5	BMW9D	BMW11	BMW16	BMW20	BMW21	BMW24	BMW25	BMW29A	BMW38	BMW39	BMW41	BMW42
				Sample ID	FTD72-BMW2-050316	FTD72-BMW3-050316	FTD72-BMW5-050916	FTD72-BMW9D-050516	FTD72-BMW11-050916	FTD72-BMW16-050916	FTD72-BMW20-050616	FTD72-BMW21-050516	FTD72-BMW24-051016	FTD72-BMW25-050616	FTD72-BMW29A-051016	FTD72-BMW38-051016	FTD72-BMW39-051016	FTD72-BMW41-050616	FTD72-BMW42-050616
				Date	5/3/16	5/3/16	5/9/16	5/5/16	5/9/16	5/9/16	5/6/16	5/5/16	5/10/16	5/6/16	5/10/16	5/10/16	5/10/16	5/6/16	5/6/16
	Unit	MCL	RSL Tapwater																
Atrazine	µg/L	3	0.3		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	µg/L	-	19		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1'-Biphenyl	µg/L	-	0.83		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl-phenylether	µg/L	-	-		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butylbenzylphthalate	µg/L	-	16		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butylphthalate	µg/L	-	900		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Caprolactam	µg/L	-	9,900		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	µg/L	-	-		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	µg/L	-	1,400		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	µg/L	-	0.37		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	µg/L	-	59		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	µg/L	-	0.014		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	µg/L	-	750		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	µg/L	-	91		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl-phenylether	µg/L	-	-		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2'-oxybis(1-Chloropropane)	µg/L	-	710		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	µg/L	-	7.9		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	µg/L	-	0.13		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	µg/L	-	46		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	µg/L	-	15,000		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	µg/L	-	360		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethylphthalate	µg/L	-	-		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	-	1.5		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	µg/L	-	39		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	µg/L	-	0.24		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	µg/L	-	0.049		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dioxane	µg/L	-	0.46		--	--	--	--	--	**14**	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate	µg/L	6	5.6		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	µg/L	1	0.0098		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	µg/L	-	0.14		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	µg/L	50	0.41		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	µg/L	-	0.33		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	µg/L	-	78		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	µg/L	-	36		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	µg/L	-	930		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	µg/L	-	1,900		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Watermark ECC LLC

Table A.7.3.1-6
Semi-Volatile Organic Compound and Polycyclic Aromatic Hydrocarbon Results
Area B Landfill, Fort Detrick, Maryland

Analyte				Location	BMW2	BMW3	BMW5	BMW9D	BMW11	BMW16	BMW20	BMW21	BMW24	BMW25	BMW29A	BMW38	BMW39	BMW41	BMW42
				Sample ID	FTD72-BMW2-050316	FTD72-BMW3-050316	FTD72-BMW5-050916	FTD72-BMW9D-050516	FTD72-BMW11-050916	FTD72-BMW16-050916	FTD72-BMW20-050616	FTD72-BMW21-050516	FTD72-BMW24-051016	FTD72-BMW25-050616	FTD72-BMW29A-051016	FTD72-BMW38-051016	FTD72-BMW39-051016	FTD72-BMW41-050616	FTD72-BMW42-050616
				Date	5/3/16	5/3/16	5/9/16	5/5/16	5/9/16	5/9/16	5/6/16	5/5/16	5/10/16	5/6/16	5/10/16	5/10/16	5/10/16	5/6/16	5/6/16
	Unit	MCL	RSL Tapwater																
1,4-Naphthoquinone	µg/L	-	-		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	µg/L	-	190		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	µg/L	-	-		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	µg/L	-	3.8		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	µg/L	-	0.14		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	µg/L	-	-		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	µg/L	-	-		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitroso-di-n-propylamine	µg/L	-	0.011		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	µg/L	-	12		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octylphthalate	µg/L	-	200		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	µg/L	1	0.041		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	µg/L	-	5,800		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	µg/L	-	1,200		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	µg/L	-	4.1		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons																			
Acenaphthene	µg/L	-	530		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	µg/L	-	-		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetophenone	µg/L	-	1,900		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	µg/L	-	1,800		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	µg/L	-	3.4		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	µg/L	-	800		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	µg/L	-	290		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	µg/L	-	-		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	µg/L	-	120		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	µg/L	-	0.012		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	µg/L	0.2	0.0034		--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.066**
Benzo(b)fluoranthene	µg/L	-	0.034		--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.077**
Benzo(g,h,i)perylene	µg/L	-	-		--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.076
Benzo(k)fluoranthene	µg/L	-	0.34		--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.027 J
Dibenz(a,h)anthracene	µg/L	-	0.0034		--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.022 J**
Indeno(1,2,3-cd)pyrene	µg/L	-	0.034		--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.066**
Naphthalene	µg/L	-	0.17		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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Table A.7.3.1-6
Semi-Volatile Organic Compound and Polycyclic Aromatic Hydrocarbon Results
Area B Landfill, Fort Detrick, Maryland

Analyte			BMW44	BMW49	BMW59D	BMW65A	BMW67A	BMW67C	BMW68A	BMW72	BMW73	BMW74	BMW76	BMW77	MW81	MW82
			FTD72-BMW44-050916	FTD72-BMW49-050916	FTD72-BMW59D-050516	FTD72-BMW65A-050916	FTD72-BMW67A-050916	FTD72-BMW67C-050916	FTD72-BMW68A-050916	FTD72-BMW72-050916	FTD72-BMW73-051016	FTD72-BMW74-051016	FTD72-BMW76-050516	FTD72-BMW77-050516	FTD72-MW81-050516	FTD72-MW82-050516
			5/9/16	5/9/16	5/5/16	5/9/16	5/9/16	5/9/16	5/9/16	5/9/16	5/10/16	5/10/16	5/5/16	5/5/16	5/5/16	5/5/16
	Unit	**MCL**														
Atrazine	µg/L	3	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Benzaldehyde	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
1,1'-Biphenyl	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
4-Bromophenyl-phenylether	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Butylbenzylphthalate	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Di-n-butylphthalate	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Caprolactam	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Carbazole	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
4-Chloroaniline	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
2-Chloronaphthalene	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
2-Chlorophenol	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
4-Chlorophenyl-phenylether	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
2,2'-oxybis(1-Chloropropane)	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Dibenzofuran	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Diethylphthalate	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Dimethylphthalate	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
1,4-Dioxane	µg/L	-	--	--	--	--	**15 (17)**	**29 (27)**	**10**	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate	µg/L	6	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Hexachlorobenzene	µg/L	1	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Hexachlorobutadiene	µg/L	-	--	--	--	--	**0.6 J (0.7 J)**	-- (--)	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	µg/L	50	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Hexachloroethane	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Isophorone	µg/L	-	--	--	--	0.6 J	-- (--)	-- (--)	--	--	--	--	--	--	--	--
2-Methylnaphthalene	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
2-Methylphenol	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
4-Methylphenol	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--

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Table A.7.3.1-6
Semi-Volatile Organic Compound and Polycyclic Aromatic Hydrocarbon Results
Area B Landfill, Fort Detrick, Maryland

Analyte			BMW44	BMW49	BMW59D	BMW65A	BMW67A	BMW67C	BMW68A	BMW72	BMW73	BMW74	BMW76	BMW77	MW81	MW82
			FTD72-BMW44-050916	FTD72-BMW49-050916	FTD72-BMW59D-050516	FTD72-BMW65A-050916	FTD72-BMW67A-050916	FTD72-BMW67C-050916	FTD72-BMW68A-050916	FTD72-BMW72-050916	FTD72-BMW73-051016	FTD72-BMW74-051016	FTD72-BMW76-050516	FTD72-BMW77-050516	FTD72-MW81-050516	FTD72-MW82-050516
			5/9/16	5/9/16	5/5/16	5/9/16	5/9/16	5/9/16	5/9/16	5/9/16	5/10/16	5/10/16	5/5/16	5/5/16	5/5/16	5/5/16
	Unit	**MCL**														
1,4-Naphthoquinone	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
2-Nitroaniline	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
3-Nitroaniline	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
4-Nitroaniline	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Nitrobenzene	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
2-Nitrophenol	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
4-Nitrophenol	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
N-Nitroso-di-n-propylamine	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Di-n-octylphthalate	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Pentachlorophenol	µg/L	1	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	**7.0 J**	--	--
Phenol	µg/L	-	--	--	--	10	-- (--)	-- (--)	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	µg/L	-	--	--	--	--	-- (--)	0.5 J (--)	--	--	--	--	--	0.7 J	--	--
2,4,6-Trichlorophenol	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons																
Acenaphthene	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Acenaphthylene	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Acetophenone	µg/L	-	--	--	--	0.5 J	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Anthracene	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Chrysene	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Fluoranthene	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Fluorene	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Phenanthrene	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Pyrene	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Benzo(a)anthracene	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Benzo(a)pyrene	µg/L	0.2	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	-	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Naphthalene	µg/L	-	--	--	--	0.036 J	0.081 (0.072)	0.052 J (0.056 J)	--	--	--	--	--	--	--	--

Notes:

Duplicate sanple results are presented in parenthesis adjacent to the parent sample result.
Results in **bold** and shaded gray have exceeded both their respective Maximum Contaminant Level (MCL) and Regional Screening Level (RSL)
Results in **bold** have exceeded either their respective Maximum Contaminant Level (MCL) or Regional Screening Level (RSL)
-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.
µg/L = Micrograms per Liter
MCL = Maximum Contaminant Level
RSL = Regional Screening Levels for Tapwater, THQ = 1.0, EPA May 2016

Data Qualifier:
J = Estimated Value

Watermark ECC LLC

Table A.7.3.1-7
Pesticides / Herbicides and Polychlorinated Biphenyl Results
Area B Landfills, Fort Detrick, Maryland

Analyte	Unit	MCL	RSL Tapwater	Location	BMW2	BMW3	BMW5	BMW9D	BMW11	BMW16	BMW20	BMW21	BMW24	BMW25	BMW29A	BMW38	BMW39	BMW41
				Sample ID	FTD72-BMW2-050316	FTD72-BMW3-050316	FTD72-BMW5-050916	FTD72-BMW9D-050516	FTD72-BMW11-050916	FTD72-BMW16-050916	FTD72-BMW20-050616	FTD72-BMW21-050516	FTD72-BMW24-051016	FTD72-BMW25-050616	FTD72-BMW29A-051016	FTD72-BMW38-051016	FTD72-BMW39-051016	FTD72-BMW41-050616
				Date	5/3/16	5/3/16	5/9/16	5/5/16	5/9/16	5/9/16	5/6/16	5/5/16	5/10/16	5/6/16	5/10/16	5/10/16	5/10/16	5/6/16
Pesticides / Herbicides																		
2,4-D	µg/L	70	170		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dalapon	µg/L	200	600		--	--	--	--	--	--	--	1.8 J	--	--	--	--	--	--
2,4-DB	µg/L	-	120		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dicamba	µg/L	-	570		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dinoseb	µg/L	7	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-DP (Dichlorprop)	µg/L	-	-		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MCPA	µg/L	-	7.5		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MCPP	µg/L	-	16		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Picloram	µg/L	500	1,400		--	0.58 J	0.45 J	0.47 J	0.40 J	0.43 J	--	--	--	--	--	--	--	--
2,4,5-T	µg/L	-	160		--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-TP	µg/L	50	110		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aldrin	µg/L	-	0.00092		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Alpha BHC	µg/L	-	0.0072		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beta BHC	µg/L	-	0.025		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Gamma BHC (Lindane)	µg/L	0.2	0.042		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Alpha Chlordane	µg/L	-	-		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Gamma Chlordane	µg/L	-	-		--	--	--	--	--	--	--	--	--	--	--	--	--	--
p,p-DDD	µg/L	-	0.032		--	--	--	--	--	--	--	--	--	--	--	--	--	--
p,p-DDE	µg/L	-	0.046		--	--	--	--	--	--	--	--	--	--	--	--	--	--
p,p-DDT	µg/L	-	0.23		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Delta BHC	µg/L	-	-		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	µg/L	-	0.0018		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan I	µg/L	-	-		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan II	µg/L	-	-		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan Sulfate	µg/L	-	-		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin	µg/L	2	2.3		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin Aldehyde	µg/L	-	-		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin Ketone	µg/L	-	-		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	µg/L	0.4	0.0014		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor Epoxide	µg/L	0.2	0.0014		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	µg/L	40	37		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toxaphene	µg/L	3	0.071		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls																		
PCB-1016	µg/L	0.5	0.22		--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1221	µg/L	0.5	0.0047		--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1232	µg/L	0.5	0.0047		--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1242	µg/L	0.5	0.0078		--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1248	µg/L	0.5	0.0078		--	--	--	**0.14 J**	--	--	--	--	--	--	--	--	--	--
PCB-1254	µg/L	0.5	0.0078		--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1260	µg/L	0.5	0.0078		--	--	--	--	--	--	--	--	--	--	--	--	--	--

Watermark ECC LLC

Table A.7.3.1-7
Pesticides / Herbicides and Polychlorinated Biphenyl Results
Area B Landfills, Fort Detrick, Maryland

Analyte				Location	BMW42	BMW44	BMW49	BMW59D	BMW65A	BMW67A	BMW67C	BMW68A	BMW72	BMW73	BMW74	BMW76	BMW77	MW81	MW82
				Sample ID	FTD72-BMW42-050616	FTD72-BMW44-050916	FTD72-BMW49-050916	FTD72-BMW59D-050516	FTD72-BMW65A-050916	FTD72-BMW67A-050916	FTD72-BMW67C-050916	FTD72-BMW68A-050916	FTD72-BMW72-050916	FTD72-BMW73-051016	FTD72-BMW74-051016	FTD72-BMW76-050516	FTD72-BMW77-050516	FTD72-MW81-050516	FTD72-MW82-050516
				Date	5/6/16	5/9/16	5/9/16	5/5/16	5/9/16	5/9/16	5/9/16	5/9/16	5/9/16	5/10/16	5/10/16	5/5/16	5/5/16	5/5/16	5/5/16
	Unit	MCL	RSL Tapwater																
Pesticides / Herbicides																			
2,4-D	µg/L	70	170	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	0.16 J	--	--
Dalapon	µg/L	200	600	--	--	--	--	--	0.93 J (1.0 J)	-- (--)	0.39 J	--	--	--	--	--	--	--
2,4-DB	µg/L	-	120	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Dicamba	µg/L	-	570	--	--	--	--	--	0.32 (0.33)	0.31 (0.31)	0.086 J	--	--	--	--	--	--	--
Dinoseb	µg/L	7	15	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	2.8 J	--	--
2,4-DP (Dichlorprop)	µg/L	-	-	--	--	--	--	--	-- (--)	-- (--)	0.48	--	--	--	--	--	--	--
MCPA	µg/L	-	7.5	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
MCPP	µg/L	-	16	--	--	--	--	--	-- (--)	**50 J** (--)	--	--	--	--	--	--	--	--
Picloram	µg/L	500	1,400	--	--	--	--	0.50 J	-- (0.83 J)	6.6 J (5.0 J)	2.3 J	--	--	--	0.44 J	7.5 J	0.42 J	--
2,4,5-T	µg/L	-	160	--	--	--	--	--	0.17 (0.18)	0.094 J (0.076 J)	0.021 J	--	--	--	--	0.26 J	--	--
2,4,5-TP	µg/L	50	110	--	--	--	--	--	0.047 J (0.042 J)	-- (--)	0.15	--	--	--	--	5.6 J	--	--
Aldrin	µg/L	-	0.00092	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Alpha BHC	µg/L	-	0.0072	--	--	--	--	0.0032 J	**0.018 (0.018)**	-- (--)	--	--	--	--	--	--	--	--
Beta BHC	µg/L	-	0.025	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Gamma BHC (Lindane)	µg/L	0.2	0.042	--	--	--	--	--	0.0095 J (0.011 J)	0.0048 J (0.0049 J)	0.0030 J	0.0025 J	--	--	--	--	--	--
Alpha Chlordane	µg/L	-	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Gamma Chlordane	µg/L	-	-	0.0082 J	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
p,p-DDD	µg/L	-	0.032	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
p,p-DDE	µg/L	-	0.046	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
p,p-DDT	µg/L	-	0.23	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Delta BHC	µg/L	-	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	0.018	--	--
Dieldrin	µg/L	-	0.0018	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	**0.011 J**
Endosulfan I	µg/L	-	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Endosulfan II	µg/L	-	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Endosulfan Sulfate	µg/L	-	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Endrin	µg/L	2	2.3	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Endrin Aldehyde	µg/L	-	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Endrin Ketone	µg/L	-	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	0.0063 J	--	--
Heptachlor	µg/L	0.4	0.0014	--	--	--	--	--	-- (--)	-- (**0.0060 J**)	--	--	--	--	--	--	--	--
Heptachlor Epoxide	µg/L	0.2	0.0014	--	--	--	--	**0.0047 J**	-- (--)	-- (--)	--	**0.0019 J**	--	--	--	--	--	--
Methoxychlor	µg/L	40	37	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Toxaphene	µg/L	3	0.071	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls																			
PCB-1016	µg/L	0.5	0.22	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
PCB-1221	µg/L	0.5	0.0047	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
PCB-1232	µg/L	0.5	0.0047	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
PCB-1242	µg/L	0.5	0.0078	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
PCB-1248	µg/L	0.5	0.0078	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
PCB-1254	µg/L	0.5	0.0078	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
PCB-1260	µg/L	0.5	0.0078	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--

Notes:

Duplicate sample results are presented in parenthesis adjacent to the parent sample result.

Results in **bold** and shaded gray have exceeded both their respective Maximum Contaminant Level (MCL) and Regional Screening Level (RSL)

Results in **bold** have exceeded either their respective Maximum Contaminant Level (MCL) or Regional Screening Level (RSL)

-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.

RSL = Regional Screening Levels for Tapwater, THQ = 1.0, EPA May 2016

µg/L = Micrograms per Liter

MCL = Maximum Contaminant Level

Data Qualifier:

J = Estimated Value

Table A.7.3.1-8
Water Quality Parameters and Dioxins, Furans, and Radiological Results
Area B Landfill, Fort Detrick, Maryland

Analyte	Location			BMW2	BMW3	BMW5	BMW9D	BMW11	BMW16	BMW20	BMW21	BMW24	BMW25	BMW29A	BMW38	BMW39	BMW41	BMW42
	Sample ID			FTD72-BMW2-050316	FTD72-BMW3-050316	FTD72-BMW5-050916	FTD72-BMW9D-050516	FTD72-BMW11-050916	FTD72-BMW16-050916	FTD72-BMW20-050616	FTD72-BMW21-050516	FTD72-BMW24-051016	FTD72-BMW25-050616	FTD72-BMW29A-051016	FTD72-BMW38-051016	FTD72-BMW39-051016	FTD72-BMW41-050616	FTD72-BMW42-050616
	Date			5/3/16	5/3/16	5/9/16	5/5/16	5/9/16	5/9/16	5/6/16	5/5/16	5/10/16	5/6/16	5/10/16	5/10/16	5/10/16	5/6/16	5/6/16
	Unit	MCL	RSL Tapwater															
Water Quality Parameters																		
Ammonia Nitrogen	mg/L	-	-	--	--	--	--	--	--	--	0.064 J	--	--	--	--	--	--	--
Total Nitrite / Nitrate Nitrogen	mg/L	-	-	2.9	4.2	1.7	2.2	2.4	3.6	3.0	0.50	1.3	3.7	2.8	4.3	2.4 J	3.7	3.2
Chloride	mg/L	-	-	10.1	33.7	19.9	19.2	7.0	15.4	58.1	10.6	8.7	5.8	21.9	50.2	29.7	5.4	4.7
Sulfate	mg/L	-	-	4.2	36.5	20.6	34.1	11.4	4.9	11.1	33.0	4.8	7.6	16.0	7.4	26.9	18.7	21.9
Chemical Oxygen Demand	mg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Temperature of pH	Degrees Celsius	-	-	22.9	22.5	21.8	22.5	22.0	21.9	22.4	22.3	21.3	22.6	21.3	20.8	21.5	22.7	22.7
Turbidity	NTU	-	-	0.18 J	2.3	0.16 J	3.8	0.29 J	6.8	11.7	5.1	2.3	--	0.18 J	0.15 J	3.7	2.5	--
Total Alkalinity to pH 4.5	mg/L as CaCO3	-	-	103	220	221	127	172	109	105	52.3	159	33.8	173	189	206	158	175
Specific Conductance	umhos/cm	-	-	264	611	501	379	374	286	425	212	334	125	435	542	535	376	409
Total Dissolved Solids	mg/L	-	-	139	320	307	235	221	141	238	135	177	83.0	234	294	300	234	252
pH	Standard Units	-	-	7.5	7.4	7.6	8.2	7.7	7.0	7.8	6.7	7.4	6.6	7.8	7.8	7.8	7.8	7.8
Total Hardness as CaCO3	mg/L	-	-	113	270	254	145	202	116	139	73.3	163	49.9	206	234	238	184	200
Dioxins / Furans																		
2,3,7,8-TCDD	pg/L	30	0.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PeCDD	pg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	pg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	pg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	pg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDD	pg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OCDD	pg/L	-	-	--	15 J	--	--	11 J	15 J	--	--	14 J	--	--	--	--	--	--
2,3,7,8-TCDF	pg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PeCDF	pg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-PeCDF	pg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	pg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	pg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	pg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	pg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	pg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	pg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OCDF	pg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radiological Analysis																		
Alpha	pCi/L	-	-	--	--	--	7.21	--	--	--	--	--	--	--	--	--	--	--
Beta	pCi/L	-	-	--	5.37	--	--	--	--	4.93	--	--	--	--	--	--	--	--

Table A.7.3.1-8
Water Quality Parameters and Dioxins, Furans, and Radiological Results
Area B Landfill, Fort Detrick, Maryland

Analyte				Location	BMW44	BMW49	BMW59D	BMW65A	BMW67A	BMW67C	BMW68A	BMW72	BMW73	BMW74	BMW76	BMW77	MW81	MW82
				Sample ID	FTD72-BMW44-050916	FTD72-BMW49-050916	FTD72-BMW59D-050516	FTD72-BMW65A-050916	FTD72-BMW67A-050916	FTD72-BMW67C-050916	FTD72-BMW68A-050916	FTD72-BMW72-050916	FTD72-BMW73-051016	FTD72-BMW74-051016	FTD72-BMW76-050516	FTD72-BMW77-050516	FTD72-MW81-050516	FTD72-MW82-050516
				Date	5/9/16	5/9/16	5/5/16	5/9/16	5/9/16	5/9/16	5/9/16	5/9/16	5/10/16	5/10/16	5/5/16	5/5/16	5/5/16	5/5/16
	Unit	MCL	RSL Tapwater															
Water Quality Parameters																		
Ammonia Nitrogen	mg/L	-	-		--	--	--	0.59	0.24 (0.24)	0.13 (0.15)	1.1	--	--	0.12	--	--	--	--
Total Nitrite / Nitrate Nitrogen	mg/L	-	-		3.4	7.0	4.2	--	2.9 (2.6)	1.2 (1.3)	1.2	2.8	3.8	6.9	5.9	1.1	2.4	1.9
Chloride	mg/L	-	-		8.6	9.5	32.9	40.9	33.7 (33.8)	33.9 (31.7)	26.9	10.5	26.3	46.1	9.4	20.3	23.4	8.1
Sulfate	mg/L	-	-		20.0	10.4	6.2	211	71.8 (75.0)	16.8 (13.8)	27.9	16.3	9.7	16.9	8.9	44.1	12.1	45.5
Chemical Oxygen Demand	mg/L	-	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Temperature of pH	Degrees Celsius	-	-		21.4	22.0	22.6	21.8	22.2 (21.7)	21.3 (21.7)	21.7	21.4	21.6	21.1	23.0	22.7	23.0	22.6
Turbidity	NTU	-	-		0.15 J	0.17 J	--	30.7	0.27 J (2.2 J)	6.8 (7.3)	7.6	5.0	0.23 J	53.4	--	--	134	0.20 J
Total Alkalinity to pH 4.5	mg/L as CaCO3	-	-		158	291	170	58.1	274 (275)	286 (284)	362	63.2	239	94.5	128	390	320	251
Specific Conductance	umhos/cm	-	-		371	620	508	625	725 (727)	633 (626)	761	332	556	449	330	858	677	575
Total Dissolved Solids	mg/L	-	-		240	404	270	629	469 (473)	373 (367)	512	131	302	258 J	188	507	400	346
pH	Standard Units	-	-		7.9	7.1	8.0	10.3 J	7.6 (7.5)	7.6 (7.7)	7.2	11.0 J	7.7	10.1 J	8.1	7.6	7.6	7.6
Total Hardness as CaCO3	mg/L	-	-		184	332	211	153	376 (377)	325 (327)	373	192	247	77.7	155	451	357	293
Dioxins / Furans																		
2,3,7,8-TCDD	pg/L	30	0.12		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
1,2,3,7,8-PeCDD	pg/L	-	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	pg/L	-	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	pg/L	-	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	pg/L	-	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDD	pg/L	-	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
OCDD	pg/L	-	-		--	35	--	--	-- (--)	-- (12 J)	18 J	--	10 J	--	--	--	34	--
2,3,7,8-TCDF	pg/L	-	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
1,2,3,7,8-PeCDF	pg/L	-	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
2,3,4,7,8-PeCDF	pg/L	-	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	pg/L	-	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	pg/L	-	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	pg/L	-	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	pg/L	-	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	pg/L	-	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	pg/L	-	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
OCDF	pg/L	-	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Radiological Analysis																		
Alpha	pCi/L	-	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	6.18	9.83	--
Beta	pCi/L	-	-		--	4.90	--	15.90	-- (--)	5.77 J (--)	7.97	--	--	66.00	--	--	7.13	--

Notes:

-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.
Duplicate sample results are presented in parenthesis adjacent to the parent sample result.

Data Qualifier:
J = Estimated Value

mg/L = Milligrams per Liter
pg/L = Picograms per Liter
umhos/cm = Micromhos per Centimeter
pCi/L = PicoCuries per Liter
MCL = Maximum Contaminant Level
NTU = Nephelometric Turbidity Unit
CaCO3 = Calcium Carbonate
RSL = Regional Screening Level

Table A.7.3.1-9
Total and Dissolved Metals Results
Area B Landfill, Fort Detrick, Maryland

Analyte				Location	BMW2	BMW3	BMW5	BMW9D	BMW11	BMW16	BMW20	BMW21	BMW24	BMW25	BMW29A	BMW38	BMW39	BMW41	BMW42
				Sample ID	FTD72-BMW2-050316	FTD72-BMW3-050316	FTD72-BMW5-050916	FTD72-BMW9D-050516	FTD72-BMW11-050916	FTD72-BMW16-050916	FTD72-BMW20-050616	FTD72-BMW21-050516	FTD72-BMW24-051016	FTD72-BMW25-050616	FTD72-BMW29A-051016	FTD72-BMW38-051016	FTD72-BMW39-051016	FTD72-BMW41-050616	FTD72-BMW42-050616
				Date	5/3/16	5/3/16	5/9/16	5/5/16	5/9/16	5/9/16	5/6/16	5/5/16	5/10/16	5/6/16	5/10/16	5/10/16	5/10/16	5/6/16	5/6/16
	Unit	MCL	RSL Tapwater																
Total Metals																			
Barium	mg/L	2	3.8		0.0350	0.0538	0.0393	0.157	0.0731	0.0428	0.0429	0.128	0.0408	0.0431	0.0506	0.0523	0.0445	0.0460	0.0395
Calcium	mg/L	-	-		30.7	71.8	68.9	28.4	53.9	34.9	33.3	24.8	51.3	12.5	57.4	57.3	76.8	60.0	67.7
Cobalt	mg/L	-	0.006		--	--	--	--	--	--	--	**0.0326**	--	--	--	--	--	--	--
Copper	mg/L	1.3	0.8		--	--	--	0.0039 J	--	--	--	--	--	--	--	--	--	--	--
Magnesium	mg/L	-	-		8.86	22.2	19.9	18.1	16.4	7.10	13.4	2.74	8.46	4.58	15.1	22.1	11.3	8.42	7.50
Manganese	mg/L	-	0.43		0.0015 J	0.0031 J	--	--	0.0018 J	0.0208	0.0490	**2.00**	0.0071	--	0.0017 J	--	0.0055	--	--
Nickel	mg/L	-	0.39		--	--	--	0.0148	--	0.0065 J	--	0.0052 J	--	--	--	--	--	--	--
Selenium	mg/L	0.05	0.1		--	--	--	--	--	--	--	--	--	--	0.0104 J	--	--	--	--
Silver	mg/L	-	0.094		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium	mg/L	-	0.086		--	--	--	0.0119	--	--	--	--	--	--	--	--	--	--	--
Antimony	mg/L	0.006	0.0078		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	mg/L	0.01	0.000052		--	--	--	**0.0188**	--	--	--	--	--	--	--	--	--	--	**0.00072 J**
Beryllium	mg/L	0.004	0.025		--	--	--	--	--	0.00016 J	--	--	--	0.000074 J	--	--	--	--	--
Cadmium	mg/L	-	0.0092		--	--	--	0.00022 J	--	--	--	0.00046 J	--	--	--	--	--	--	--
Chromium	mg/L	0.1	-		--	--	0.0010 J	0.0112	0.0024	0.0029	0.0056	0.0030	0.0015 J	0.0011 J	0.0017 J	--	0.0021	0.00081 J	--
Iron	mg/L	-	14		0.0405 J	0.0803 J	--	0.301	0.0257 J	0.235	0.779	5.88	0.0876 J	0.0613 J	0.0384 J	--	0.0574 J	0.0973 J	0.0255 J
Lead	mg/L	0.015	0.015		--	--	--	0.00043 J	--	--	0.00044 J	0.00013 J	0.00026 J	--	--	--	0.00015 J	--	--
Potassium	mg/L	-	-		4.81	4.53	1.89	1.85	1.23	2.13	1.92	2.66	4.32	3.16	1.14	1.31	4.13	0.641	0.552
Sodium	mg/L	-	-		5.18	23.3	9.99	18.3	2.30	11.5	27.7	7.59	4.50	2.92	9.87	20.1	13.8	5.45	6.81
Thallium	mg/L	0.002	0.0002		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	mg/L	-	6		--	--	--	--	--	0.0107 J	--	0.0098 J	0.0099 J	--	--	--	--	--	--
Mercury	mg/L	0.002	0.00063		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dissolved Metals																			
Barium	mg/L	2	3.8		0.0372	0.0544	0.0407	0.164	0.0743	0.0438	0.0429	0.137	0.0390	0.0520	0.0497	0.0508	0.0441	0.0481	0.0416
Calcium	mg/L	-	-		34.7	72.3	68.1	29.0	50.5	38.6	33.3	24.4	50.2	15.7	56.9	55.3	77.7	60.1	68.2
Cobalt	mg/L	-	0.006		--	--	--	--	--	--	--	**0.0349**	--	--	--	--	--	--	--
Copper	mg/L	1.3	0.8		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Magnesium	mg/L	-	-		10.1	22.4	20.5	19.5	16.1	8.20	14.2	2.79	8.85	6.19	15.0	21.2	11.5	9.18	7.97
Manganese	mg/L	-	0.43		0.0045 J	--	--	--	--	0.0089	0.0114	**2.04**	0.0055	--	0.0019 J	--	0.0020 J	--	--
Nickel	mg/L	-	0.39		--	--	--	--	--	--	--	0.0058 J	--	--	--	--	--	--	--
Selenium	mg/L	0.05	0.1		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	mg/L	-	0.094		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium	mg/L	-	0.086		--	--	--	0.0110	--	--	--	--	--	--	--	--	--	--	--
Antimony	mg/L	0.006	0.0078		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	mg/L	0.01	0.000052		--	--	--	**0.0199**	--	--	--	--	--	--	--	--	--	--	**0.0013 J**
Beryllium	mg/L	0.004	0.025		--	--	--	--	--	0.00012 J	--	--	--	--	--	--	--	--	--
Cadmium	mg/L	-	0.0092		--	--	--	0.00021 J	--	--	--	0.00046 J	--	--	--	--	--	--	--
Chromium	mg/L	0.1	-		--	--	0.0010 J	0.0020 J	0.0024	0.00088 J	0.0011 J	0.0019 J	0.0013 J	--	0.0017 J	--	0.0017 J	0.00091 J	--
Iron	mg/L	-	14		0.0716 J	0.0264 J	--	0.0266 J	--	--	0.0792 J	6.13	--	--	--	--	--	--	--
Lead	mg/L	0.015	0.015		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Potassium	mg/L	-	-		4.55	4.71	1.96	2.06	1.28	2.06	1.82	2.60	3.94	3.05	1.14	1.35	4.07	0.584	0.547
Sodium	mg/L	-	-		6.41	24.3	10.5	20.8	2.31	11.8	30.8	8.18	4.44	3.33	10.0	20.5	13.9	5.66	7.68
Thallium	mg/L	0.002	0.0002		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	mg/L	-	6		--	--	--	--	--	--	--	0.0080 J	--	--	--	--	--	--	--
Mercury	mg/L	0.002	0.00063		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table A.7.3.1-9
Total and Dissolved Metals Results
Area B Landfill, Fort Detrick, Maryland

Analyte				Location	BMW44	BMW49	BMW59D	BMW65A	BMW67A	BMW67C	BMW68A	BMW72	BMW73	BMW74	BMW76	BMW77	MW81	MW82
				Sample ID	FTD72-BMW44-050916	FTD72-BMW49-050916	FTD72-BMW59D-050516	FTD72-BMW65A-050916	FTD72-BMW67A-050916	FTD72-BMW67C-050916	FTD72-BMW68A-050916	FTD72-BMW72-050916	FTD72-BMW73-051016	FTD72-BMW74-051016	FTD72-BMW76-050516	FTD72-BMW77-050516	FTD72-MW81-050516	FTD72-MW82-050516
				Date	5/9/16	5/9/16	5/5/16	5/9/16	5/9/16	5/9/16	5/9/16	5/9/16	5/10/16	5/10/16	5/5/16	5/5/16	5/5/16	5/5/16
	Unit	MCL	RSL Tapwater															
Total Metals																		
Barium	mg/L	2	3.8		0.0732	0.0571	0.0647	0.0327	0.0496 (0.0501)	0.287 (0.299)	0.181	0.0767	0.0372	0.0337	0.0685	0.118	0.243	0.0432
Calcium	mg/L	-	-		59.0 J	111	50.7	57.1	102 (103)	78.6 (79.1)	116	65.2	58.4	20.2	36.7	129	88.0	85.9
Cobalt	mg/L	-	0.006		--	--	--	0.0016 J	0.0017 J (0.0014 J)	-- (--)	0.0023 J	0.0018 J	--	--	--	--	0.0040 J	--
Copper	mg/L	1.3	0.8		--	0.0034 J	--	0.0102	-- (--)	-- (--)	0.0052 J	0.0064 J	--	--	--	0.0046 J	0.0070 J	0.0032 J
Magnesium	mg/L	-	-		8.77 J	13.1	20.6	2.55	29.3 (29.5)	31.2 (31.5)	20.4	7.14	24.6	6.65	15.3	31.5	33.4	19.0
Manganese	mg/L	-	0.43		--	0.167	--	0.273	**0.957 (0.985)**	0.220 (0.210)	**0.673**	0.0031 J	0.0044 J	0.0077	--	--	0.336	--
Nickel	mg/L	-	0.39		--	--	--	0.0259 J	0.0090 J (0.0123 J)	0.0065 J (0.0061 J)	0.0097 J	0.106 J	0.0396	0.0039 J	--	--	0.0074 J	--
Selenium	mg/L	0.05	0.1		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Silver	mg/L	-	0.094		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Vanadium	mg/L	-	0.086		--	--	--	--	-- (--)	-- (--)	--	--	--	0.0055	--	--	0.0099	--
Antimony	mg/L	0.006	0.0078		--	--	--	0.00054 J	-- (--)	-- (--)	--	0.00066 J	--	0.0014	--	--	--	--
Arsenic	mg/L	0.01	0.000052		**0.0013 J**	--	--	**0.0018 J**	**0.00067 J (0.00070 J)**	-- (--)	--	**0.0014 J**	--	**0.00093 J**	**0.0011 J**	--	**0.0019 J**	--
Beryllium	mg/L	0.004	0.025		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	0.00078	--
Cadmium	mg/L	-	0.0092		--	0.00028 J	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Chromium	mg/L	0.1	-		--	--	0.0011 J	0.0269	0.0039 (0.0049)	0.00071 J (--)	0.0049	0.0724	0.0082	0.0045	0.00097 J	0.0052	0.0058	0.0019 J
Iron	mg/L	-	14		--	0.0253 J	0.0271 J	1.65	0.566 (0.609)	0.0900 J (0.0994 J)	0.359	0.592	0.142	0.0879 J	--	0.0473 J	9.33	0.0327 J
Lead	mg/L	0.015	0.015		--	--	--	0.0013	-- (--)	-- (--)	--	--	--	0.00018 J	--	--	0.0038	--
Potassium	mg/L	-	-		1.14	2.52	1.36	17.5	2.36 (2.37)	1.58 (1.64)	7.19	4.46	2.21	68.2	1.04	1.87	3.29	1.34
Sodium	mg/L	-	-		7.15	5.79	20.0	130	12.6 (12.6)	9.60 (9.89)	17.0	3.61	15.5	26.9	5.14	15.0	9.41	10.2
Thallium	mg/L	0.002	0.0002		--	--	--	--	-- (--)	**0.00042 J (0.00037 J)**	--	--	--	--	--	--	--	--
Zinc	mg/L	-	6		--	--	--	0.0170	-- (--)	0.0288 (0.0277)	0.0181	--	--	--	--	--	0.0368	--
Mercury	mg/L	0.002	0.00063		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	0.000061 J	--
Dissolved Metals																		
Barium	mg/L	2	3.8		0.0761	0.0575	0.0654	0.0259	0.0506 (0.0510)	0.288 (0.292)	0.187	0.0777	0.0391	0.0245	0.0727	0.121	0.204	0.0444
Calcium	mg/L	-	-		59.7 J	107	49.4	49.2	97.5 (97.8)	77.4 (78.6)	118	60.5	61.0	16.4	36.9	126	85.6	83.6
Cobalt	mg/L	-	0.006		--	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--
Copper	mg/L	1.3	0.8		--	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--
Magnesium	mg/L	-	-		9.05 J	13.2	20.9	0.285	28.5 (29.1)	32.2 (32.5)	21.2	7.15	25.8	6.52	16.2	33.0	33.8	19.6
Manganese	mg/L	-	0.43		--	0.169	--	0.0053	**0.964 (1.01)**	0.231 (0.231)	**0.669**	--	0.0017 J	0.0019 J	--	--	0.0251	--
Nickel	mg/L	-	0.39		--	--	--	0.0030 J	0.0081 J (0.0065 J)	0.0059 J (0.0060 J)	0.0074 J	--	0.0340	--	--	--	--	--
Selenium	mg/L	0.05	0.1		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Silver	mg/L	-	0.094		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Vanadium	mg/L	-	0.086		0.0055	--	--	0.0136	-- (--)	-- (--)	--	0.0030 J	--	0.0057	--	--	--	--
Antimony	mg/L	0.006	0.0078		--	--	--	0.00040 J	-- (--)	-- (--)	--	0.00058 J	--	0.0014	--	--	--	--
Arsenic	mg/L	0.01	0.000052		**0.0014 J**	--	--	**0.0014 J**	**0.00058 J (0.00061 J)**	-- (--)	--	**0.00061 J**	--	**0.00069 J**	**0.0016 J**	--	--	--
Beryllium	mg/L	0.004	0.025		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Cadmium	mg/L	-	0.0092		--	0.00030 J	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Chromium	mg/L	0.1	-		--	--	0.0010 J	0.00088 J	-- (--)	-- (--)	0.0018 J	0.0259	0.0011 J	0.0030	0.0012 J	0.0015 J	0.0011 J	0.0017 J
Iron	mg/L	-	14		--	--	--	0.0493 J	0.498 (0.479)	0.0284 J (0.0260 J)	0.0655 J	--	--	0.0256 J	--	0.0296 J	0.654	--
Lead	mg/L	0.015	0.015		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	0.00028 J	--
Potassium	mg/L	-	-		0.827	2.65	1.37	15.6	2.42 (2.32)	1.66 (1.61)	7.40	4.38	2.25	64.2	1.08	1.82	2.20	1.25
Sodium	mg/L	-	-		7.06	6.02	21.6	144	13.2 (12.4)	10.0 (9.87)	16.3	3.50	16.4	26.2	5.77	15.8	10.2	10.7
Thallium	mg/L	0.002	0.0002		--	--	--	--	-- (--)	**0.00043 J (0.00040 J)**	--	--	--	--	--	--	--	--
Zinc	mg/L	-	6		--	--	--	--	-- (--)	0.0307 (0.0300)	--	--	--	--	--	--	--	--
Mercury	mg/L	0.002	0.00063		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--

Notes:

Duplicate sample results are presented in parenthesis adjacent to the parent sample result.
Results in **bold** and shaded gray have exceeded their respective MCL and RSL.
Results in **bold** have exceeded either their respective MCL or RSL.
-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.

µg/L = Micrograms per Liter
MCL = Maximum Contaminant Level
RSL = Regional Screening Level

Data Qualifier:
J = Estimated Value

Table A.7.3.1-10
Investigation Derived Waste Analytical Results
Area B Landfill, Fort Detrick, Maryland

Analyte	Location		IDW-001	IDW-002
	Sample ID		AreaBLF-IDW-001-051016	AreaBLF-IDW-002-051016
	Date		5/10/16	5/10/16
	Unit	MCL		
Acetone	µg/L	-	3.0 J	20
Acrolein	µg/L	-	--	--
Acrylonitrile	µg/L	-	--	--
Benzene	µg/L	5	--	--
Bromochloromethane	µg/L	-	--	--
Bromodichloromethane	µg/L	80[1]	--	--
Bromoform	µg/L	80[1]	--	--
Bromomethane	µg/L	-	--	--
2-Butanone	µg/L	-	--	--
Carbon Disulfide	µg/L	-	--	--
Carbon Tetrachloride	µg/L	5	--	--
Chlorobenzene	µg/L	100	--	--
Chloroethane	µg/L	-	--	--
Chloroform	µg/L	70[1]	0.8	1.3
Chloromethane	µg/L	-	--	--
1,2-Dibromo-3-chloropropa	µg/L	0.2	--	--
Dibromochloromethane	µg/L	60[1]	--	--
1,2-Dibromoethane	µg/L	0.05	--	--
Dibromomethane	µg/L	-	--	--
trans-1,4-Dichloro-2-butene	µg/L	-	--	--
1,2-Dichlorobenzene	µg/L	600	--	--
1,4-Dichlorobenzene	µg/L	75	--	--
1,1-Dichloroethane	µg/L	-	--	--
1,2-Dichloroethane	µg/L	5	--	--
1,1-Dichloroethene	µg/L	7	0.1 J	0.2 J
cis-1,2-Dichloroethene	µg/L	70	0.1J	0.2 J
trans-1,2-Dichloroethene	µg/L	100	--	--
1,2-Dichloropropane	µg/L	5	--	--
cis-1,3-Dichloropropene	µg/L	-	--	--
trans-1,3-Dichloropropene	µg/L	-	--	--
Ethylbenzene	µg/L	700	--	--
2-Hexanone	µg/L	-	--	--
Methyl Iodide	µg/L	-	--	--
Methyl Tertiary Butyl Ether	µg/L	-	--	--

Table A.7.3.1-10
Investigation Derived Waste Analytical Results
Area B Landfill, Fort Detrick, Maryland

Analyte	Location		IDW-001	IDW-002
	Sample ID		AreaBLF-IDW-001-051016	AreaBLF-IDW-002-051016
	Date		5/10/16	5/10/16
	Unit	MCL		
4-Methyl-2-pentanone	µg/L	-	--	--
Methylene Chloride	µg/L	5	--	--
Styrene	µg/L	100	--	--
1,1,1,2-Tetrachloroethane	µg/L	-	--	--
1,1,2,2-Tetrachloroethane	µg/L	-	--	--
Tetrachloroethene	µg/L	5	0.2 J	0.3 J
Toluene	µg/L	1,000	--	--
1,1,1-Trichloroethane	µg/L	200	--	0.2 J
1,1,2-Trichloroethane	µg/L	5	--	--
Trichloroethene	µg/L	5	1.6	2.9
Trichlorofluoromethane	µg/L	-	0.6	1
1,2,3-Trichloropropane	µg/L	-	--	--
Vinyl Acetate	µg/L	-	--	--
Vinyl Chloride	µg/L	2	--	--
m+p-Xylene	µg/L	10,000[2]	--	--
o-Xylene	µg/L	10,000[2]	--	0.2 J

Notes:

-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.

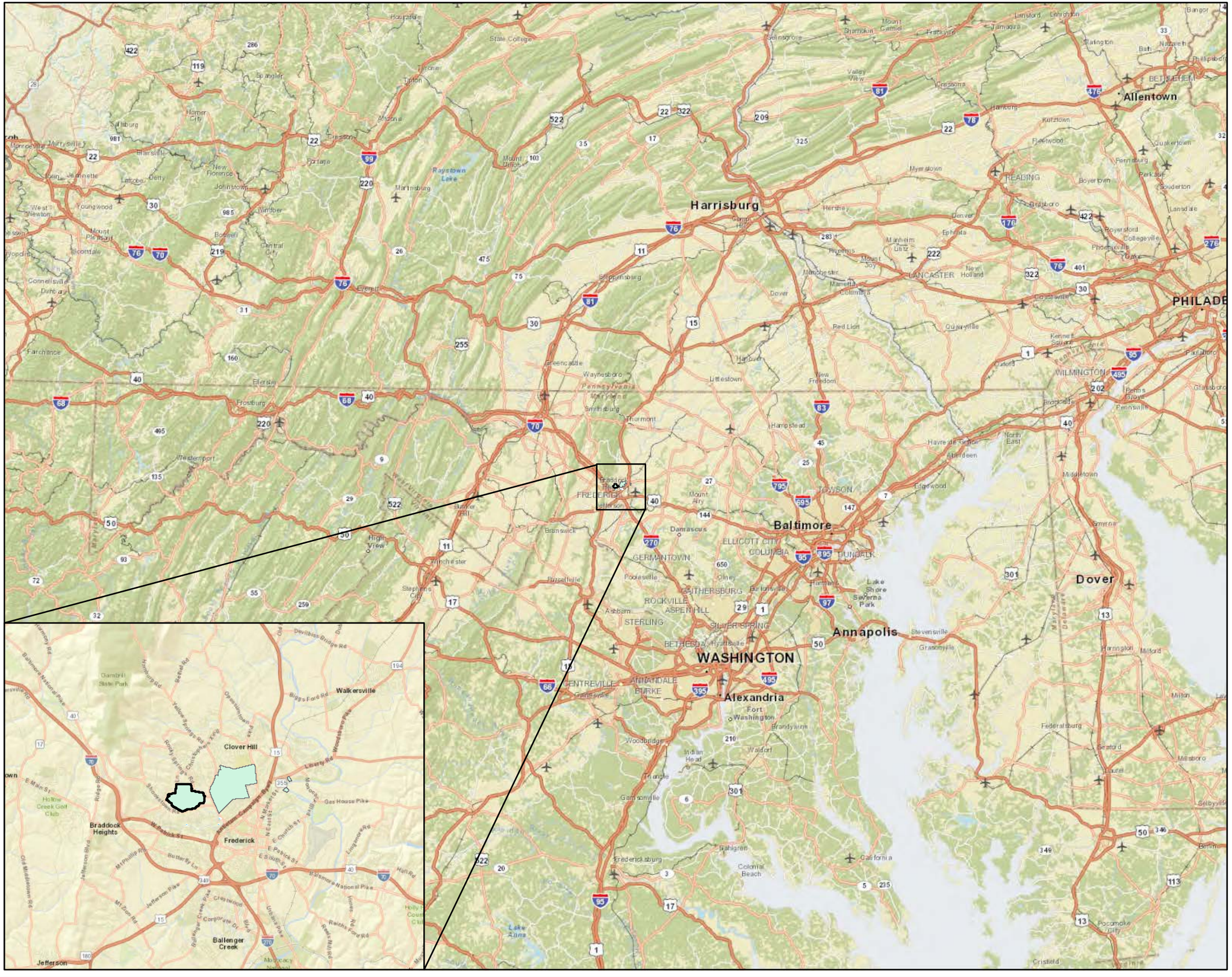
[1] = 80 µg/L is the MCL for total trihalomethanes (total of bromodichloromethane, bromoform, dibromochloromethane, and chloroform) and is applicable to public drinking water supplies that use disinfection products. Chloroform has a maximum contaminant level goal (MCLG) of 70 µg/L. Dibromochloromethane has a MCLG of 60 µg/L.

[2] = 10,000 µg/L is the MCL for total xylenes

µg/L = Micrograms per Liter
MCL = Maximum Contaminant Level
MCLG = Maximum Contaminant Level Goal
RSL = Regional Screening Level

Data Qualifier:
J = Estimated Value

Attachment 7.3.1
FIGURES



Legend

- Area B Boundary
- Installation Area

N

REFERENCE/PROJECTION: Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Semi-Annual Monitoring Report
May 2016

Date: 1 December 2016
By: J. Gatherer

FIGURE A.7.3.1-1

Site Location

FT. DETRICK
GIS File Path:
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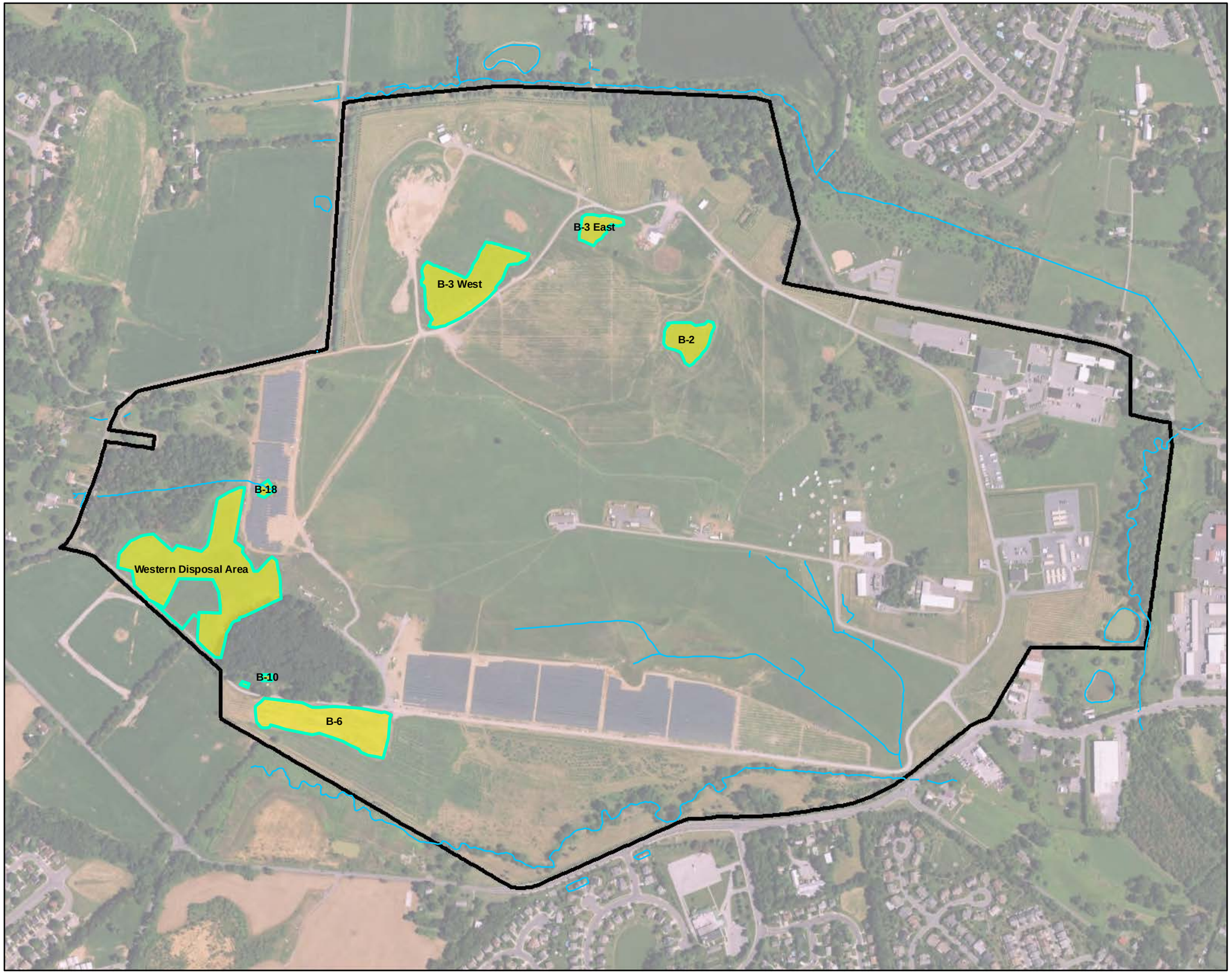
Fort Detrick
Frederick, MD



Legend

- Stream
- Landfill Boundary
- Landfill Cap Area
- Area B Boundary

N

Scale:

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Semi-Annual Monitoring Report
May 2016

Date: 1 December 2016
By: J. Gatherer

FIGURE A.7.3.1-2

Site Layout

FT. DETRICK

GIS File Path:

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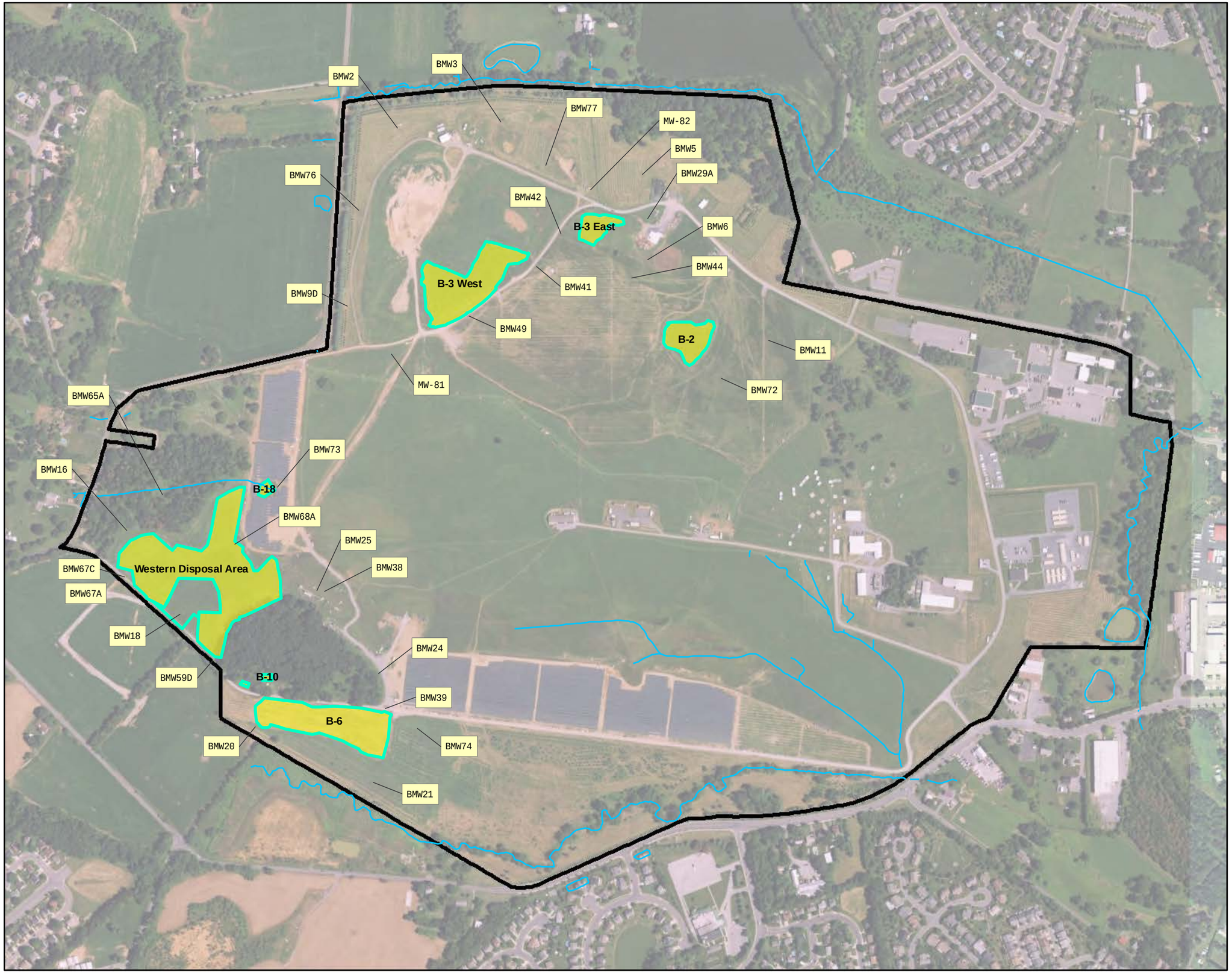
Fort Detrick
Frederick, MD



Legend

- Stream
- Landfill Boundary
- Landfill Cap Area
- Area B Boundary

N

REFERENCE/PROJECTION: Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Semi-Annual Monitoring Report
May 2016

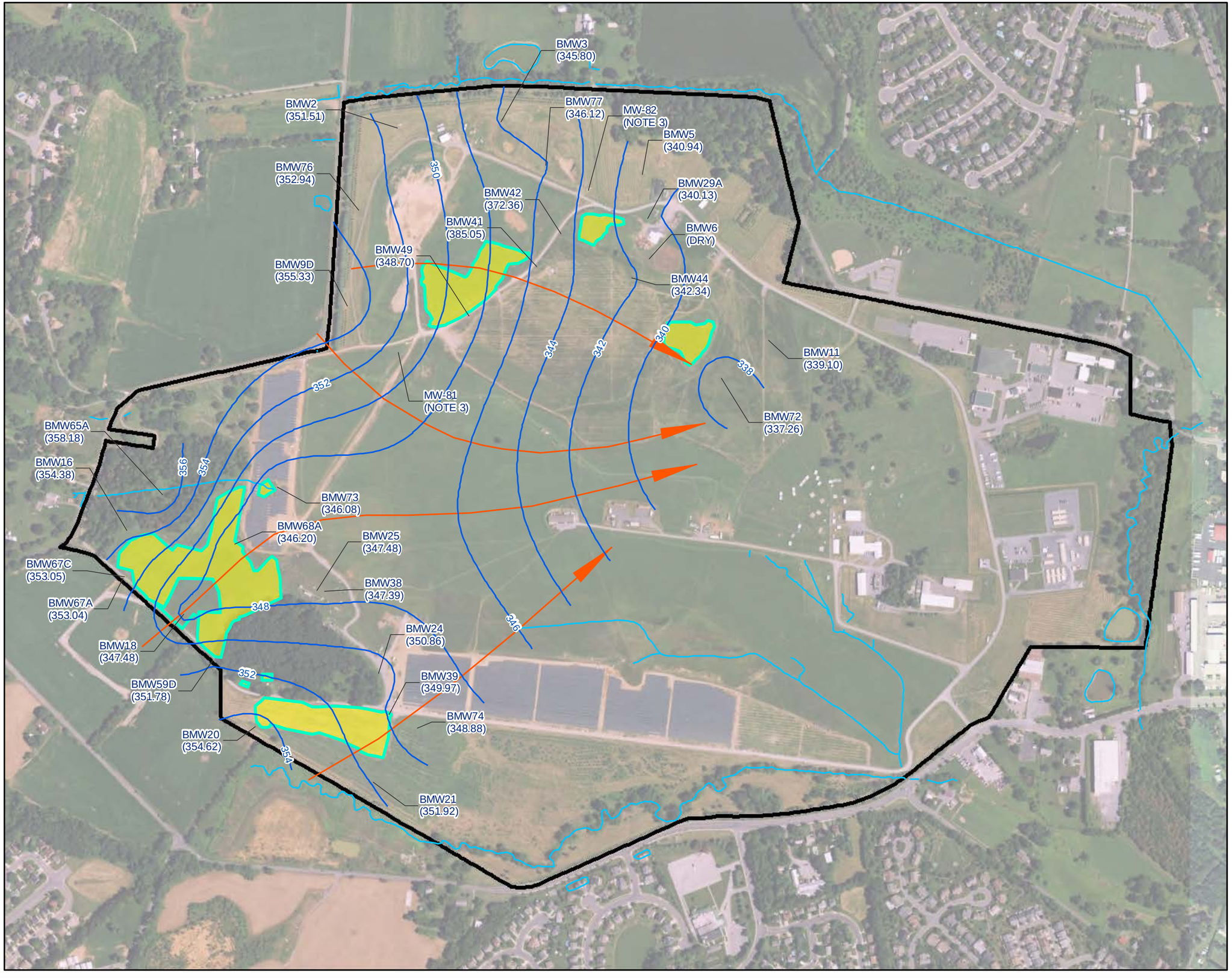
Date: 1 December 2016
By: J. Gatherer

FT. DETRICK
GIS File Path:
C:\GIS_Projects\Ft_Detrick\Maps\AreaB\AnnualReports\2016 3-1_MonitoringNetwork_AreaB_2016.mxd

FIGURE A.7.3.1-3

Area B Landfill
Groundwater
Monitoring Network

Fort Detrick
Frederick, MD



Legend

- Genralized Direction Groundwater Flow
- Potentiometric Contours (May 2016)
- Contour Int. = 2-ft
- Stream
- Landfill Boundary
- Landfill Cap Area
- Area B Boundary

Notes:
1) Elevations of potentiometric contours are shown as ft MSL.
2) Water levels at BMW41 and BMW42 were considered anomalous and were therefore not used for the generation of potentiometric contours.
3) MW-81 and -82 were gauged but no elevation data is available for these wells.

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Semi-Annual Monitoring Report
May 2016

Date: 1 December 2016
By: J. Gatherer

FIGURE A.7.3.1-4

Groundwater Elevations

FT. DETRICK
GIS File Path:
C:\GIS_Projects\Ft_Detrick\Maps\AreaB\AnnualReports\2016 3-1_MonitoringNetwork_AreaB_2016.mxd

Fort Detrick
Frederick, MD

BMW3
No Exceedances

BMW2
No Exceedances

BMW76
No Exceedances

BMW77

Analyte	MCL	Result	Unit
1,1-Dichloroethene	7	7.2	µg/L
Pentachlorophenol	1	7.0J	µg/L
Tetrachloroethene	5	22	µg/L
Trichloroethene	5	8.6	µg/L

MW-82
No Exceedances

BMW5
No Exceedances

BMW9D

Analyte	MCL	Result	Unit
Arsenic (T)	0.01	0.0188	mg/L

BMW29A
No Exceedances

BMW42
No Exceedances

BMW16
No Exceedances

MW-81
No Exceedances

BMW44
No Exceedances

BMW41
No Exceedances

BMW67C

Analyte	MCL	Result	Unit
1,1-Dichloroethene	7	120	µg/L
1,2-Dichloroethane	5	15	µg/L
Benzene	5	6.4J	µg/L
Chloroform	70	760	µg/L
cis-1,2-Dichloroethene	70	130	µg/L
Tetrachloroethene	5	42	µg/L
Trichloroethene	5	1800	µg/L

BMW49
No Exceedances

BMW11
No Exceedances

BMW72
No Exceedances

BMW65A
No Exceedances

BMW73
No Exceedances

BMW67A

Analyte	MCL	Result	Unit
1,1-Dichloroethene	7	31	µg/L
1,2-Dichloroethane	5	16	µg/L
Chloroform	70	610J	µg/L
Tetrachloroethene	5	18	µg/L
Trichloroethene	5	580	µg/L

BMW68A

Analyte	MCL	Result	Unit
1,1-Dichloroethene	7	34	µg/L
Tetrachloroethene	5	17	µg/L
Trichloroethene	5	520	µg/L
Vinyl Chloride	2	3.7	µg/L

BMW38

Analyte	MCL	Result	Unit
Trichloroethene	5	7.3	µg/L

BMW25
No Exceedances

BMW24
No Exceedances

BMW59D

Analyte	MCL	Result	Unit
Trichloroethene	5	16	µg/L

BMW39
No Exceedances

BMW74

Analyte	MCL	Result	Unit
Trichloroethene	5	17	µg/L

BMW20
No Exceedances

BMW21
No Exceedances

Legend

- Stream
- Landfill Boundary
- Landfill Cap Area
- Area B Boundary

Notes:
MCL = Maximum Contaminant Level
µg/L = micrograms per liter
mg/L = milligram per liter

N

REFERENCE/PROJECTION: Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Semi-Annual Monitoring Report
May 2016

Date: 1 December 2016
By: J. Gatherer

FIGURE A.7.3.1-5

Analytical Results Above the MCL

Fort Detrick
Frederick, MD

FT. DETRICK
GIS File Path:
C:\GIS_Projects\Ft_Detrick\Maps\AreaB\AnnualReports\2016 5-2_ResultsAboveMCL_AreaB_2016.mxd

Attachment 7.3.2
Area B Landfill Monitoring
November 2016 Monitoring Report Tables and Figures
(Watermark ECC LLC, 2017)

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Attachment 7.3.2
TABLES

Table A.7.3.2-1
Water Level Survey Data
Area B Landfills, Fort Detrick, Maryland

Monitoring Well	Top of Screen (ft BTOC)	Bottom of Screen (ft BTOC)	Depth to Groundwater (ft BTOC)	TOC Elevation (ft msl)	Groundwater Elevation (ft msl)
BMW2	25	35	35.30	376.30	341.00
BMW3	25	35	29.58	366.90	337.32
BMW5	25	35	27.36	362.01	334.65
BMW6	25	35	dry	380.90	NA
BMW9D	91	106	44.71	387.88	343.17
BMW11	25	35	23.88	357.20	333.32
BMW16	25	35	dry	390.70	NA
BMW18	25	35	dry	386.00	NA
BMW20	25	35	21.71	368.70	346.99
BMW21	25	35	14.21	359.84	345.63
BMW24	25	35	24.02	368.34	344.32
BMW25	25	35	dry	369.40	NA
BMW29A	48	58	38.34	371.03	332.69
BMW38	50.6	80.6	26.35	368.38	342.03
BMW39	21.1	51.1	26.92	370.45	343.53
BMW41	49	69	26.51	399.02	372.51*
BMW42	48.5	68.5	32.75	397.78	365.03*
BMW44	58.6	88.6	64.72	400.14	335.42
BMW49	30	50	44.29	386.60	342.31
BMW59D	163	183	46.71	391.65	344.94
BMW65A	112	127	42.21	388.47	346.26
BMW67A	50	55	50.48	395.91	345.43
BMW67C	140	155	52.06	397.47	345.41
BMW68A	32	42	35.09	374.35	339.26
BMW72	85	95	23.70	355.04	331.34
BMW73	22.5	37.5	31.95	370.80	338.85
BMW74	59	69	24.20	366.65	342.45
BMW76	98	108	47.34	388.32	340.98
BMW77	56	71	28.48	366.26	337.78
MW-81	25	35	38.88	unknown	unknown
MW-82	unknown	unknown	37.42	unknown	unknown

Notes:

Depth to groundwater was measured on 14 November 2016.
ft BTOC = Feet Below Top of Casing
ft msl = Feet Relative to Mean Sea Level
NA = Not Applicable
* = Elevations are Anomalous

Table A.7.3.2-2
Analytical Samples Collected
Area B Landfills, Fort Detrick, Maryland

Sample Identification	Description	Dissolved Metals	Metals	Water Quality Parameters	VOCs	SVOCs
Quality Assurance Samples						
AREA BLF-RB-001-111516	Rinse Blank		X	X	X	X
AREA BLF-RB-002-111616	Rinse Blank		X	X	X	X
AREA BLF-RB-003-111716	Rinse Blank		X	X	X	X
AREA BLF-RB-004-111816	Rinse Blank		X	X	X	X
AREA BLF-RB-005-112116	Rinse Blank		X	X	X	X
AREA-BLF-TB-001-111516	Trip Blank				X	
AREA-BLF-TB-002-111616	Trip Blank				X	
AREA-BLF-TB-003-111716	Trip Blank				X	
AREA-BLF-TB-004-111816	Trip Blank				X	
AREA-BLF-TB-005-112116	Trip Blank				X	
FTD72-DUP001-112116	Duplicate Sample - BMW67A	X	X	X	X	X
FTD72-DUP002-112116	Duplicate Sample - BMW67C	X	X	X	X	X
FTD72-IDW-001-112116	Investigation Derived Waste Sample				X	
FTD72-IDW-002-112116	Investigation Derived Waste Sample				X	
Monitoring Wells						
FTD72-BMW2-111516	Groundwater Sample	X	X	X	X	X
FTD72-BMW3-111516	Groundwater Sample	X	X	X	X	X
FTD72-BMW5-111516	Groundwater Sample	X	X	X	X	X
FTD72-BMW9D-111716	Groundwater Sample	X	X	X	X	X
FTD72-BMW11-111616	Groundwater Sample	X	X	X	X	X
FTD72-BMW20-111716	Groundwater Sample	X	X	X	X	X
FTD72-BMW21-112116	Groundwater Sample	X	X	X	X	X
FTD72-BMW24-111816	Groundwater Sample	X	X	X	X	X
FTD72-BMW29A-111816	Groundwater Sample	X	X	X	X	X
FTD72-BMW38-112116	Groundwater Sample	X	X	X	X	X
FTD72-BMW39-111716	Groundwater Sample	X	X	X	X	X
FTD72-BMW41-111716	Groundwater Sample	X	X	X	X	X
FTD72-BMW42-111516	Groundwater Sample	X	X	X	X	X
FTD72-BMW44-111616	Groundwater Sample	X	X	X	X	X
FTD72-BMW49-111616	Groundwater Sample	X	X	X	X	X

Table A.7.3.2-2
Analytical Samples Collected
Area B Landfills, Fort Detrick, Maryland

Sample Identification	Description	Dissolved Metals	Metals	Water Quality Parameters	VOCs	SVOCs
Monitoring Wells (Continued)						
FTD72-BMW59D-111816	Groundwater Sample	X	X	X	X	X
FTD72-BMW65A-111816	Groundwater Sample	X	X	X	X	X
FTD72-BMW67A-112116	Groundwater Sample	X	X	X	X	X
FTD72-BMW67C-112116	Groundwater Sample	X	X	X	X	X
FTD72-BMW68A-112116	Groundwater Sample	X	X	X	X	X
FTD72-BMW72-111616	Groundwater Sample	X	X	X	X	X
FTD72-BMW74-111716	Groundwater Sample	X	X	X	X	X
FTD72-BMW76-111516	Groundwater Sample	X	X	X	X	X
FTD72-BMW77-111516	Groundwater Sample	X	X	X	X	X
FTD72-MW81-111716	Groundwater Sample	X	X	X	X	X

Notes:

Water quality parameters include ammonia/nitrogen, chemical oxygen demand, chloride, total alkalinity, total nitrite/nitrogen, total dissolved solids, turbidity, pH, sulfate, total hardness, and specific conductance.

Total and dissolved metals include antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium and zinc.

Samples were not collected from BMW6, BMW16, BMW18 and BMW25 because the wells were dry. A sample was not collected from BMW73 due to an obstruction in the well. A sample was not collected from BMW82 because there was an insufficient amount of water in the well.

VOCs = Volatile Organic Compounds

SVOCs = Semi-Volatile Organic Compounds

Table A.7.3.2-3
Duplicate Analysis - BMW67A
Area B Landfills, Fort Detrick, Maryland

Location	Sample Date	Analyte	Unit	Sample		Duplicate		Relative Percent Difference
				Sample Result	Validation Qualifier	Duplicate Result	Validation Qualifier	
BMW67A	21 November 2016	**Total Metals**						
		Barium	mg/L	0.0712	-	0.0720	-	1.12%
		Calcium	mg/L	137	-	138	-	0.73%
		Magnesium	mg/L	40.7	-	40.8	-	0.25%
		Manganese	mg/L	1.10	-	1.10	-	0.00%
		Nickel	mg/L	0.006	J	0.006	J	0.00%
		Arsenic	mg/L	--	-	0.00083	J	-
		Chromium	mg/L	--	-	0.00063	J	-
		Iron	mg/L	0.522	-	0.512	-	1.93%
		Potassium	mg/L	2.96	-	2.86	-	3.44%
		Sodium	mg/L	14.8	-	14.6	-	1.36%
		Dissolved Metals						
		Barium	mg/L	0.0745	-	0.0732	-	1.76%
		Calcium	mg/L	141	-	139	-	1.43%
		Magnesium	mg/L	41.8	-	41.0	-	1.93%
		Manganese	mg/L	1.17	-	1.14	-	2.60%
		Nickel	mg/L	0.0064	J	0.0061	J	4.80%
		Iron	mg/L	0.499	-	0.482	-	3.47%
		Potassium	mg/L	2.64	-	2.67	-	1.13%
		Sodium	mg/L	14.0	-	14.2	-	1.42%
		SVOCs						
		1,4-Dioxane	µg/L	14.0	J	15.0	J	6.90%
		VOCs						
		Benzene	µg/L	3.0	J	3.4	J	12.5%
		Bromoform	µg/L	5.0	J	6.7	J	29.1%
		Carbon Tetrachloride	µg/L	2.5	J	--	-	--
		Chloroform	µg/L	**1,200**	J	**1,200**	J	0.00%
		1,2-Dichloroethane	µg/L	**34**	J	**39**	J	13.7%
		1,1-Dichloroethene	µg/L	**67**	J	**68**	J	1.48%
		cis-1,2-Dichloroethene	µg/L	13	J	13	J	0.00%
		Tetrachloroethene	µg/L	**27**	J	**27**	J	0.00%
		1,1,1-Trichloroethane	µg/L	7.7	J	8.1	J	5.06%
		Trichloroethene	µg/L	**1,300**	J	**1,400**	J	7.41%
		Trichlorofluoromethane	µg/L	560	J	620	J	10.17%
		Water Quality Parameters						
		Total Hardness as CaCO3	mg/L	509	-	512	-	0.59%
		Ammonia Nitrogen	mg/L	0.26	-	0.24	-	8.0%
		Total Nitrite / Nitrate Nitrogen	mg/L	1.0	-	1.0	-	0.00%
		Chloride	mg/L	30.5	-	28.4	-	7.13%
		Sulfate	mg/L	195	-	177	-	9.68%
		Temperature of pH	℃	20.8	-	21.4	-	2.84%
		Turbidity	NTU	5.1	-	5.9	-	14.5%
		Total Alkalinity to pH 4.5	mg/L*	303	-	308	-	1.64%
		Specific Conductance	umhos/cm	976	-	975	-	0.10%
		Total Dissolved Solids	mg/L	732	-	646	-	12.5%
		pH	SU	7.3	-	7.4	-	1.36%

Notes:

-- Indicates that an analyte was analyzed for but was not detected at or above laboratory reporting limits.

Results in **bold** and shaded gray have exceeded their respective Maximum Contaminant Level (MCL) or the Maximum Contaminant Level Goal (MCLG).

µg/L = Micrograms per Liter umhos/cm = Micromhos per Centimeter mg/L = Milligrams per Liter mg/L* = mg/L as Calcium Carbonate (CaCO3)
NTU = Nephelometric Turbidity Unit SU = Standard Units °C = Degrees Celsius VOCs = Volatile Organic Compounds SVOCs = Semi-VOCs

Data Qualifier: J = Estimated Value

Table A.7.3.2-4
Duplicate Analysis - BMW67C
Area B Landfills, Fort Detrick, Maryland

Location	Sample Date	Analyte	Unit	Sample		Duplicate		Relative Percent Difference
				Sample Result	Validation Qualifier	Duplicate Result	Validation Qualifier	
BMW67C	21 November 2016	**Total Metals**						
		Barium	mg/L	0.472	-	0.460	-	2.58%
		Calcium	mg/L	108	-	106	-	1.87%
		Colbalt	mg/L	0.0051	-	0.0057	-	11.11%
		Magnesium	mg/L	38.2	-	37.9	-	0.79%
		Manganese	mg/L	1.70	-	1.68	-	1.18%
		Nickel	mg/L	0.0136	-	0.0131	-	3.75%
		Arsenic	mg/L	0.0012	J	0.0014	J	15.38%
		Chromium	mg/L	0.0020	J	0.0023	-	13.95%
		Iron	mg/L	1.01	-	1.03	-	1.96%
		Lead	mg/L	0.00019	J	0.00018	J	5.41%
		Potassium	mg/L	2.25	-	2.34	-	3.92%
		Sodium	mg/L	12.2	-	12.7	-	4.02%
		Thallium	mg/L	0.00075	-	0.00074	-	1.34%
		Zinc	mg/L	0.0914	-	0.0958	-	4.70%
		Mercury	mg/L	0.000083	J	0.00009	J	8.09%
		Dissolved Metals						
		Barium	mg/L	0.488	-	0.482	-	1.24%
		Calcium	mg/L	114	-	112	-	1.77%
		Colbalt	mg/L	0.0040	J	0.0044	J	9.52%
		Magnesium	mg/L	40.4	-	39.7	-	1.75%
		Manganese	mg/L	1.96	-	1.94	-	1.03%
		Nickel	mg/L	0.0140	-	0.0134	-	4.38%
		Arsenic	mg/L	0.0014	J	0.0010	J	33.33%
		Chromium	mg/L	0.00063	J	--	-	-
		Iron	mg/L	0.977	-	0.894	-	8.87%
		Potassium	mg/L	2.19	-	2.07	-	5.63%
		Sodium	mg/L	12.6	-	12.0	-	4.88%
		Thallium	mg/L	0.00072	-	0.00073	-	1.38%
		Zinc	mg/L	0.0859	-	0.0840	-	2.24%
		Mercury	mg/L	--	-	0.000051	J	-
		SVOCs						
		2,4-Dichlorophenol	µg/L	4	J	4	J	0.00%
		1,4-Dioxane	µg/L	18	J	16	J	11.76%
		2-Methylnaphthalene	µg/L	0.2	J	0.2	J	0.00%
		2,4,5-Trichlorophenol	µg/L	4	J	4	J	0.00%
		Naphthalene	µg/L	1.2	-	1.2	-	0.00%
		VOCs						
		Benzene	µg/L	**35**	-	**36**	-	2.82%
		Chloroform	µg/L	**1,200**	-	**1,200**	-	0.00%
		1,1-Dichloroethane	µg/L	16	J	17	J	6.06%
		1,2-Dichloroethane	µg/L	**53**	-	**51**	-	3.85%
		1,1-Dichloroethene	µg/L	**490**	J	**490**	J	0.00%
		cis-1,2-Dichloroethene	µg/L	**860**	-	**830**	-	3.55%
		trans-1,2-Dichloroethene	µg/L	7.6	J	12	J	44.90%
		Ethylbenzene	µg/L	27	-	27	-	0.00%
		Tetrachloroethene	µg/L	**100**	-	**96**	-	4.08%
		1,1,1-Trichloroethane	µg/L	200	-	200	-	0.00%
		1,1,2-Trichloroethane	µg/L	**8.2**	J	**6.6**	J	21.62%
		Trichloroethene	µg/L	**6,800**	-	**6,900**	-	1.46%
		Trichlorofluoromethane	µg/L	1,300	-	1,300	-	0.00%
		m+p-Xylene	µg/L	26	-	24	J	8.00%
		o-Xylene	µg/L	53	-	52	-	1.90%

Table A.7.3.2-4
Duplicate Analysis - BMW67C
Area B Landfills, Fort Detrick, Maryland

Location	Sample Date	Analyte	Unit	Sample		Duplicate		Relative Percent Difference
				Sample Result	Validation Qualifier	Duplicate Result	Validation Qualifier	
BMW67C (Continued)	21 November 2016 (Continued)	**Water Quality Parameters**						
		Total Hardness as CaCO3	mg/L	426	-	421	-	1.18%
		Ammonia Nitrogen	mg/L	0.43	-	0.42	-	2.35%
		Total Nitrite / Nitrate Nitrogen	mg/L	--	-	--	--	-
		Chloride	mg/L	49.0	-	45.5	-	7.41%
		Sulfate	mg/L	39.9	-	35.3	-	12.23%
		Temperature of pH	℃	21.2	-	21.3	-	0.47%
		Turbidity	NTU	9.6	-	9.0	-	6.45%
		Total Alkalinity to pH 4.5	mg/L*	342	-	344	-	0.58%
		Specific Conductance	umhos/cm	833	-	836	-	0.36%
		Total Dissolved Solids	mg/L	566	-	498	-	12.78%
		pH	SU	7.2	-	7.2	-	0.00%

Notes:

-- Indicates that an analyte was analyzed for but was not detected at or above laboratory reporting limits.

Results in **bold** and shaded gray have exceeded their respective Maximum Contaminant Level (MCL) or the Maximum Contaminant Level Goal (MCLG).

µg/L = Micrograms per Liter
umhos/cm = Micromhos per Centimeter
mg/L = Milligrams per Liter
mg/L* = mg/L as Calcium Carbonate (CaCO3)
VOCs = Volatile Organic Compounds
NTU = Nephelometric Turbidity Unit
SU = Standard Units
°C = Degrees Celsius
SVOCs = Semi-Volatile Organic Compounds

Data Qualifier:
J = Estimated Value

Table A.7.3.2-5
Volatile Organic Compound Results
Area B Landfills, Fort Detrick, Maryland

Analyte	Location		BMW2	BMW3	BMW5	BMW9D	BMW11	BMW20	BMW21	BMW24	BMW29A	BMW38	BMW39	BMW41
	Sample ID		FTD72-BMW2-111516	FTD72-BMW3-111516	FTD72-BMW5-111516	FTD72-BMW9D-111716	FTD72-BMW11-111616	FTD72-BMW20-111716	FTD72-BMW21-112116	FTD72-BMW24-111816	FTD72-BMW29A-111816	FTD72-BMW38-112116	FTD72-BMW39-111716	FTD72-BMW41-111716
	Date		11/15/16	11/15/16	11/15/16	11/17/16	11/16/16	11/17/16	11/21/16	11/18/16	11/18/16	11/21/16	11/17/16	11/17/16
	Unit	MCL												
Acetone	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
Acrylonitrile	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	µg/L	5	--	--	--	--	--	--	--	--	--	--	--	--
Bromochloromethane	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	µg/L	80[1]	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	µg/L	80[1]	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Disulfide	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	µg/L	5	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	µg/L	100	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	µg/L	70[1]	--	--	--	0.1 J	--	--	--	1.7	--	2.4	--	--
Chloromethane	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	µg/L	0.2	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	µg/L	60[1]	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	µg/L	0.05	--	--	--	--	--	--	--	--	--	--	--	--
Dibromomethane	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	600	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	µg/L	75	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	µg/L	5	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	µg/L	7	--	--	--	--	--	--	--	0.3 J	--	0.4 J	--	--
cis-1,2-Dichloroethene	µg/L	70	--	--	--	--	--	--	--	0.2 J	--	0.3 J	--	--
trans-1,2-Dichloroethene	µg/L	100	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	5	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	µg/L	700	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
Methyl Iodide	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
Methyl Tertiary Butyl Ether	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	µg/L	5	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	µg/L	100	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1,2-Tetrachloroethane	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	µg/L	5	--	--	0.3 J	0.4 J	--	0.1 J	--	0.2 J	--	0.3 J	--	--
Toluene	µg/L	1,000	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	µg/L	200	--	--	--	--	--	--	--	0.1 J	--	0.1 J	--	--
1,1,2-Trichloroethane	µg/L	5	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	µg/L	5	--	--	--	--	--	--	--	**5.1**	--	**7.7**	**7.8**	--
Trichlorofluoromethane	µg/L	-	--	--	1.1	--	--	--	--	2.4 J	18 J	2.8	0.3 J	--
1,2,3-Trichloropropane	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Acetate	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	µg/L	2	--	--	--	--	--	--	--	--	--	--	--	--
m+p-Xylene	µg/L	10,000[2]	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	µg/L	10,000[2]	--	--	--	--	--	--	--	--	--	--	--	--

Table A.7.3.2-5
Volatile Organic Compound Results
Area B Landfills, Fort Detrick, Maryland

Analyte	Location		BMW42	BMW44	BMW49	BMW59D	BMW65A	BMW67A	BMW67C	BMW68A	BMW72	BMW74	BMW76	BMW77	MW81
	Sample ID		FTD72-BMW42-111516	FTD72-BMW44-111616	FTD72-BMW49-111616	FTD72-BMW59D-111816	FTD72-BMW65A-111816	FTD72-BMW67A-112116	FTD72-BMW67C-112116	FTD72-BMW68A-112116	FTD72-BMW72-111616	FTD72-BMW74-111716	FTD72-BMW76-111516	FTD72-BMW77-111516	FTD72-MW81-111716
	Date		11/15/16	11/16/16	11/16/16	11/18/16	11/18/16	11/21/16	11/21/16	11/21/16	11/16/16	11/17/16	11/15/16	11/15/16	11/17/16
	Unit	MCL													
Acetone	µg/L	-	--	--	--	--	10	-- (--)	-- (--)	--	--	6.6	--	--	--
Acrolein	µg/L	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Acrylonitrile	µg/L	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Benzene	µg/L	5	--	--	--	--	--	3.0 J (3.4 J)	**35 (36)**	2.4	--	--	--	0.2 J	--
Bromochloromethane	µg/L	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Bromodichloromethane	µg/L	80[1]	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Bromoform	µg/L	80[1]	--	--	--	--	--	5.0 J (6.7 J)	-- (--)	--	--	--	--	--	--
Bromomethane	µg/L	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
2-Butanone	µg/L	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Carbon Disulfide	µg/L	-	--	--	--	--	0.6 J	-- (--)	-- (--)	--	--	--	--	--	--
Carbon Tetrachloride	µg/L	5	--	--	--	--	--	2.5 J (--)	-- (--)	--	--	--	--	--	--
Chlorobenzene	µg/L	100	--	--	0.2 J	--	--	-- (--)	-- (--)	0.7	--	--	--	0.3 J	--
Chloroethane	µg/L	-	--	--	0.2 J	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Chloroform	µg/L	70[1]	--	--	1.1	5.2	0.5	**1,200 J (1200 J)**	**1,200 (1200)**	30	--	0.8	--	0.5 J	--
Chloromethane	µg/L	-	--	--	--	--	0.4 J	-- (--)	-- (--)	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	µg/L	0.2	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Dibromochloromethane	µg/L	60[1]	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
1,2-Dibromoethane	µg/L	0.05	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Dibromomethane	µg/L	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	µg/L	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	600	--	--	--	--	--	-- (--)	-- (--)	0.5 J	--	--	--	0.2 J	--
1,4-Dichlorobenzene	µg/L	75	--	--	--	--	--	-- (--)	-- (--)	0.7	--	--	--	0.3 J	--
1,1-Dichloroethane	µg/L	-	--	--	0.5 J	--	--	-- (--)	16 J (17 J)	6.9	--	--	--	0.3 J	--
1,2-Dichloroethane	µg/L	5	--	--	--	0.2 J	--	**34 J (39 J)**	**53 (51)**	**5.2 J**	--	--	--	0.1 J	--
1,1-Dichloroethene	µg/L	7	--	--	--	1	--	**67 J (68 J)**	**490 J (490 J)**	**63 J**	--	0.2 J	--	6.7	--
cis-1,2-Dichloroethene	µg/L	70	--	--	0.7 J	0.5 J	--	13 J (13 J)	**860 (830)**	**120**	--	--	--	1.6	--
trans-1,2-Dichloroethene	µg/L	100	--	--	--	--	--	-- (--)	7.6 J (12 J)	0.5	--	--	--	--	--
1,2-Dichloropropane	µg/L	5	--	--	--	--	--	-- (--)	-- (--)	0.7	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Ethylbenzene	µg/L	700	--	--	--	--	--	-- (--)	27 (27)	--	--	--	--	--	--
2-Hexanone	µg/L	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Methyl Iodide	µg/L	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Methyl Tertiary Butyl Ether	µg/L	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
4-Methyl-2-pentanone	µg/L	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Methylene Chloride	µg/L	5	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Styrene	µg/L	100	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
1,1,1,2-Tetrachloroethane	µg/L	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Tetrachloroethene	µg/L	5	--	--	0.4 J	0.5	0.4 J	**27 J (27 J)**	**100 (96)**	**23 J**	--	0.1 J	--	**21**	--
Toluene	µg/L	1,000	--	--	--	--	0.4 J	-- (--)	-- (--)	--	--	--	--	--	--
1,1,1-Trichloroethane	µg/L	200	--	--	--	0.3 J	--	7.7 J (8.1 J)	200 (200)	15	--	--	--	0.1 J	--
1,1,2-Trichloroethane	µg/L	5	--	--	--	--	--	-- (--)	**8.2 J (6.6 J)**	0.3 J	--	--	--	--	--
Trichloroethene	µg/L	5	--	--	0.2 J	**16**	0.4 J	**1,300 J (1400 J)**	**6,800 (6,900)**	**1,100**	0.2 J	**18**	--	**8.9**	--
Trichlorofluoromethane	µg/L	-	--	--	3.6	7.2 J	--	560 J (620 J)	1,300 (1300)	37	0.5 J	1.2 J	--	--	--
1,2,3-Trichloropropane	µg/L	-	--	--	--	--	--	-- (--)	-- (--)	0.4 J	--	--	--	--	--
Vinyl Acetate	µg/L	-	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Vinyl Chloride	µg/L	2	--	--	0.2 J	--	--	-- (--)	-- (--)	**5.4**	--	--	--	--	--
m+p-Xylene	µg/L	10,000[2]	--	--	--	--	0.1 J	-- (--)	26 (24 J)	--	--	--	--	--	--
o-Xylene	µg/L	10,000[2]	--	--	--	--	--	-- (--)	53 (52)	--	--	--	--	--	--

Notes:
[1] = 80 µg/L is the MCL for total trihalomethanes [total of bromodichloromethane, bromoform, dibromochloromethane (MCLG of 60 µg/L), and chloroform (MCLG of 70 µg/L)] and is applicable to public drinking water supplies that use disinfection products.
[2] = 10,000 µg/L is the MCL for total xylenes
Results in **bold** and shaded gray have exceeded their respective MCL. Duplicate sample results are presented in parenthesis adjacent to the parent sample result. Data Qualifier:
-- Indicates that an analyte was analyzed for but was not detected at or above the method detection limit. J = Estimated Value
µg/L = Micrograms per Liter MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal ID = Identification

Table A.7.3.2-6
Semi-Volatile Organic Compound and Polycyclic Aromatic Hydrocarbon Results
Area B Landfills, Fort Detrick, Maryland

Analyte	Location		BMW2	BMW3	BMW5	BMW9D	BMW11	BMW20	BMW21	BMW24	BMW29A	BMW38	BMW39	BMW41	BMW42	BMW44	BMW49	BMW59D	BMW65A	BMW67A	BMW67C	BMW68A	BMW72	BMW74	BMW76	BMW77	MW81
	Sample ID		FTD72-BMW2-111516	FTD72-BMW3-111516	FTD72-BMW5-111516	FTD72-BMW9D-111716	FTD72-BMW11-111616	FTD72-BMW20-111716	FTD72-BMW21-112116	FTD72-BMW24-111816	FTD72-BMW29A-111816	FTD72-BMW38-112116	FTD72-BMW39-111716	FTD72-BMW41-111716	FTD72-BMW42-111516	FTD72-BMW44-111616	FTD72-BMW49-111616	FTD72-BMW59D-111816	FTD72-BMW65A-111816	FTD72-BMW67A-112116	FTD72-BMW67C-112116	FTD72-BMW68A-112116	FTD72-BMW72-111616	FTD72-BMW74-111716	FTD72-BMW76-111516	FTD72-BMW77-111516	FTD72-MW81-111716
	Date		11/15/16	11/15/16	11/15/16	11/17/16	11/16/16	11/17/16	11/21/16	11/18/16	11/18/16	11/21/16	11/17/16	11/17/16	11/15/16	11/16/16	11/16/16	11/18/16	11/18/16	11/21/16	11/21/16	11/21/16	11/16/16	11/17/16	11/15/16	11/15/16	11/17/16
	Unit	MCL																									
Semi-Volatile Organic Compounds																											
Atrazine	µg/L	3	--	--	--	--	R	--	--	--	--	--	--	--	--	R	R	--	--	-- (--)	-- (--)	--	R	--	--	--	--
Benzaldehyde	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
1,1'-Biphenyl	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
4-Bromophenyl-phenylether	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Butylbenzylphthalate	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Di-n-butylphthalate	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Caprolactam	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Carbazole	µg/L	-	--	--	--	--	R	--	--	--	--	--	--	--	--	R	R	--	--	-- (--)	-- (--)	--	R	--	--	--	--
4-Chloro-3-methylphenol	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
4-Chloroaniline	µg/L	-	--	--	--	--	R	--	--	--	--	--	--	--	--	R	R	--	--	-- (--)	-- (--)	--	R	--	--	--	--
bis(2-Chloroethoxy)methane	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
bis(2-Chloroethyl)ether	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
2-Chloronaphthalene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
2-Chlorophenol	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
4-Chlorophenyl-phenylether	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
2,2'-oxybis(1-Chloropropane)	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Dibenzofuran	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
3,3'-Dichlorobenzidine	µg/L	-	--	--	--	--	R	--	--	--	--	--	--	--	--	R	R	--	--	-- (--)	-- (--)	--	R	--	--	--	--
2,4-Dichlorophenol	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	4 J (4 J)	--	--	--	--	--	--
Diethylphthalate	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
2,4-Dimethylphenol	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Dimethylphthalate	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
2,4-Dinitrophenol	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
2,4-Dinitrotoluene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
2,6-Dinitrotoluene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
1,4-Dioxane	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14 J (15 J)	18 J (16 J)	8 J	--	--	--	1 J	--
bis(2-Ethylhexyl)phthalate	µg/L	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Hexachlorobenzene	µg/L	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Hexachlorobutadiene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Hexachlorocyclopentadiene	µg/L	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Hexachloroethane	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Isophorone	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
2-Methylnaphthalene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	0.2 J (0.2 J)	--	--	--	--	--	--
2-Methylphenol	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
4-Methylphenol	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--

Table A.7.3.2-6
Semi-Volatile Organic Compound and Polycyclic Aromatic Hydrocarbon Results
Area B Landfills, Fort Detrick, Maryland

Analyte	Location		BMW2	BMW3	BMW5	BMW9D	BMW11	BMW20	BMW21	BMW24	BMW29A	BMW38	BMW39	BMW41	BMW42	BMW44	BMW49	BMW59D	BMW65A	BMW67A	BMW67C	BMW68A	BMW72	BMW74	BMW76	BMW77	MW81
	Sample ID		FTD72-BMW2-111516	FTD72-BMW3-111516	FTD72-BMW5-111516	FTD72-BMW9D-111716	FTD72-BMW11-111616	FTD72-BMW20-111716	FTD72-BMW21-112116	FTD72-BMW24-111816	FTD72-BMW29A-111816	FTD72-BMW38-112116	FTD72-BMW39-111716	FTD72-BMW41-111716	FTD72-BMW42-111516	FTD72-BMW44-111616	FTD72-BMW49-111616	FTD72-BMW59D-111816	FTD72-BMW65A-111816	FTD72-BMW67A-112116	FTD72-BMW67C-112116	FTD72-BMW68A-112116	FTD72-BMW72-111616	FTD72-BMW74-111716	FTD72-BMW76-111516	FTD72-BMW77-111516	FTD72-MW81-111716
	Date		11/15/16	11/15/16	11/15/16	11/17/16	11/16/16	11/17/16	11/21/16	11/18/16	11/18/16	11/21/16	11/17/16	11/17/16	11/15/16	11/16/16	11/16/16	11/18/16	11/18/16	11/21/16	11/21/16	11/21/16	11/16/16	11/17/16	11/15/16	11/15/16	11/17/16
	Unit	MCL																									
Semi-Volatile Organic Compounds (Continued)																											
1,4-Naphthoquinone	µg/L	-	R	R	R	R	R	R	R	--	--	R	R	R	R	R	R	--	--	R (R)	R (R)	R	R	R	R	R	R
2-Nitroaniline	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
3-Nitroaniline	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
4-Nitroaniline	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Nitrobenzene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
2-Nitrophenol	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
4-Nitrophenol	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
N-Nitroso-di-n-propylamine	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
N-Nitrosodiphenylamine	µg/L	-	--	--	--	--	R	--	--	--	--	--	--	--	--	R	R	--	--	-- (--)	-- (--)	--	R	--	--	--	--
Di-n-octylphthalate	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Pentachlorophenol	µg/L	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	**27 J**	--
Phenol	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5 J	-- (--)	-- (--)	--	--	--	--	--	--
2,4,5-Trichlorophenol	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	4 J (4 J)	--	--	--	--	3 J	--
2,4,6-Trichlorophenol	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons																											
Acenaphthene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Acenaphthylene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Acetophenone	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Anthracene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Chrysene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Fluoranthene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Fluorene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Phenanthrene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Pyrene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Benzo(a)anthracene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Benzo(a)pyrene	µg/L	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Benzo(b)fluoranthene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Benzo(g,h,i)perylene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Benzo(k)fluoranthene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Dibenz(a,h)anthracene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Naphthalene	µg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.037 J	-- (--)	1.2 (1.2)	--	--	--	--	--	--

Notes:

Duplicate sanple results are presented in parenthesis adjacent to the parent sample result.
-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.
µg/L = Micrograms per Liter
MCL = Maximum Contaminant Level

Data Qualifiers:
J = Estimated Value
R = Rejected

Table A.7.3.2-7
Water Quality Parameter Results
Area B Landfills, Fort Detrick, Maryland

Analyte	Location		BMW2	BMW3	BMW5	BMW9D	BMW11	BMW20	BMW21	BMW24	BMW29A	BMW38	BMW39	BMW41	BMW42	BMW44	BMW49	BMW59D	BMW65A	BMW67A	BMW67C	BMW68A	BMW72	BMW74	BMW76	BMW77	MW81
	Sample ID		FTD72-BMW2-111516	FTD72-BMW3-111516	FTD72-BMW5-111516	FTD72-BMW9D-111716	FTD72-BMW11-111616	FTD72-BMW20-111716	FTD72-BMW21-112116	FTD72-BMW24-111816	FTD72-BMW29A-111816	FTD72-BMW38-112116	FTD72-BMW39-111716	FTD72-BMW41-111716	FTD72-BMW42-111516	FTD72-BMW44-111616	FTD72-BMW49-111616	FTD72-BMW59D-111816	FTD72-BMW65A-111816	FTD72-BMW67A-112116	FTD72-BMW67C-112116	FTD72-BMW68A-112116	FTD72-BMW72-111616	FTD72-BMW74-111716	FTD72-BMW76-111516	FTD72-BMW77-111516	FTD72-MW81-111716
	Date		11/15/16	11/15/16	11/15/16	11/17/16	11/16/16	11/17/16	11/21/16	11/18/16	11/18/16	11/21/16	11/17/16	11/17/16	11/15/16	11/16/16	11/16/16	11/18/16	11/18/16	11/21/16	11/21/16	11/21/16	11/16/16	11/17/16	11/15/16	11/15/16	11/17/16
	Unit	MCL																									
Water Quality Parameters																											
Ammonia Nitrogen	mg/L	-	--	--	--	--	--	--	0.089 J	--	0.05 J	--	--	--	--	0.053 J	--	--	0.19	0.26 (0.24)	0.43 (0.42)	1.8	--	0.095 J	--	--	--
Total Nitrite / Nitrate Nitrogen	mg/L	-	2.1	1.3	1.3	2	2.8	1.8	0.48	3.4	2.6	3.5	2.5	4	5	4.2	3.8	4.1	--	1 (1)	-- (--)	--	2.6	5.9	5.5	0.9	2.7
Chloride	mg/L	-	7.3	34	20.7	19.9	5.7	61	14.6	29.7	19.5	52	40.3	5.5	6.0	6.5	10.9	52.7	30.8	30.5 (28.4)	49.0 (45.5)	41.1	8.7	44.9	8.3	29.8	23.3
Sulfate	mg/L	-	4.1 J	10.1	14.7	36.8	11.9	11.7	30.9	6.9	15.6	7.9	19	18.4	20.1	16.9 J	10.4	7.1	127	195 (177)	39.9 (35.3)	34.5	15.4	15.3	12.9	43	11
Chemical Oxygen Demand	mg/L	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	123	-- (--)	-- (--)	--	--	--	--	--	--
Temperature of pH	°C	-	22	21.9	22	22	21.8	22.2	21.1	21.6	20.9	21	22.3	21.7	21.5	21.5	21.9	20.4	20.5	20.8 (21.4)	21.2 (21.3)	21.3	22.1	22.2	21.4	22	21.8
Turbidity	NTU	-	17	12.6	0.45 J	2.2	5.8	1.9	20.9	0.27 J	0.71 J	0.78 J	3.1	7.8	0.28 J	0.18 J	0.18 J	0.78 J	6.4	5.1 (5.9)	9.6 (9.0)	1.4	7	4.6	1.2	1.7	115
Total Alkalinity to pH 4.5	mg/L*	-	86.9	105	184	134	233	111	64.9 J	181 J	171	181	191	175	185	150 J	408	168	60.6	303 (308)	342 (344)	427	31.4	75.9	129 J	390	318
Specific Conductance	umhos/cm	-	211	334	450	379	478	449	238	474	434	542	544	401	429	362	795	525	514	976 (975)	833 (836)	957	156	422	326	850	669
Total Dissolved Solids	mg/L	-	129	194	259	209	271	235	149	240	259	283	332	249	257	227	468	278	339	732 (646)	566 (498)	574	90	246	181	531	394
pH	SU	-	6.8	7.3	7.1	7.7	7.5	7.3	6.8	7.5	7.6	7.7	7.4	7.4	7.4	7.5	6.9	7.8	8.5	7.3 (7.4)	7.2 (7.2)	7.2	9.4	9	7.4	7.3	7.2
Total Hardness as CaCO3	mg/L	-	93.9	122	205	150	251	144	86.6	208	201	217	238	204	214	175	421	208	123	509 (512)	426 (421)	420	150	103	153	442	361

Notes:

-- Indicates that an analyte was analyzed for but was not detected at or above the method detection limit.
Duplicate sample results are presented in parenthesis adjacent to the parent sample result.

°C = Degrees Celsius
umhos/cm = Micromhos per Centimeter

mg/L = Milligrams per Liter
mg/L* = mg/L as Calcium Carbonate (CaCO3)

VOCs = Volatile Organic Compounds
SVOCs = Semi-Volatile Organic Compounds

NTU = Nephelometric Turbidity Unit
SU = Standard Units

Data Qualifier:
J = Estimated Value

Table A.7.3.2-8
Total and Dissolved Metals Results
Area B Landfills, Fort Detrick, Maryland

Analyte			Location	BMW2	BMW3	BMW5	BMW9D	BMW11	BMW20	BMW21	BMW24	BMW29A	BMW38	BMW39	BMW41	BMW42
			Sample ID	FTD72-BMW2-111516	FTD72-BMW3-111516	FTD72-BMW5-111516	FTD72-BMW9D-111716	FTD72-BMW11-111616	FTD72-BMW20-111716	FTD72-BMW21-112116	FTD72-BMW24-111816	FTD72-BMW29A-111816	FTD72-BMW38-112116	FTD72-BMW39-111716	FTD72-BMW41-111716	FTD72-BMW42-111516
			Date	11/15/16	11/15/16	11/15/16	11/17/16	11/16/16	11/17/16	11/21/16	11/18/16	11/18/16	11/21/16	11/17/16	11/17/16	11/15/16
	Unit	MCL														
Total Metals																
Barium	mg/L	2		0.0279	0.0254	0.0341	0.173	0.0898	0.0453	0.112	0.0462	0.0537	0.0600	0.0458	0.0533	0.0432
Calcium	mg/L	-		25.8	32.1	55.9	28.4	67.3	33.6	29.7	59.6	56.0	51.5	75.8	64.6	71.7
Cobalt	mg/L	-		--	--	--	0.0039 J	--	--	0.0240	--	--	--	--	--	--
Copper	mg/L	1.3		--	--	--	--	--	--	--	--	--	--	--	--	--
Magnesium	mg/L	-		7.13	10.3	16	19.2	20.2	14.7	3.04	14.4	14.8	21.5	11.8	10.4	8.44
Manganese	mg/L	-		0.0135	0.012	--	--	0.0149	--	1.42	--	0.0061	0.0020 J	--	--	--
Nickel	mg/L	-		0.0164	--	--	0.0272	0.0076 J	0.0034 J	0.0059 J	--	--	--	--	--	--
Selenium	mg/L	0.05		--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	mg/L	-		--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium	mg/L	-		--	--	--	0.0105	--	--	--	--	--	--	--	--	0.0051
Antimony	mg/L	0.006		--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	mg/L	0.01		--	--	--	**0.0158**	0.00083 J	--	--	--	--	--	--	0.00072 J	0.00075 J
Beryllium	mg/L	0.004		0.00011 J	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/L	-		--	--	--	0.0002 J	--	--	0.00039 J	--	--	--	--	--	--
Chromium	mg/L	0.1		0.0185	0.0014 J	0.0029	0.0428	0.0105	0.005	0.0034	0.0028	0.0038	0.0021	0.0029	0.0040	--
Iron	mg/L	-		0.783	0.179	--	0.2	0.145	0.102	3.56	--	0.141	--	0.179	0.117	0.0393 J
Lead	mg/L	0.015		0.00059 J	0.00025 J	--	0.00034 J	0.00023 J	0.000097 J	0.00013 J	--	0.00018 J	--	0.00021 J	--	--
Potassium	mg/L	-		3.33	2.64	1.86	1.76	0.924	1.87	2.32	4.27	1.19	1.28	4.03	0.646	0.519
Sodium	mg/L	-		4.02	16.9	10.7	18.0	2.33	29.3	8.83	12.1	9.54	20.9	16.8	5.87	7.06
Thallium	mg/L	0.002		--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	mg/L	-		0.0169	--	--	--	--	--	0.0070 J	0.0036 J	0.0043 J	--	--	--	--
Mercury	mg/L	0.002		--	--	--	--	--	--	--	--	--	--	--	--	--
Dissolved Metals																
Barium	mg/L	-		0.0265	0.0235	0.0345	0.166	0.0916	0.0468	0.118	0.0448	0.0531	0.0633	0.0453	0.0537	0.0431
Calcium	mg/L	-		26.3	31.6	56.9	27.9	72.2	34.6	30.2	58.4	55.5	54.6	75.1	64.1	70.7
Cobalt	mg/L	-		--	--	--	--	--	--	0.0257	--	--	--	--	--	--
Copper	mg/L	-		--	--	--	--	--	--	--	--	--	--	--	--	--
Magnesium	mg/L	-		7.28	10.1	16.2	19.1	22	15.2	3.11	14.1	14.9	22.6	11.7	10.3	8.26
Manganese	mg/L	-		0.0062	0.0021 J	--	--	--	--	1.50	--	--	--	--	--	--
Nickel	mg/L	-		0.0048 J	--	--	0.0073 J	0.0086 J	0.0033 J	0.0065 J	--	--	--	--	0.0031 J	--
Selenium	mg/L	-		--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	mg/L	-		--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium	mg/L	-		--	--	--	0.0112	--	--	--	--	--	--	--	--	0.0063
Antimony	mg/L	-		--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	mg/L	-		--	--	--	0.0164	--	--	--	--	--	--	--	--	0.0012 J
Beryllium	mg/L	-		--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/L	-		--	--	--	--	--	--	0.00034 J	--	--	--	--	--	--
Chromium	mg/L	-		0.0018 J	0.00067 J	0.0021	0.0036	0.0066	0.0019 J	0.0019 J	0.0026	0.0025	0.00071 J	0.0018 J	0.0034	--
Iron	mg/L	-		0.0608 J	--	--	--	0.0748 J	--	3.30	--	--	--	0.0547 J	0.134	--
Lead	mg/L	-		--	--	--	--	--	--	--	--	--	--	--	--	--
Potassium	mg/L	-		3.3	2.6	1.88	1.86	0.961	1.79	2.17	4.36	1.19	1.21	3.84	0.642	0.54
Sodium	mg/L	-		3.92	17.2	10.5	21.2	2.14	28.2	8.28	12.5	9.71	20.3	16.4	5.68	8.21
Thallium	mg/L	-		--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	mg/L	-		--	--	--	--	--	--	0.0063 J	--	0.0040 J	--	--	--	--
Mercury	mg/L	-		--	--	--	--	--	--	--	--	--	--	--	--	--

Table A.7.3.2-8
Total and Dissolved Metals Results
Area B Landfills, Fort Detrick, Maryland

Analyte			Location	BMW44	BMW49	BMW59D	BMW65A	BMW67A	BMW67C	BMW68A	BMW72	BMW74	BMW76	BMW77	MW81
			Sample ID	FTD72-BMW44-111616	FTD72-BMW49-111616	FTD72-BMW59D-111816	FTD72-BMW65A-111816	FTD72-BMW67A-112116	FTD72-BMW67C-112116	FTD72-BMW68A-112116	FTD72-BMW72-111616	FTD72-BMW74-111716	FTD72-BMW76-111516	FTD72-BMW77-111516	FTD72-MW81-111716
			Date	11/16/16	11/16/16	11/18/16	11/18/16	11/21/16	11/21/16	11/21/16	11/16/16	11/17/16	11/15/16	11/15/16	11/17/16
	Unit	MCL													
Total Metals															
Barium	mg/L	2		0.0722	0.0696	0.0661	0.0259	0.0712 (0.0720)	0.472 (0.460)	0.213	0.0771	0.0409	0.0722	0.123	0.234
Calcium	mg/L	-		56.3	137	49.2	38.2	137 (138)	108 (106)	125	44.4	29.4	35.2	123	87.1
Cobalt	mg/L	-		--	--	--	0.0062	-- (--)	0.0051 (0.0057)	0.0035 J	--	--	--	--	--
Copper	mg/L	1.3		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Magnesium	mg/L	-		8.32	19.2	20.8	6.76	40.7 (40.8)	38.2 (37.9)	26.4	9.57	7.13	15.9	32.7	34.8
Manganese	mg/L	-		0.0021 J	0.403	--	0.0051	1.10 (1.10)	1.70 (1.68)	1.36	--	--	0.0023 J	0.0135	0.214
Nickel	mg/L	-		--	0.0047 J	--	0.0063 J	0.0060 J (0.0060 J)	0.0136 (0.0131)	0.0080 J	--	--	0.0055 J	--	0.01
Selenium	mg/L	0.05		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Silver	mg/L	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Vanadium	mg/L	-		0.0045 J	--	--	0.0075	-- (--)	-- (--)	--	0.0016 J	0.0043 J	0.0017 J	0.0019 J	--
Antimony	mg/L	0.006		--	--	--	0.00051 J	-- (--)	-- (--)	--	--	--	--	--	--
Arsenic	mg/L	0.01		0.0013 J	--	--	0.0011 J	-- (0.00083 J)	0.0012 J (0.0014 J)	--	0.0013 J	0.00097 J	0.0013 J	0.00094 J	0.001 J
Beryllium	mg/L	0.004		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	0.00026 J
Cadmium	mg/L	-		--	0.00048 J	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Chromium	mg/L	0.1		--	--	0.0040	0.0136	-- (0.00063 J)	0.0020 J (0.0023)	0.0015 J	--	0.0043	0.006	0.0019 J	0.0101
Iron	mg/L	-		0.0342 J	--	0.0418 J	0.114	0.522 (0.512)	1.01 (1.03)	0.133	--	0.034 J	0.063 J	0.0422 J	0.781
Lead	mg/L	0.015		--	--	--	0.00018 J	-- (--)	0.00019 J (0.00018)	--	--	--	--	--	0.0015
Potassium	mg/L	-		0.555	2.65	1.40	9.81	2.96 (2.86)	2.25 (2.34)	9.86	2.82	65.1	1.01	1.76	2.22
Sodium	mg/L	-		6.14	7.02	21.2	64.0	14.8 (14.6)	12.2 (12.7)	35.7	3.09	25.5	6.4	15.8	11.4
Thallium	mg/L	0.002		--	--	--	--	-- (--)	0.00075 (0.00074)	--	--	--	--	--	--
Zinc	mg/L	-		--	0.0084 J	--	0.0041 J	-- (--)	0.0914 (0.09858)	0.0055 J	--	--	0.0041 J	--	--
Mercury	mg/L	0.002		--	--	--	--	-- (--)	0.000083 J (0.000090 J)	--	--	--	--	--	--
Dissolved Metals															
Barium	mg/L	-		0.0739	0.0723	0.0661	0.0242	0.0745 (0.0732)	0.488 (0.482)	0.239	0.0823	0.0398	0.0722	0.123	0.21
Calcium	mg/L	-		59.3	144	49.2	31.6	141 (139)	114 (112)	130	47.7	29.2	35.4	125	85.9
Cobalt	mg/L	-		--	--	--	--	-- (--)	0.0040 J (0.0044 J)	0.0037 J	--	--	--	--	--
Copper	mg/L	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Magnesium	mg/L	-		8.82	20.3	20.8	7.20	41.8 (41.0)	40.4 (39.7)	27.6	10.8	7.1	16	33.4	34.2
Manganese	mg/L	-		--	0.42	--	0.0025 J	1.17 (1.14)	1.96 (1.94)	1.28	--	--	--	0.0119	--
Nickel	mg/L	-		0.0058 J	0.0045 J	--	--	0.0064 J (0.0061 J)	0.0140 (0.0134)	0.0169	--	--	--	--	0.0065 J
Selenium	mg/L	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Silver	mg/L	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Vanadium	mg/L	-		0.0038 J	--	--	0.0067	-- (--)	-- (--)	--	--	0.0044 J	0.0018 J	--	--
Antimony	mg/L	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Arsenic	mg/L	-		0.00099 J	--	--	0.0011 J	-- (--)	0.0014 J (0.0010 J)	--	0.0011 J	0.00088 J	0.0014 J	0.0009 J	--
Beryllium	mg/L	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Cadmium	mg/L	-		--	0.0005 J	--	--	-- (--)	-- (--)	--	--	--	--	--	--
Chromium	mg/L	-		--	--	0.0013 J	0.0020 J	-- (--)	0.00063 J (--)	0.00088 J	0.0219	0.0033	0.0022	0.0013 J	0.0033
Iron	mg/L	-		--	0.0698 J	--	--	0.499 (0.482)	0.977 (0.894)	0.0661 J	--	--	--	--	0.263
Lead	mg/L	-		--	--	--	--	-- (--)	-- (--)	--	--	--	--	--	0.00026 J
Potassium	mg/L	-		0.544	2.87	1.39	9.23	2.64 (2.67)	2.19 (2.07)	9.58	2.76	61.6	1.02	1.76	1.99
Sodium	mg/L	-		5.68	6.88	21.0	59.9	14.0 (14.2)	12.6 (12.0)	40.7	2.72	24.2	6.38	16.3	10.8
Thallium	mg/L	-		--	--	--	--	-- (--)	0.00072 (0.00073)	--	--	--	--	--	--
Zinc	mg/L	-		0.007 J	--	--	--	-- (--)	0.0859 (0.0840)	0.0048 J	--	--	0.0037 J	0.0049 J	--
Mercury	mg/L	-		--	--	--	--	-- (--)	-- (0.000051 J)	--	--	--	--	--	--

Notes:
Duplicate sample results are presented in parenthesis adjacent to the parent sample result.
Results in **bold** and shaded gray have exceeded their respective Maximum Contaminant Level (MCL).
-- Indicates that an analyte was analyzed for but was not detected at or above the method detection limit.

mg/L = Milligrams per Liter

Data Qualifier:
J = Estimated Value

Table A.7.3.2-9
Investigation Derived Waste Analytical Results
Area B Landfills, Fort Detrick, Maryland

Analyte		Location	IDW-001	IDW-002
		Sample ID	FTD72-IDW-001-112116	FTD72-IDW-002-112116
		Date	11/21/16	11/21/16
	Unit	MCL		
Acetone	µg/L	-	39	7.2
Acrolein	µg/L	-	--	--
Acrylonitrile	µg/L	-	--	--
Benzene	µg/L	5	--	--
Bromochloromethane	µg/L	-	--	--
Bromodichloromethane	µg/L	80[1]	--	--
Bromoform	µg/L	80[1]	--	--
Bromomethane	µg/L	-	--	--
2-Butanone	µg/L	-	6.3	--
Carbon Disulfide	µg/L	-	--	--
Carbon Tetrachloride	µg/L	5	--	--
Chlorobenzene	µg/L	100	--	--
Chloroethane	µg/L	-	--	--
Chloroform	µg/L	70[1]	--	1.9
Chloromethane	µg/L	-	--	--
1,2-Dibromo-3-chloropropane	µg/L	0.2	--	--
Dibromochloromethane	µg/L	60[1]	--	--
1,2-Dibromoethane	µg/L	0.05	--	--
Dibromomethane	µg/L	-	--	--
trans-1,4-Dichloro-2-butene	µg/L	-	--	--
1,2-Dichlorobenzene	µg/L	600	--	--
1,4-Dichlorobenzene	µg/L	75	--	--
1,1-Dichloroethane	µg/L	-	--	--
1,2-Dichloroethane	µg/L	5	--	--
1,1-Dichloroethene	µg/L	7	--	0.3 J
cis-1,2-Dichloroethene	µg/L	70	--	0.2 J
trans-1,2-Dichloroethene	µg/L	100	--	--
1,2-Dichloropropane	µg/L	5	--	--
cis-1,3-Dichloropropene	µg/L	-	--	--
trans-1,3-Dichloropropene	µg/L	-	--	--
Ethylbenzene	µg/L	700	--	--
2-Hexanone	µg/L	-	--	--
Methyl Iodide	µg/L	-	--	--
Methyl Tertiary Butyl Ether	µg/L	-	--	--
4-Methyl-2-pentanone	µg/L	-	--	--
Methylene Chloride	µg/L	5	--	--
Styrene	µg/L	100	--	--
1,1,1,2-Tetrachloroethane	µg/L	-	--	--
1,1,2,2-Tetrachloroethane	µg/L	-	--	--
Tetrachloroethene	µg/L	5	0.2 J	0.2 J
Toluene	µg/L	1,000	--	--
1,1,1-Trichloroethane	µg/L	200	--	--
1,1,2-Trichloroethane	µg/L	5	--	--
Trichloroethene	µg/L	5	1	4.9
Trichlorofluoromethane	µg/L	-	0.1 J	2.1
1,2,3-Trichloropropane	µg/L	-	--	--
Vinyl Acetate	µg/L	-	--	--
Vinyl Chloride	µg/L	2	--	--
m+p-Xylene	µg/L	10,000[2]	--	--
o-Xylene	µg/L	10,000[2]	--	--

Notes:

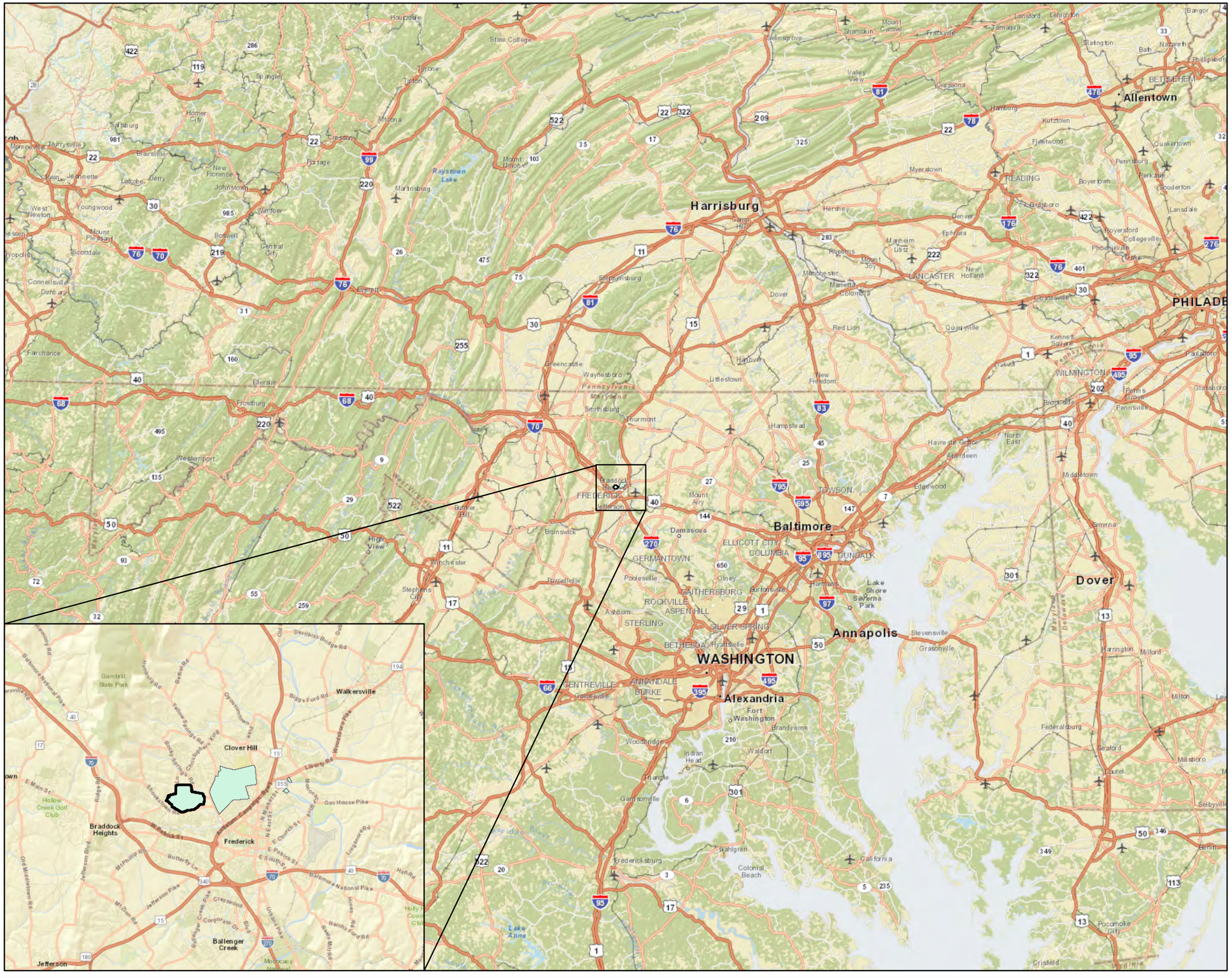
-- Indicates that an analyte was analyzed for but was not detected at or above the method detection limit.

[1] = 80 µg/L is the MCL for total trihalomethanes [total of bromodichloromethane, bromoform, dibromochloromethane (MCLG of 60 µg/L), and chloroform (MCLG of 70 µg/L)] and is applicable to public drinking water supplies that use disinfection products.

[2] = 10,000 µg/L is the MCL for total xylenes

µg/L = Micrograms per Liter
ID = Identification
MCL = Maximum Contaminant Level
MCLG = Maximum Contaminant Level Goal
Data Qualifier:
J = Estimated Value

Attachment 7.3.2
FIGURES



Legend

- Area B Boundary
- Installation Area

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Semi-Annual Monitoring Report

Date: 1 December 2016
By: J. Gatherer

FIGURE A.7.3.2-1

Site Location

FT. DETRICK
GIS File Path:

C:\GIS_Projects\Ft_Detrick\Maps\AreaB\SemiAnnualReports\2016\November\1-1_SiteLocation_AreaB_2016.mxd

Fort Detrick
Frederick, MD

B-3 East

B-3 West

B-2

B-18

Western Disposal Area

B-10

B-6

Legend

- Stream
- Landfill Boundary
- Landfill Cap Area
- Area B Boundary

N

Scale:

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

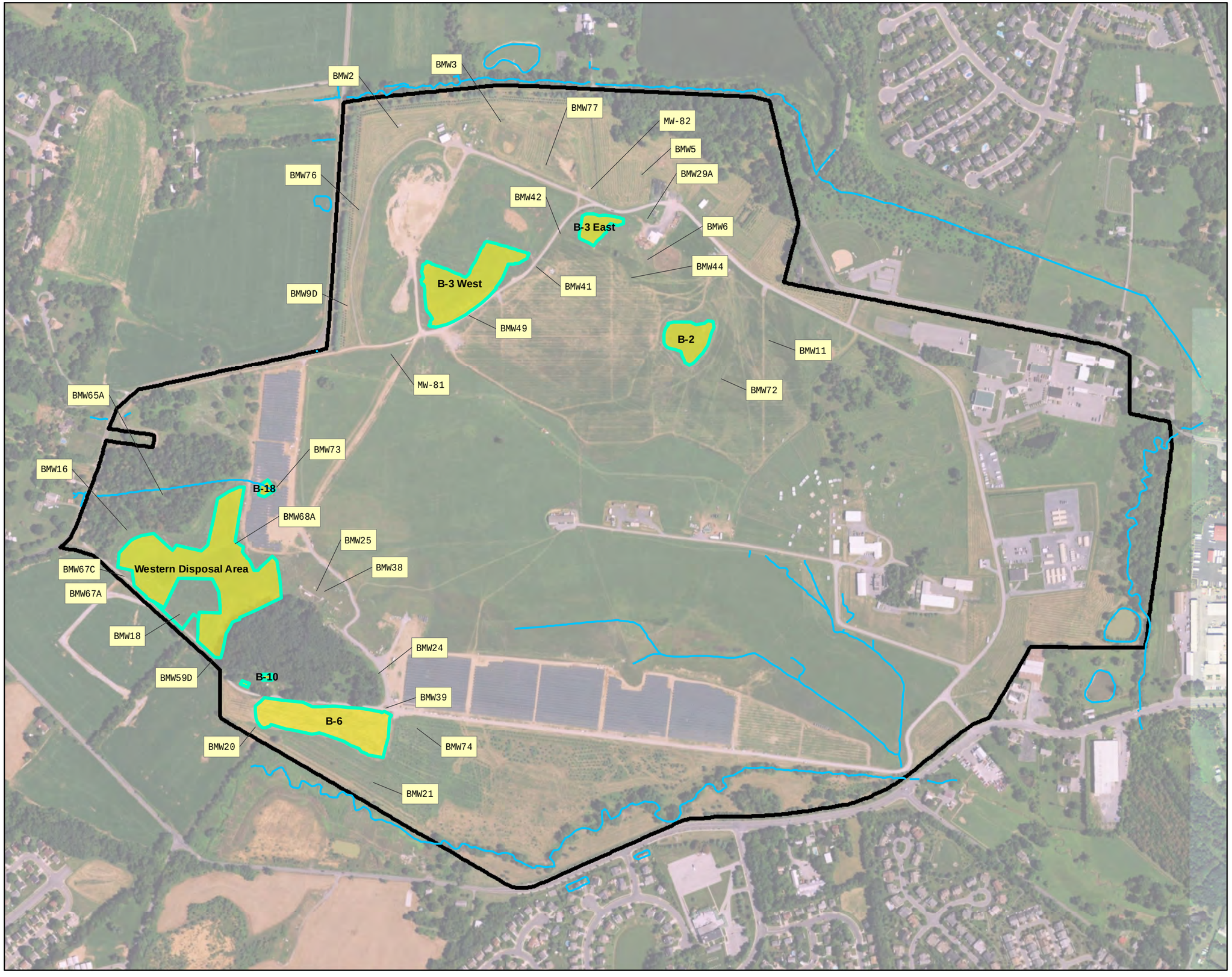
Area B Landfill
Semi-Annual Monitoring Report

Date: 1 December 2016
By: J. Gatherer

FIGURE A.7.3.2-2
Area B
Site Layout

FT. DETRICK
GIS File Path:
C:\GIS_Projects\Ft_Detrick\Maps\AreaB\AnnualReports\2016 2-1_SiteLayout_AreaB_2016.mxd

Fort Detrick
Frederick, MD



Legend

- Stream
- Landfill Boundary
- Landfill Cap Area
- Area B Boundary

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Semi-Annual Monitoring Report

Date: 1 December 2016
By: J. Gatherer

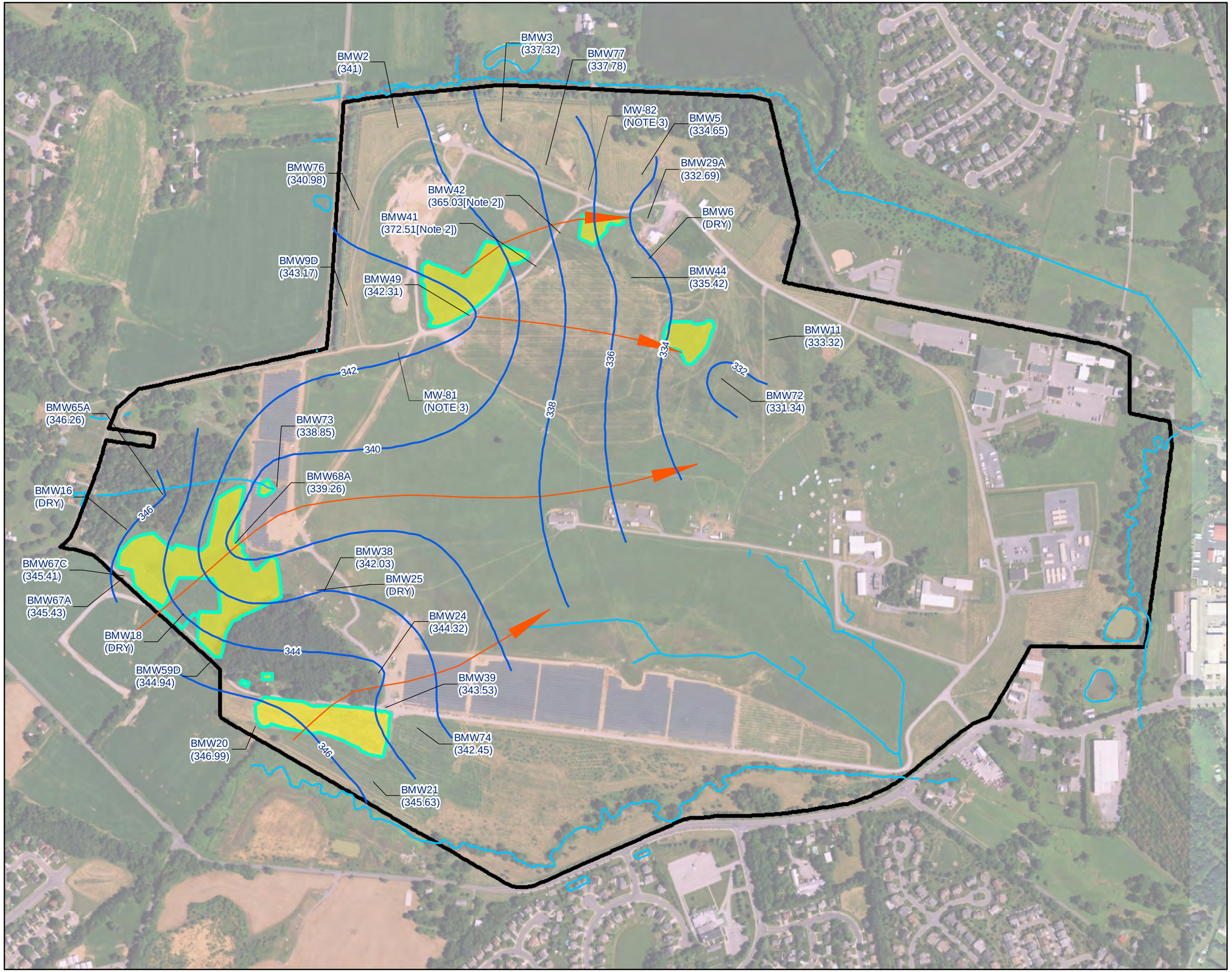
FIGURE A.7.3.2-3

Area B Landfill
Groundwater
Monitoring Network

Fort Detrick
Frederick, MD

FT. DETRICK
GIS File Path:

C:\GIS_Projects\Ft_Detrick\Maps\AreaB\AnnualReports\2016 3-1_MonitoringNetwork_AreaB_2016.mxd



Legend

- Genralized Direction Groundwater Flow
- Contour Int. = 2-ft
- Stream
- Landfill Boundary
- Landfill Cap Area
- Area B Boundary

Notes:
1) Elevations of potentiometric contours are shown as ft MSL.
2) Water levels at BMW41 and BMW42 were considered anomalous and were therefore not used for the generation of potentiometric contours.
3) MW-81 and -82 were gauged but no elevation data is available for these wells.

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Semi-Annual Monitoring Report

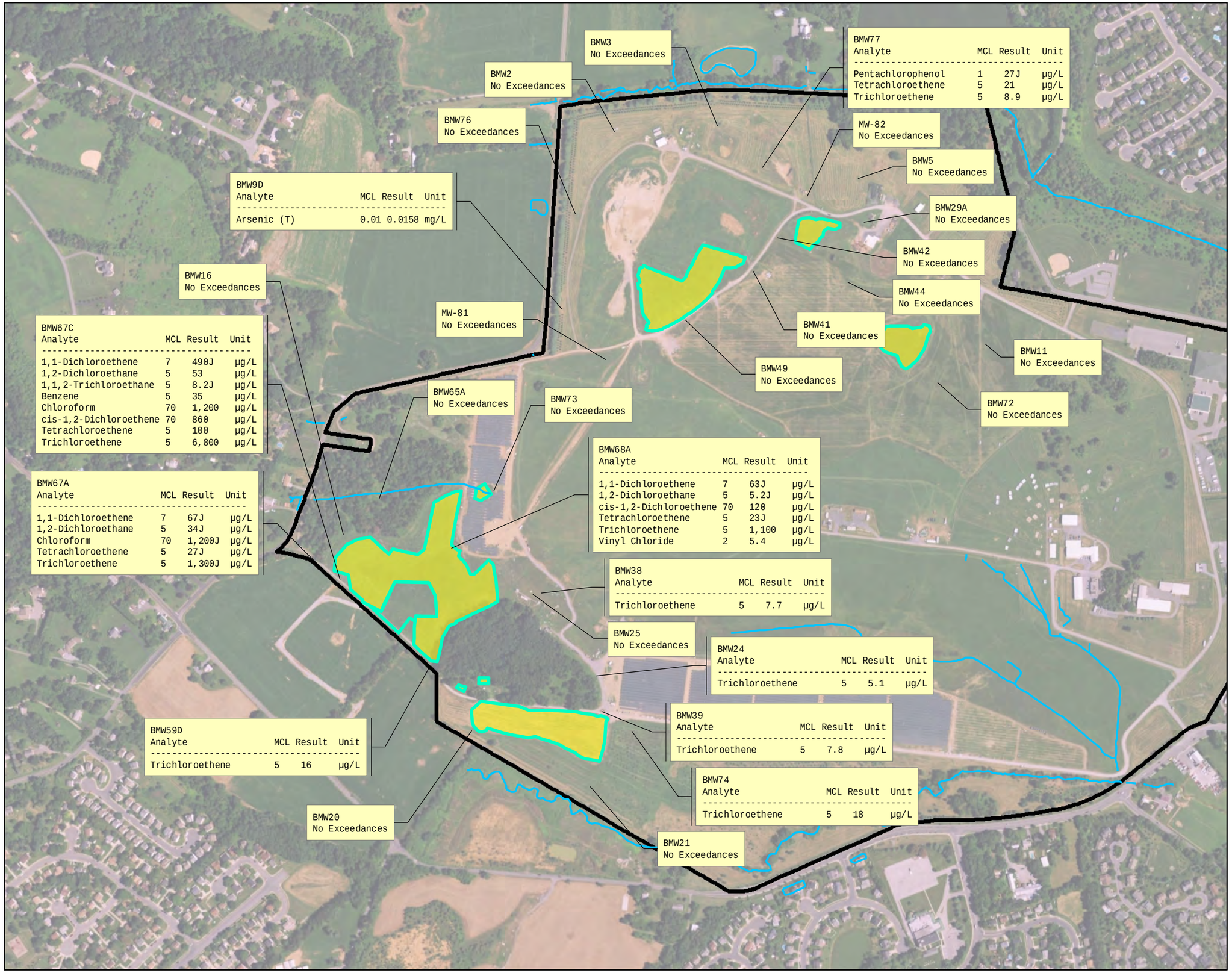
Date: 1 December 2016
By: J. Gatherer

FT. DETRICK
GIS File Path:
C:\GIS_Projects\Ft_Detrick\Maps\AreaB\AnnualReports\2016 3-1_MonitoringNetwork_AreaB_2016.mxd

FIGURE A.7.3.2-4

Groundwater Elevations November 2016

Fort Detrick
Frederick, MD



Legend

- Stream
- Landfill Boundary
- Landfill Cap Area
- Area B Boundary

Notes:
MCL = Maximum Contaminant Level
µg/L = micrograms per liter
mg/L = milligram per liter
J = Estimated

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Semi-Annual Monitoring Report

Date: 1 December 2016
By: J. Gatherer

FT. DETRICK
GIS File Path:
C:\GIS_Projects\Ft_Detrick\Maps\AreaB\SemiAnnualReports\2016\November 5-2_ResultsAboveMCL_AreaB_2016.mxd

FIGURE A.7.3.2-5

Analytical Results Above the MCL November 2016

Fort Detrick
Frederick, MD

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Attachment 7.3.3
Area B Landfill Monitoring
April 2017 Monitoring Report Tables and Figures
(Watermark ECC LLC, 2018)

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Attachment 7.3.3
TABLES

Table A.7.3.3-1
Water Level Survey Data
Area B Landfills, Fort Detrick, Maryland

Monitoring Well	Top of Screen (ft BTOC)	Bottom of Screen (ft BTOC)	Depth to Groundwater (ft BTOC)	TOC Elevation (ft amsl)	Groundwater Elevation (ft msl)
BMW2	25	35	36.15	376.30	340.15
BMW3	25	35	28.32	366.90	338.58
BMW5	25	35	25.79	362.01	336.22
BMW6	25	35	Dry	380.90	NA
BMW9D	91	106	46.23	387.88	341.65
BMW11	25	35	21.63	357.20	335.57
BMW16	25	35	Dry	390.70	NA
BMW18	25	35	40.80	386.00	345.20
BMW20	25	35	14.38	368.70	354.32
BMW21	25	35	9.41	359.84	350.43
BMW24	25	35	19.02	368.34	349.32
BMW25	25	35	23.49	369.40	345.91
BMW26	25	35	Damaged	371.30	NA
BMW29A	48	58	36.75	371.03	334.28
BMW37	39.5	59.5	27.28	373.70	346.42
BMW38	50.6	80.6	22.68	368.38	345.70
BMW39	21.1	51.1	21.95	370.45	348.50
BMW41	49	69	9.73	399.02	372.51
BMW42	48.5	68.5	17.03	397.78	365.03
BMW44	58.6	88.6	61.39	400.14	338.75
BMW49	30	50	37.70	386.60	348.90
BMW59D	163	183	41.56	391.65	350.09
BMW65A	112	127	39.55	388.47	348.92
BMW67A	50	55	44.00	395.91	351.91
BMW67C	140	155	45.68	397.47	351.79
BMW68A	32	42	29.68	374.35	344.67
BMW72	85	95	21.35	355.04	333.69
BMW73	22.5	37.5	26.20	370.80	344.60
BMW74	59	69	19.22	366.65	347.43
BMW76	98	108	45.53	388.32	342.79
BMW77	56	71	27.12	366.26	339.14
MW-81	DNA	DNA	37.52	DNA	DNA

Notes:

Depth to groundwater was measured on 03 April 2017.

ft BTOC = Feet Below Top of Casing

ft amsl = Feet Above Mean Sea Level

NA = Not Applicable

DNA = Data Not Available

Table A.7.3.3-2
Analytical Samples Collected
Area B Landfills, Fort Detrick, Maryland

Sample Identification	Description	Dissolved Metals	Metals	Water Quality Parameters	VOCs	SVOCs
Quality Assurance Samples						
AREA BLF-RB-001 (040317)	Rinse Blank		X	X	X	X
AREA BLF-RB-002 (040417)	Rinse Blank		X	X	X	X
AREA BLF-RB-003 (040517)	Rinse Blank		X	X	X	X
AREA BLF-RB-003 (040617)	Rinse Blank				X	
AREA BLF-RB-004 (040717)	Rinse Blank		X	X	X	X
AREA BLF-RB-005 (041017)	Rinse Blank		X	X	X	X
AREA-BLF-TB-001 (040317)	Trip Blank				X	
AREA-BLF-TB-002 (040417)	Trip Blank				X	
AREA-BLF-TB-003 (040517)	Trip Blank				X	
AREA-BLF-TB-003 (040617)	Trip Blank				X	
AREA-BLF-TB-004 (040717)	Trip Blank				X	
AREA-BLF-TB-005 (041017)	Trip Blank				X	
FTD72-DUP001 (040517)	Duplicate Sample - BMW11	X	X	X	X	X
FTD72-DUP002 (041017)	Duplicate Sample - BMW67C	X	X	X	X	X
FTD72-IDW-001 (041017)	Investigation Derived Waste Sample				X	
Monitoring Wells						
FTD72-BMW2 (040317)	Groundwater Sample	X	X	X	X	X
FTD72-BMW3 (040317)	Groundwater Sample	X	X	X	X	X
FTD72-BMW5 (040417)	Groundwater Sample	X	X	X	X	X
FTD72-BMW9D (040417)	Groundwater Sample	X	X	X	X	X
FTD72-BMW11 (040517)	Groundwater Sample	X	X	X	X	X
FTD72-BMW18 (040717)	Groundwater Sample	X	X	X	X	X
FTD72-BMW20 (040617)	Groundwater Sample	X	X	X	X	X
FTD72-BMW21 (040517)	Groundwater Sample	X	X	X	X	X
FTD72-BMW24 (040617)	Groundwater Sample	X	X	X	X	X
FTD72-BMW25 (040417)	Groundwater Sample	X	X	X	X	X
FTD72-BMW29A (040617)	Groundwater Sample	X	X	X	X	X
FTD72-BMW37 (040717)	Groundwater Sample	X	X	X	X	X
FTD72-BMW38 (040417)	Groundwater Sample	X	X	X	X	X
FTD72-BMW39 (040417)	Groundwater Sample	X	X	X	X	X
FTD72-BMW41 (040417)	Groundwater Sample	X	X	X	X	X
FTD72-BMW42 (040417)	Groundwater Sample	X	X	X	X	X
FTD72-BMW44 (040517)	Groundwater Sample	X	X	X	X	X
FTD72-BMW49 (040517)	Groundwater Sample	X	X	X	X	X

Table A.7.3.3-2
Analytical Samples Collected
Area B Landfills, Fort Detrick, Maryland

Sample Identification	Description	Dissolved Metals	Metals	Water Quality Parameters	VOCs	SVOCs
Monitoring Wells (Continued)						
FTD72-BMW59D (040517)	Groundwater Sample	X	X	X	X	X
FTD72-BMW65A (040517)	Groundwater Sample	X	X	X	X	X
FTD72-BMW67A (041017)	Groundwater Sample	X	X	X	X	X
FTD72-BMW67C (041017)	Groundwater Sample	X	X	X	X	X
FTD72-BMW68A (041017)	Groundwater Sample	X	X	X	X	X
FTD72-BMW72 (040517)	Groundwater Sample	X	X	X	X	X
FTD72-BMW74 (040417)	Groundwater Sample	X	X	X	X	X
FTD72-BMW76 (040417)	Groundwater Sample	X	X	X	X	X
FTD72-BMW77 (040517)	Groundwater Sample	X	X	X	X	X
FTD72-MW81 (040617)	Groundwater Sample	X	X	X	X	X

Notes:

VOCs = Volatile Organic Compounds

SVOCs = Semi-Volatile Organic Compounds

Water quality parameters include ammonia/nitrogen, chemical oxygen demand, chloride, total alkalinity, total nitrite/nitrogen, total dissolved solids, turbidity, pH, sulfate, total hardness, and specific conductance.

Total and dissolved metals include antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium, and zinc.

Samples were not collected from BMW6 and BMW16 because the wells were dry. A sample was not collected from BMW26 because the well was damaged. A sample was not collected from BMW73 due to an obstruction in the well.

Samples were analyzed using United States Environmental Protection Agency (EPA) Methods SW-846/8260B (VOCs), SW-846/8270C (SVOCs), SW-846/8270 [Selective Ion Monitoring (SIM) PAHs], SW-846/6010B/6020/7470A (total and dissolved metals), SM 4500-H+/B-2000 (pH), SM 2320/B-1997 (alkalinity), SM 2340/B-1997 (total hardness), SW-846/9056 (chloride), SM 2510/B-1997 (specific conductance), EPA 353.2 (nitrate), EPA 410.4 (COD), SM 2130/B-2001 (turbidity), EPA 350.1 (ammonia), SW-846/9056 (sulfate), and SM 2540/C-1997 (TDS).

Tabe A.7.3.3-3
Duplicate Analysis - BMW11
Area B Landfills, Fort Detrick, Maryland

Location	Sample Date	Analyte	Unit	Sample		Duplicate		Relative Percent Difference
				Sample Result	Validation Qualifier	Duplicate Result	Validation Qualifier	
BMW11	04 April 2017	**Total Metals**						
		Barium	mg/L	0.0789		0.0822		4.10%
		Calcium	mg/L	64.5		65.4		1.39%
		Magnesium	mg/L	16.7		17.3		3.53%
		Manganese	mg/L	0.0174		0.0134		25.97%
		Arsenic	mg/L	0.00087		0.00081		7.14%
		Chromium	mg/L	0.0057		0.0049		15.09%
		Iron	mg/L	0.0705	J	0.125	J	55.75%
		Lead	mg/L	0.00014		0.00015		6.90%
		Potassium	mg/L	1.23		1.33		7.81%
		Sodium	mg/L	2.37		2.46		3.73%
		Zinc	mg/L	0.0053	J	0.0038	J	32.97%
		Dissolved Metals						
		Barium	mg/L	0.0790		0.0816		3.24%
		Calcium	mg/L	62.2		64.6		3.79%
		Magnesium	mg/L	16.3		16.9		3.61%
		Manganese	mg/L	0.0059		0.0056		5.22%
		Chromium	mg/L	0.0031		0.0037		17.65%
		Potassium	mg/L	1.24		1.14		8.40%
		Sodium	mg/L	2.58		2.46		4.76%
		Zinc	mg/L	0.0035	J	--	UJ	200.00%
		SVOCs						
		Benzo(a)anthracene	µg/L	--	UJ	0.018	J	200.00%
		Benzo(a)pyrene	µg/L	--	UJ	0.015	J	200.00%
		Benzo(b)fluoranthene	µg/L	--	UJ	0.015	J	200.00%
		Benzo(g,h,i)perylene	µg/L	--	UJ	0.014	J	200.00%
		Benzo(k)fluoranthene	µg/L	--	UJ	0.015	J	200.00%
		Dibenz(a,h)anthracene	µg/L	--	UJ	0.015	J	200.00%
		Indeno(1,2,3-cd)pyrene	µg/L	--	UJ	0.015	J	200.00%
		Naphthalene	µg/L	--	UJ	0.18	J	200.00%
		Water Quality Parameters						
		Total Hardness as CaCO3	mg/L	230		235	-	2.15%
		Ammonia Nitrogen	mg/L	0.053	J	-	UJ	200.0%
		Total Nitrite / Nitrate Nitrogen	mg/L	2.7		2.6	-	3.77%
		Chloride	mg/L	6.0		5.9	-	1.68%
		Sulfate	mg/L	13.1		12.1	-	7.94%
		Temperature of pH	°C	22.6		22.0	-	2.69%
		Turbidity	NTU	4.5		5.3	-	16.3%
		Total Alkalinity to pH 4.5	mg/L*	196		202	-	3.02%
		Specific Conductance	umhos/cm	425		430	-	1.17%
		Total Dissolved Solids	mg/L	275		272	-	1.1%
		pH	SU	7.8		7.8	-	0.00%

Notes:

-- Indicates that an analyte was analyzed for but was not detected at or above laboratory reporting limits.

µg/L = Micrograms per Liter umhos/cm = Micromhos per Centimeter °C = Degrees Celsius SU = Standard Units

mg/L = Milligrams per Liter mg/L* = mg/L as Calcium Carbonate (CaCO3) NTU = Nephelometric Turbidity Unit

VOCs = Volatile Organic Compounds SVOCs = Semi-Volatile Organic Compounds

Data Qualifiers: J = Estimated Value UJ = Non-Detect, Estimated Value

Table A.7.3.3-4
Duplicate Analysis - BMW67C
Area B Landfills, Fort Detrick, Maryland

Location	Sample Date	Analyte	Unit	Sample		Duplicate		Relative Percent Difference
				Sample Result	Validation Qualifier	Duplicate Result	Validation Qualifier	
BMW67C	10 April 2017	**Total Metals**						
		Barium	mg/L	0.392		0.383		2.32%
		Calcium	mg/L	83.2		83.3		0.12%
		Magnesium	mg/L	33.8		33.5		0.89%
		Manganese	mg/L	0.356		0.365		2.50%
		Nickel	mg/L	0.0109		0.0098		10.63%
		Arsenic	mg/L	0.00086		0.00085		1.17%
		Chromium	mg/L	0.0025	J	0.0014	J	56.41%
		Iron	mg/L	0.130	J	--	UJ	200.00%
		Lead	mg/L	0.00012	J	--	UJ	200.00%
		Potassium	mg/L	2.02		2.05		1.47%
		Sodium	mg/L	10.8		10.5		2.82%
		Thallium	mg/L	0.00049		0.00056		13.33%
		Zinc	mg/L	0.0309		0.0281		9.49%
		Dissolved Metals						
		Barium	mg/L	0.386		0.381		1.30%
		Calcium	mg/L	83.9		83.6		0.36%
		Magnesium	mg/L	33.8		33.5		0.89%
		Manganese	mg/L	0.381		0.374		1.85%
		Nickel	mg/L	0.0098		0.0102		4.00%
		Arsenic	mg/L	--	UJ	0.00090	J	200.00%
		Chromium	mg/L	0.00073		0.00060		19.55%
		Potassium	mg/L	2.07		2.00		3.44%
		Sodium	mg/L	11.3		10.9		3.60%
		Thallium	mg/L	0.00053		0.00056		5.50%
		Zinc	mg/L	0.0296		0.0306		3.32%
		SVOCs						
		1,4-Dioxane	µg/L	22	J	16	J	31.58%
		Benzo(a)pyrene	µg/L	--	UJ	0.015	J	200.00%
		Benzo(b)fluoranthene	µg/L	--	UJ	0.015	J	200.00%
		Benzo(g,h,i)perylene	µg/L	--	UJ	0.030	J	200.00%
		Benzo(k)fluoranthene	µg/L	--	UJ	0.015	J	200.00%
		Dibenz(a,h)anthracene	µg/L	--	UJ	0.022	J	200.00%
		Naphthalene	µg/L	0.17		0.23		30.00%
		VOCs						
		Benzene	µg/L	11		11		0.00%
		Chloroform	µg/L	910		890		2.22%
		1,1-Dichloroethane	µg/L	3.4		4.2		21.05%
		1,2-Dichloroethane	µg/L	14		14		0.00%
		1,1-Dichloroethene	µg/L	120		140		15.38%
		cis-1,2-Dichloroethene	µg/L	160		190		17.14%
		trans-1,2-Dichloroethene	µg/L	2.3		2.1		9.09%
		Tetrachloroethene	µg/L	51		57		11.11%
		1,1,1-Trichloroethane	µg/L	36		44		20.00%
		Trichloroethene	µg/L	2,100		2,200		4.65%
		Trichlorofluoromethane	µg/L	750		730		2.70%

Table A.7.3.3-4
Duplicate Analysis - BMW67C
Area B Landfills, Fort Detrick, Maryland

Location	Sample Date	Analyte	Unit	Sample		Duplicate		Relative Percent Difference
				Sample Result	Validation Qualifier	Duplicate Result	Validation Qualifier	
BMW67C (Continued)	10 April 2017 (Continued)	Water Quality Parameters						
		Total Hardness as CaCO3	mg/L	347		346		0.29%
		Ammonia Nitrogen	mg/L	0.11		0.11		0.00%
		Total Nitrite / Nitrate Nitrogen	mg/L	0.63		0.74		16.06%
		Chloride	mg/L	27.8		29.4		5.59%
		Sulfate	mg/L	14.6		17.8		19.75%
		Temperature of pH	°C	22.9		22.5		1.76%
		Turbidity	NTU	6.8		6.1		10.85%
		Total Alkalinity to pH 4.5	mg/L*	304		304		0.00%
		Specific Conductance	umhos/cm	675		670		0.74%
		Total Dissolved Solids	mg/L	443		376		16.36%
		pH	SU	7.9		7.9		0.00%

Notes:

-- Indicates that an analyte was analyzed for but was not detected at or above laboratory reporting limits.
µg/L = Micrograms per Liter umhos/cm = Micromhos per Centimeter °C = Degrees Celsius SU = Standard Units
mg/L = Milligrams per Liter mg/L* = mg/L as Calcium Carbonate (CaCO3) NTU = Nephelometric Turbidity Unit
VOCs = Volatile Organic Compounds SVOCs = Semi-Volatile Organic Compounds

Data Qualifiers: J = Estimated Value UJ = Non-Detect, Estimated Value

Watermark ECC LLC

Table A.7.3.3-5
Volatile Organic Compound Results
Area B Landfills, Fort Detrick, Maryland

Analyte			Location	BMW2	BMW3	BMW5	BMW9D	BMW11	BMW18	BMW20	BMW21	BMW24	BMW25	BMW29A	BMW37	BMW38	BMW39	BMW41
			Sample ID	FTD72-BMW2-040317	FTD72-BMW3-040317	FTD72-BMW5-040411	FTD72-BMW9D-040417	FTD72-BMW11-040517	FTD72-BMW18-040717	FTD72-BMW20-040617	FTD72-BMW21-040517	FTD72-BMW24-040617	FTD72-BMW25-040417	FTD72-BMW29A-040617	FTD72-BMW37-040717	FTD72-BMW38-040417	FTD72-BMW39-040417	FTD72-BMW41-040417
			Date	4/3/17	4/3/17	4/4/17	4/4/17	4/5/17	4/7/17	4/6/17	4/5/17	4/6/17	4/4/17	4/6/17	4/7/17	4/4/17	4/4/17	4/4/17
	Unit	**MCL**	**RSL Tapwater**															
Acetone	µg/L	-	14000	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
Acrolein	µg/L	-	0.042	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
Acrylonitrile	µg/L	-	0.052	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
Benzene	µg/L	5	0.46	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
Bromochloromethane	µg/L	-	83	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	µg/L	80[1]	0.13	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
Bromoform	µg/L	80[1]	3.3	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
Bromomethane	µg/L	-	7.5	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
2-Butanone	µg/L	-	-	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
Carbon Disulfide	µg/L	-	810	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	µg/L	5	0.46	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	µg/L	100	78	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
Chloroethane	µg/L	-	21000	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
Chloroform	µg/L	70[1]	0.22	--	--	--	0.2 J	-- (--)	**4.4**	--	--	**0.3 J**	0.1 J	--	**22**	**1.9**	--	--
Chloromethane	µg/L	-	190	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	µg/L	0.2	0.00033	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	µg/L	60[1]	0.87	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	µg/L	0.05	0.0075	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
Dibromomethane	µg/L	-	8.3	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	µg/L	-	0.0013	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	600	300	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	µg/L	75	0.48	--	--	--	--	-- (--)	--	--	--	--	--	--	0.1 J	--	--	--
1,1-Dichloroethane	µg/L	-	2.8	--	--	--	--	-- (--)	0.9	--	--	--	--	--	1.1	--	--	--
1,2-Dichloroethane	µg/L	5	0.17	--	--	--	--	-- (--)	**0.3 J**	--	--	--	--	--	**1.3**	--	--	--
1,1-Dichloroethene	µg/L	7	280	0.1 J	--	--	--	-- (--)	4.6	--	--	--	--	--	**12**	0.4 J	--	--
cis-1,2-Dichloroethene	µg/L	70	36	--	--	--	--	-- (--)	15	--	--	--	--	--	24	0.2 J	--	--
trans-1,2-Dichloroethene	µg/L	100	360	--	--	--	--	-- (--)	0.2 J	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	5	0.44	--	--	--	--	-- (--)	--	--	--	--	--	--	0.2 J	--	--	--
cis-1,3-Dichloropropene	µg/L	-	-	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	-	-	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	µg/L	700	1.5	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
2-Hexanone	µg/L	-	38	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
Methyl Iodide	µg/L	-	-	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
Methyl Tertiary Butyl Ether	µg/L	-	14	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	µg/L	-	6300	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	µg/L	5	11	--	--	--	--	-- (--)	0.3 J	--	--	--	--	--	--	--	--	--
Styrene	µg/L	100	1200	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
1,1,1,2-Tetrachloroethane	µg/L	-	0.57	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	-	0.076	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	µg/L	5	11	--	--	0.2 J	0.3 J	-- (--)	0.8 U	--	--	--	--	--	**8.6**	0.3 J	--	--
Toluene	µg/L	1,000	1,100	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	µg/L	200	8000	--	--	--	--	-- (--)	0.4 J	--	--	--	--	--	2.5	--	--	--
1,1,2-Trichloroethane	µg/L	5	0.28	--	--	--	--	-- (--)	--	--	--	--	--	--	0.1 J	--	--	--
Trichloroethene	µg/L	5	0.49	0.1 J	--	--	--	-- (--)	**31**	--	--	**0.9**	0.3 J	--	**160**	**5.9**	**3.3**	--
Trichlorofluoromethane	µg/L	-	5200	--	--	0.2 J	--	-- (--)	3.8	--	--	0.5	0.2 J	30	18	2.3	0.3 J	--
1,2,3-Trichloropropane	µg/L	-	0.00075	--	--	--	--	-- (--)	--	--	--	--	--	--	**0.1 J**	--	--	--
Vinyl Acetate	µg/L	-	410	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	µg/L	2	0.019	--	--	--	--	-- (--)	**3.5**	--	--	--	--	--	**0.5 J**	--	--	--
m+p-Xylene	µg/L	10,000[2]	-	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--
o-Xylene	µg/L	10,000[2]	190	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--

Watermark ECC LLC

Table A.7.3.3-5
Volatile Organic Compound Results
Area B Landfills, Fort Detrick, Maryland

Analyte			Location	BMW42	BMW44	BMW49	BMW59D	BMW65A	BMW67A	BMW67C	BMW68A	BMW72	BMW74	BMW76	BMW77	MW81
			Sample ID	FTD72-BMW42-040417	FTD72-BMW44-040517	FTD72-BMW49-040517	FTD72-BMW59D-040517	FTD72-BMW65A-040517	FTD72-BMW67A-041017	FTD72-BMW67C-041017	FTD72-BMW68A-041017	FTD72-BMW72-040517	FTD72-BMW74-040417	FTD72-BMW76-040417	FTD72-BMW77-040517	FTD72-MW81-040617
			Date	4/4/17	4/5/17	4/5/17	4/5/17	4/5/17	4/10/17	4/10/17	4/10/17	4/5/17	4/4/17	4/4/17	4/5/17	4/6/17
	Unit	MCL	RSL Tapwater													
Acetone	µg/L	-	14000	--	--	--	--	11	--	-- (--)	--	--	5.6 U	--	--	--
Acrolein	µg/L	-	0.042	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Acrylonitrile	µg/L	-	0.052	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Benzene	µg/L	5	0.46	--	--	--	--	--	**3.0 J**	**11 (11)**	0.3 J	--	--	--	0.1 J	--
Bromochloromethane	µg/L	-	83	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Bromodichloromethane	µg/L	80[1]	0.13	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Bromoform	µg/L	80[1]	3.3	--	--	--	--	--	**4.0 J**	-- (--)	--	--	--	--	--	--
Bromomethane	µg/L	-	7.5	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
2-Butanone	µg/L	-	-	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Carbon Disulfide	µg/L	-	810	--	--	0.6 J	--	1.5	--	-- (--)	--	--	--	--	--	--
Carbon Tetrachloride	µg/L	5	0.46	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Chlorobenzene	µg/L	100	78	--	--	--	--	--	--	-- (--)	--	--	--	--	0.1 J	--
Chloroethane	µg/L	-	21000	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Chloroform	µg/L	70[1]	0.22	--	--	0.3 J	**4.5**	0.2 J	**530**	**910 (890)**	**4.9**	--	**0.8**	--	**0.6**	0.2 J
Chloromethane	µg/L	-	190	--	--	--	--	0.4 J	--	-- (--)	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	µg/L	0.2	0.00033	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Dibromochloromethane	µg/L	60[1]	0.87	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
1,2-Dibromoethane	µg/L	0.05	0.0075	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Dibromomethane	µg/L	-	8.3	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	µg/L	-	0.0013	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	600	300	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
1,4-Dichlorobenzene	µg/L	75	0.48	--	--	--	--	--	--	-- (--)	--	--	--	--	0.2 J	--
1,1-Dichloroethane	µg/L	-	2.8	--	--	0.2 J	--	--	--	3.4 J (4.2 J)	0.8	--	--	--	0.2 J	--
1,2-Dichloroethane	µg/L	5	0.17	--	--	--	0.1 J	--	**13**	**14 (14)**	**0.5 J**	--	--	--	--	--
1,1-Dichloroethene	µg/L	7	280	--	--	--	1	--	**46**	**120 (140)**	**9.1**	--	0.2 J	--	3.5	--
cis-1,2-Dichloroethene	µg/L	70	36	--	--	0.1 J	0.4 J	--	7.5 J	**160 (190)**	18	--	--	--	0.7	--
trans-1,2-Dichloroethene	µg/L	100	360	--	--	--	--	--	--	2.3 J (2.1 J)	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	5	0.44	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	-	-	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	-	-	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Ethylbenzene	µg/L	700	1.5	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
2-Hexanone	µg/L	-	38	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Methyl Iodide	µg/L	-	-	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Methyl Tertiary Butyl Ether	µg/L	-	14	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
4-Methyl-2-pentanone	µg/L	-	6300	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Methylene Chloride	µg/L	5	11	--	--	--	--	0.3 J	--	-- (--)	--	--	--	--	--	--
Styrene	µg/L	100	1200	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
1,1,1,2-Tetrachloroethane	µg/L	-	0.57	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	-	0.076	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Tetrachloroethene	µg/L	5	11	--	--	0.2 J	0.5 J	0.4 J	**19**	**51 (57)**	3.8	--	0.1 J	--	**16**	--
Toluene	µg/L	1,000	1,100	--	--	--	--	0.5 J	--	-- (--)	--	--	--	--	--	--
1,1,1-Trichloroethane	µg/L	200	8000	--	--	--	0.2 J	--	4.2 J	36 (44)	1.7	--	--	--	--	--
1,1,2-Trichloroethane	µg/L	5	0.28	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Trichloroethene	µg/L	5	0.49	--	--	--	**14**	0.2 J	**690**	**2,100**	**120**	0.2 J	**17**	--	**4.2**	--
Trichlorofluoromethane	µg/L	-	5200	--	--	1.3	6.5	--	410	750 (730)	5.5	0.5	1.2	--	--	--
1,2,3-Trichloropropane	µg/L	-	0.00075	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Vinyl Acetate	µg/L	-	410	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Vinyl Chloride	µg/L	2	0.019	--	--	--	--	**0.1 J**	--	-- (--)	**0.4 J**	--	--	--	--	--
m+p-Xylene	µg/L	10,000[2]	-	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
o-Xylene	µg/L	10,000[2]	190	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--

Notes:

Duplicate sample results are presented in parenthesis adjacent to the parent sample result.

Results in **bold** and shaded gray have exceeded both their respective Maximum Contaminant Level (MCL) and Regional Screening Level (RSL).

Results in **bold** have exceeded either their respective MCL or RSL.

-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.

[1] = 80 µg/L is the MCL for total trihalomethanes (total of bromodichloromethane, bromoform, dibromochloromethane, and chloroform) and is applicable to public drinking water supplies that use disinfection products. Chloroform has a Maximum Contaminant Level Goal (MCLG) of 70 µg/L. Dibromochloromethane has a MCLG of 60 µg/L.

[2] = 10,000 µg/L is the MCL for total xylenes. µg/L = Micrograms per Liter RSL = Tapwater, THQ - 1.0, EPA May 2016

Data Qualifiers: J = Estimated Value U = Qualified as Non-Detect Based on Field and/or Laboratory Blanks

Table A.7.3.3-6
Semivolatile Organic Compound and Polycyclic Aromatic Hydrocarbon Results
Area B Landfills, Fort Detrick, Maryland

Analyte	Location			BMW2	BMW3	BMW5	BMW9D	BMW11	BMW18	BMW20	BMW21	BMW24	BMW25	BMW29A	BMW37	BMW38	BMW39	BMW41	BMW42	BMW44	BMW49	BMW59D	BMW65A	BMW67A	BMW67C	BMW68A	BMW72	BMW74	BMW76	BMW77	MW81
	Sample ID			FTD72-BMW2-040317	FTD72-BMW3-040317	FTD72-BMW5-040411	FTD72-BMW9D-040417	FTD72-BMW11-040517	FTD72-BMW18-040717	FTD72-BMW20-040617	FTD72-BMW21-040517	FTD72-BMW24-040617	FTD72-BMW25-040417	FTD72-BMW29A-040617	FTD72-BMW37-040717	FTD72-BMW38-040417	FTD72-BMW39-040417	FTD72-BMW41-040417	FTD72-BMW42-040417	FTD72-BMW44-040517	FTD72-BMW49-040517	FTD72-BMW59D-040517	FTD72-BMW65A-040517	FTD72-BMW67A-041017	FTD72-BMW67C-041017	FTD72-BMW68A-041017	FTD72-BMW72-040517	FTD72-BMW74-040417	FTD72-BMW76-040417	FTD72-BMW77-040517	FTD72-MW81-040617
	Date			4/3/17	4/3/17	4/4/17	4/4/17	4/5/17	4/7/17	4/6/17	4/5/17	4/6/17	4/4/17	4/6/17	4/7/17	4/4/17	4/4/17	4/4/17	4/4/17	4/5/17	4/5/17	4/5/17	4/5/17	4/10/17	4/10/17	4/10/17	4/5/17	4/4/17	4/4/17	4/5/17	4/6/17
	Unit	MCL	RSL Tapwater																												
Atrazine	µg/L	3	0.3	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Benzaldehyde	µg/L	-	19	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
1,1'-Biphenyl	µg/L	-	0.83	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
4-Bromophenyl-phenylether	µg/L	-	-	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Butylbenzylphthalate	µg/L	-	16	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Di-n-butylphthalate	µg/L	-	900	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Caprolactam	µg/L	-	9900	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Carbazole	µg/L	-	-	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
4-Chloro-3-methylphenol	µg/L	-	1400	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
4-Chloroaniline	µg/L	-	0.37	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	µg/L	-	59	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
bis(2-Chloroethyl)ether	µg/L	-	0.014	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
2-Chloronaphthalene	µg/L	-	750	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
2-Chlorophenol	µg/L	-	91	--	--	--	--	-- (--)	--	--	R	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
4-Chlorophenyl-phenylether	µg/L	-	-	--	--	--	--	-- (--)	--	--	R	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
2,2'-oxybis(1-Chloropropane)	µg/L	-	710	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Dibenzofuran	µg/L	-	7.9	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
3,3'-Dichlorobenzidine	µg/L	-	0.13	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
2,4-Dichlorophenol	µg/L	-	46	--	--	--	--	-- (--)	--	--	R	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Diethylphthalate	µg/L	-	15000	--	--	--	--	-- (--)	--	--	R	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
2,4-Dimethylphenol	µg/L	-	360	--	--	--	--	-- (--)	--	--	R	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Dimethylphthalate	µg/L	-	-	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	-	1.5	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
2,4-Dinitrophenol	µg/L	-	39	--	--	--	--	-- (--)	--	--	R	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
2,4-Dinitrotoluene	µg/L	-	0.24	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
2,6-Dinitrotoluene	µg/L	-	0.049	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
1,4-Dioxane	µg/L	-	0.46	--	--	--	--	-- (--)	**6**	--	--	--	--	--	**3 J**	--	--	--	--	--	--	--	--	**9**	**22 (16)**	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate	µg/L	6	5.6	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Hexachlorobenzene	µg/L	1	0.0098	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Hexachlorobutadiene	µg/L	-	0.14	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Hexachlorocyclopentadiene	µg/L	50	0.41	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Hexachloroethane	µg/L	-	0.33	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
Isophorone	µg/L	-	78	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
2-Methylnaphthalene	µg/L	-	36	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
2-Methylphenol	µg/L	-	930	--	--	--	--	-- (--)	--	--	R	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--
4-Methylphenol	µg/L	-	1900	--	--	--	--	-- (--)	--	--	R	--	--	--	--	--	--	--	--	--	--	--	3	--	-- (--)	--	--	--	--	--	--

Table A.7.3.3-6
Semivolatile Organic Compound and Polycyclic Aromatic Hydrocarbon Results
Area B Landfills, Fort Detrick, Maryland

Analyte	Location			BMW2	BMW3	BMW5	BMW9D	BMW11	BMW18	BMW20	BMW21	BMW24	BMW25	BMW29A	BMW37	BMW38	BMW39	BMW41	BMW42	BMW44	BMW49	BMW59D	BMW65A	BMW67A	BMW67C	BMW68A	BMW72	BMW74	BMW76	BMW77	MW81
	Sample ID			FTD72-BMW2-040317	FTD72-BMW3-040317	FTD72-BMW5-040411	FTD72-BMW9D-040417	FTD72-BMW11-040517	FTD72-BMW18-040717	FTD72-BMW20-040617	FTD72-BMW21-040517	FTD72-BMW24-040617	FTD72-BMW25-040417	FTD72-BMW29A-040617	FTD72-BMW37-040717	FTD72-BMW38-040417	FTD72-BMW39-040417	FTD72-BMW41-040417	FTD72-BMW42-040417	FTD72-BMW44-040517	FTD72-BMW49-040517	FTD72-BMW59D-040517	FTD72-BMW65A-040517	FTD72-BMW67A-041017	FTD72-BMW67C-041017	FTD72-BMW68A-041017	FTD72-BMW72-040517	FTD72-BMW74-040417	FTD72-BMW76-040417	FTD72-BMW77-040517	FTD72-MW81-040617
	Date			4/3/17	4/3/17	4/4/17	4/4/17	4/5/17	4/7/17	4/6/17	4/5/17	4/6/17	4/4/17	4/6/17	4/7/17	4/4/17	4/4/17	4/4/17	4/4/17	4/5/17	4/5/17	4/5/17	4/5/17	4/10/17	4/10/17	4/10/17	4/5/17	4/4/17	4/4/17	4/5/17	4/6/17
	Unit	MCL	RSL Tapwater																												
1,4-Naphthoquinone	µg/L	-	-	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
2-Nitroaniline	µg/L	-	190	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
3-Nitroaniline	µg/L	-	-	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
4-Nitroaniline	µg/L	-	3.8	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Nitrobenzene	µg/L	-	0.14	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
2-Nitrophenol	µg/L	-	-	--	--	--	--	-- (--)	--	--	R	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
4-Nitrophenol	µg/L	-	-	--	--	--	--	-- (--)	--	--	R	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
N-Nitroso-di-n-propylamine	µg/L	-	0.011	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	µg/L	-	12	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Di-n-octylphthalate	µg/L	-	200	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Pentachlorophenol	µg/L	1	0.041	--	--	--	--	-- (--)	--	--	R	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	**7**	--
Phenol	µg/L	-	5800	--	--	--	--	-- (--)	--	--	R	--	--	--	--	--	--	--	--	--	--	--	2	--	-- (--)	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	µg/L	-	1200	--	--	--	--	-- (--)	--	--	R	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	µg/L	-	4.1	--	--	--	--	-- (--)	--	--	R	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons																																
Acenaphthene	µg/L	-	530	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Acenaphthylene	µg/L	-	-	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Acetophenone	µg/L	-	1900	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Anthracene	µg/L	-	1800	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Chrysene	µg/L	-	3.4	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Fluoranthene	µg/L	-	800	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Fluorene	µg/L	-	290	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Phenanthrene	µg/L	-	-	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Pyrene	µg/L	-	120	--	--	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Benzo(a)anthracene	µg/L	-	0.012	--	--	--	--	-- (**0.018 J**)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (--)	--	**0.026 J**	--	--	--	--	--
Benzo(a)pyrene	µg/L	0.2	0.0034	--	--	--	--	-- (**0.015 J**)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (**0.015 J**)	--	**0.018 J**	--	--	--	--	--
Benzo(b)fluoranthene	µg/L	-	0.034	--	--	--	--	-- (0.015 J)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (0.015 J)	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	µg/L	-	-	--	--	--	--	-- (0.014 J)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (0.030 J)	--	0.015 J	--	--	--	--	--
Benzo(k)fluoranthene	µg/L	-	0.34	--	--	--	--	-- (0.015 J)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (0.015 J)	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	µg/L	-	0.0034	--	--	--	--	-- (**0.015 J**)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- (**0.022 J**)	--	**0.014 J**	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	-	0.034	--	--	--	--	-- (0.015 J)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.015 J	--	--	--	--	--	--
Naphthalene	µg/L	-	0.17	--	--	--	--	-- (**0.18**)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.034 J	--	0.17 (**0.23**)	--	--	--	--	--	--	--

Notes:

Duplicate sanple results are presented in parenthesis adjacent to the parent sample result.
Results in **bold** and shaded gray have exceeded both their respective Maximum Contaminant Level (MCL) and Regional Screening Level (RSL).
Results in **bold** have exceeded either their respective MCL or RSL.
-- Indicates that an analyte was analyzed for but was not detected at or above the method report
µg/L = Micrograms per Liter RSL = Regional Screening Levels for Tapwater, THQ - 1.0, EPA May 2016

Data Qualifiers: J = Estimated Value R = Rejected

Table A.7.3.3-7
Water Quality Parameter Results
Area B Landfills, Fort Detrick, Maryland

Analyte				Location	BMW2	BMW3	BMW5	BMW9D	BMW11	BMW18	BMW20
				Sample ID	FTD72-BMW2-040317	FTD72-BMW3-040317	FTD72-BMW5-040411	FTD72-BMW9D-040417	FTD72-BMW11-040517	FTD72-BMW18-040717	FTD72-BMW20-040617
				Date	4/3/17	4/3/17	4/4/17	4/4/17	4/5/17	4/7/17	4/6/17
	Unit	MCL	RSL Tapwater								
Water Quality Parameters											
Ammonia Nitrogen	mg/L	-	-		0.080 J	--	--	--	0.053 J (--)	0.11	0.091 J
Total Nitrite / Nitrate Nitrogen	mg/L	-	-		3.3	1.7	1.4	2.5	2.7 (2.6)	--	2.5
Chloride	mg/L	-	-		9.7	34.4	26.2	19.4	6.0 (5.9)	43.4	93.3
Sulfate	mg/L	-	-		5.2	21.7	12.3	33.1	13.1 (12.1)	85.7	10.2
Chemical Oxygen Demand	mg/L	-	-		--	--	--	--	-- (--)	95.4	--
Temperature of pH	°C	-	-		22.4	22.4	22.5	23	22.6 (22.0)	23.5	22.1
Turbidity	NTU	-	-		15	7.4	2.1	1.3	4.5 (5.3)	20.5	3.3
Total Alkalinity to pH 4.5	mg/L as CaCO3	-	-		140	153	209	133	196 (202)	335	65.2
Specific Conductance	umhos/cm	-	-		332	462	475	374	425 (430)	867	482
Total Dissolved Solids	mg/L	-	-		203	278	285	242	275 (272)	597	274
pH	SU	-	-		7.4	7.6	7.9	8.1	7.8 (7.8)	7.1	7.3
Total Hardness as CaCO3	mg/L	-	-		151	184	242	151	230 (235)	452	120

Table A.7.3.3-7
Water Quality Parameter Results
Area B Landfills, Fort Detrick, Maryland

Analyte				Location	BMW21	BMW24	BMW25	BMW29A	BMW37	BMW38	BMW39
				Sample ID	FTD72-BMW21-040517	FTD72-BMW24-040617	FTD72-BMW25-040417	FTD72-BMW29A-040617	FTD72-BMW37-040717	FTD72-BMW38-040417	FTD72-BMW39-040417
				Date	4/5/17	4/6/17	4/4/17	4/6/17	4/7/17	4/4/17	4/4/17
	Unit	MCL	RSL Tapwater								
Water Quality Parameters											
Ammonia Nitrogen	mg/L	-	-		0.35	0.057 J	--	0.060 J	1.2	--	--
Total Nitrite / Nitrate Nitrogen	mg/L	-	-		0.3	1.1	3.7	2.9	3.5	3.9	2.5
Chloride	mg/L	-	-		18.5	6.8	6	22.1	32.1	65.1	42.4
Sulfate	mg/L	-	-		27.3	2.7	8.3	16.3	12.2	8.4	15.7
Chemical Oxygen Demand	mg/L	-	-		--	--	--	--	--	--	--
Temperature of pH	°C	-	-		22	22.5	22.1	22	22.6	23.1	22.8
Turbidity	NTU	-	-		2.4	0.22 J	0.41 J	0.21 J	0.21 J	0.72 J	3.5
Total Alkalinity to pH 4.5	mg/L as CaCO3	-	-		60.9	190	228	185	277	203	190
Specific Conductance	umhos/cm	-	-		221	372	166	455	643	575	520
Total Dissolved Solids	mg/L	-	-		142	197	142	241	426	351	313
pH	SU	-	-		7.2	7.4	6.9	7.6	7.6	8	7.8
Total Hardness as CaCO3	mg/L	-	-		77.8	211	73.1	228	311	251	251

Table A.7.3.3-7
Water Quality Parameter Results
Area B Landfills, Fort Detrick, Maryland

Analyte				Location	BMW41	BMW42	BMW44	BMW49	BMW59D	BMW65A	BMW67A
				Sample ID	FTD72-BMW41-040417	FTD72-BMW42-040417	FTD72-BMW44-040517	FTD72-BMW49-040517	FTD72-BMW59D-040517	FTD72-BMW65A-040517	FTD72-BMW67A-041017
				Date	4/4/17	4/4/17	4/5/17	4/5/17	4/5/17	4/5/17	4/10/17
	Unit	MCL	RSL Tapwater								
Water Quality Parameters											
Ammonia Nitrogen	mg/L	-	-		--	--	0.11	--	0.12	0.22	0.16
Total Nitrite / Nitrate Nitrogen	mg/L	-	-		8.2	4.8	5	9	3.8	0.042 J	3.4
Chloride	mg/L	-	-		6.2	4.3	6.8	9.7	55.2	29	26.7
Sulfate	mg/L	-	-		17.4	23.3	17.4	11.2	7.6	116	60.4
Chemical Oxygen Demand	mg/L	-	-		--	--	--	--	--	95.7	--
Temperature of pH	°C	-	-		23.2	22.3	21	22	22.8	22.5	23.2
Turbidity	NTU	-	-		0.20 J	0.80 J	0.81 J	0.50 J	4.5	26	0.71 J
Total Alkalinity to pH 4.5	mg/L as CaCO3	-	-		148	158	156	356	169	61.2	262
Specific Conductance	umhos/cm	-	-		362	387	370	754	522	508	691
Total Dissolved Solids	mg/L	-	-		259	257	286	426	307	358	443
pH	SU	-	-		7.8	7.9	7.9	7.2	7.9	9.1	7.8
Total Hardness as CaCO3	mg/L	-	-		198	204	194	403	235	120	357

Table A.7.3.3-7
Water Quality Parameter Results
Area B Landfills, Fort Detrick, Maryland

Analyte				Location	BMW67C	BMW68A	BMW72	BMW74	BMW76	BMW77	MW81
				Sample ID	FTD72-BMW67C-041017	FTD72-BMW68A-041017	FTD72-BMW72-040517	FTD72-BMW74-040417	FTD72-BMW76-040417	FTD72-BMW77-040517	FTD72-MW81-040617
				Date	4/10/17	4/10/17	4/5/17	4/4/17	4/4/17	4/5/17	4/6/17
	Unit	MCL	RSL Tapwater								
Water Quality Parameters											
Ammonia Nitrogen	mg/L	-	-	0.11 (0.11)	0.21	--	0.082 J	--	--	0.16
Total Nitrite / Nitrate Nitrogen	mg/L	-	-	0.63 (0.74)	2.9	2.5	6.4	6	1.1	2.5
Chloride	mg/L	-	-	27.8 (29.4)	11.8	8.9	47.2	8.5	17.1	20.3
Sulfate	mg/L	-	-	14.6 (17.8)	22.7	16.8	14.5	10.2	36	14.8
Chemical Oxygen Demand	mg/L	-	-	-- (--)	--	--	--	--	--	--
Temperature of pH	°C	-	-	22.9 (22.5)	22.3	22.1	22.5	23.1	22.4	22.2
Turbidity	NTU	-	-	6.8 (6.1)	0.18 J	15.9	13.2	0.90 J	0.22 J	16.7
Total Alkalinity to pH 4.5	mg/L as CaCO3	-	-	304 (304)	280	39.2	87	131	370	366
Specific Conductance	umhos/cm	-	-	675 (670)	619	152	433	317	749	746
Total Dissolved Solids	mg/L	-	-	443 (376)	337	85.5	253	196	461	435
pH	SU	-	-	7.9 (7.9)	7.4	8.6	8.4	8	7.4	7.3
Total Hardness as CaCO3	mg/L	-	-	347 (346)	307	162	128	165	447	426

Table A.7.3.3-7
Water Quality Parameter Results
Area B Landfills, Fort Detrick, Maryland

Notes:

-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.
Duplicate sample results are presented in parenthesis adjacent to the parent sample result.

mg/L = Milligrams per Liter
MCL = Maximum Contaminant Level
NTU = Nephelometric Turbidity Unit
pg/L = Picograms per Liter
pCi/L = PicoCuries per Liter
SU = Standard Units
umhos/cm = Micromhos per Centimeter
CaCO3 = Calcium Carbonate
°C = Degrees Celsius
RSL = Regional Screening Levels for Tapwater, THQ - 1.0, EPA May 2016

Data Qualifier:
J = Estimated Value

Table A.7.3.3-8
Total and Dissolved Metal Results
Area B Landfills, Fort Detrick, Maryland

Analyte			Location	BMW2	BMW3	BMW5	BMW9D	BMW11	BMW18	BMW20
			Sample ID	FTD72-BMW2-040317	FTD72-BMW3-040317	FTD72-BMW5-040411	FTD72-BMW9D-040417	FTD72-BMW11-040517	FTD72-BMW18-040717	FTD72-BMW20-040617
			Date	4/3/17	4/3/17	4/4/17	4/4/17	4/5/17	4/7/17	4/6/17
	Unit	MCL	RSL Tapwater							
Total Metals										
Barium	mg/L	2	3.8	0.0354	0.0364	0.0381	0.153	0.0789 (0.0822)	0.175	0.0411
Calcium	mg/L	-	-	41.2	48.3	65.2	28.2	64.5 (65.4)	109	28.7
Cobalt	mg/L	-	0.006	--	--	--	--	-- (--)	**0.0763**	--
Copper	mg/L	1.3	0.8	--	--	--	--	-- (--)	0.0154 U	--
Magnesium	mg/L	-	-	11.7	15.5	19.3	19.5	16.7 (17.3)	43.5	11.7
Manganese	mg/L	-	0.43	0.0067 U	0.0102	0.0038 UJ	--	0.0174 (0.0134)	**6.11**	0.0151
Nickel	mg/L	-	0.39	0.0067 J	--	0.0039 J	--	-- (--)	0.0529	--
Selenium	mg/L	0.05	0.1	--	--	--	--	-- (--)	--	--
Silver	mg/L	-	0.094	--	--	--	--	-- (--)	--	--
Vanadium	mg/L	-	0.086	--	--	--	0.0121	-- (--)	--	--
Antimony	mg/L	0.006	0.0078	--	--	--	--	-- (--)	--	--
Arsenic	mg/L	0.01	0.000052	--	--	--	**0.0180**	**0.00087 J (0.00081 J)**	**0.0013 J**	--
Beryllium	mg/L	0.004	0.025	--	--	--	--	-- (--)	--	--
Cadmium	mg/L	-	0.0092	--	--	--	--	-- (--)	0.0024	--
Chromium	mg/L	0.1	-	0.0089 U	0.0029 U	0.0044	0.0048	0.0057 (0.0049)	0.0049	0.0019 UJ
Iron	mg/L	-	14	0.827	0.338	0.0480 UJ	--	0.0705 J (0.125)	3.22	0.135
Lead	mg/L	0.015	0.015	0.00043 UJ	0.00027 UJ	0.000096 UJ	--	0.00014 J (0.00015 J)	0.0011	0.00018 UJ
Potassium	mg/L	-	-	3.31	3.39	2.22	1.92	1.23 (1.33)	8.21	2.16
Sodium	mg/L	-	-	5.31	18.9	13.2	22.7	2.37 (2.46)	21.2	47.0
Thallium	mg/L	0.002	0.0002	--	--	--	--	-- (--)	**0.0011**	--
Zinc	mg/L	-	6	0.0328	0.0053 J	0.0131 UJ	0.0037 UJ	0.0053 J (0.0038 J)	0.127	--
Mercury	mg/L	0.002	0.00063	--	--	--	--	-- (--)	--	--

Table A.7.3.3-8
Total and Dissolved Metal Results
Area B Landfills, Fort Detrick, Maryland

Analyte			Location	BMW21	BMW24	BMW25	BMW29A	BMW37	BMW38	BMW39
			Sample ID	FTD72-BMW21-040517	FTD72-BMW24-040617	FTD72-BMW25-040417	FTD72-BMW29A-040617	FTD72-BMW37-040717	FTD72-BMW38-040417	FTD72-BMW39-040417
			Date	4/5/17	4/6/17	4/4/17	4/6/17	4/7/17	4/4/17	4/4/17
	Unit	MCL	RSL Tapwater							
Total Metals										
Barium	mg/L	2	3.8	0.116	0.0486	0.0477	0.0600	0.0793	0.0632	0.0446
Calcium	mg/L	-	-	26.4	66.2	17.9	63.4	84.4	60.6	80.2
Cobalt	mg/L	-	0.006	**0.0309**	--	--	--	--	--	--
Copper	mg/L	1.3	0.8	--	--	--	0.0084 J	--	--	--
Magnesium	mg/L	-	-	2.91	11.1	6.92	17.0	24.3	24.2	12.4
Manganese	mg/L	-	0.43	**1.67**	--	--	0.0019 J	--	--	0.0041 UJ
Nickel	mg/L	-	0.39	0.0065 J	--	0.0029 J	--	--	--	--
Selenium	mg/L	0.05	0.1	--	--	--	--	--	--	--
Silver	mg/L	-	0.094	--	--	--	--	--	--	--
Vanadium	mg/L	-	0.086	--	--	--	--	--	--	--
Antimony	mg/L	0.006	0.0078	--	--	--	--	--	--	--
Arsenic	mg/L	0.01	0.000052	--	--	--	--	--	--	--
Beryllium	mg/L	0.004	0.025	--	--	--	--	--	--	--
Cadmium	mg/L	-	0.0092	0.00041 J	--	--	--	--	--	--
Chromium	mg/L	0.1	-	0.0029	0.0028 U	0.0018 J	0.0060	0.00072 UJ	0.0013 J	0.0022
Iron	mg/L	-	14	4.02	--	--	0.0464 J	0.0594 J	--	0.0744 UJ
Lead	mg/L	0.015	0.015	--	--	--	--	--	--	0.00016 UJ
Potassium	mg/L	-	-	2.53	5.72	2.78	1.26	3.64	1.53	3.72
Sodium	mg/L	-	-	9.18	3.76	3.19	11.3	15.7	23.1	17.0
Thallium	mg/L	0.002	0.0002	--	--	--	--	--	--	--
Zinc	mg/L	-	6	0.0093 J	0.0145 UJ	0.0037 UJ	0.0052 UJ	--	--	--
Mercury	mg/L	0.002	0.00063	--	--	--	--	--	--	--

Table A.7.3.3-8
Total and Dissolved Metal Results
Area B Landfills, Fort Detrick, Maryland

Analyte			Location	BMW41	BMW42	BMW44	BMW49	BMW59D	BMW65A	BMW67A
			Sample ID	FTD72-BMW41-040417	FTD72-BMW42-040417	FTD72-BMW44-040517	FTD72-BMW49-040517	FTD72-BMW59D-040517	FTD72-BMW65A-040517	FTD72-BMW67A-041017
			Date	4/4/17	4/4/17	4/5/17	4/5/17	4/5/17	4/5/17	4/10/17
	Unit	MCL	RSL Tapwater							
Total Metals										
Barium	mg/L	2	3.8	0.0485	0.0387	0.0768	0.0666	0.0739	0.0325	0.0455
Calcium	mg/L	-	-	62.4	68.0	62.1	134	55.2	38.1	96.4
Cobalt	mg/L	-	0.006	--	--	--	--	--	--	--
Copper	mg/L	1.3	0.8	--	--	--	0.0044 J	--	--	--
Magnesium	mg/L	-	-	10.3	8.21	9.36	16.8	23.6	6.10	28.3
Manganese	mg/L	-	0.43	--	--	--	0.193	0.0081	0.0023 J	**1.09**
Nickel	mg/L	-	0.39	--	--	--	0.0036 J	0.0042 J	--	0.0116
Selenium	mg/L	0.05	0.1	--	--	--	--	--	--	--
Silver	mg/L	-	0.094	--	--	--	--	--	--	--
Vanadium	mg/L	-	0.086	--	0.0040 J	0.0048 J	--	--	0.0027 J	--
Antimony	mg/L	0.006	0.0078	--	--	--	--	--	--	--
Arsenic	mg/L	0.01	0.000052	--	**0.00082 J**	**0.0011 J**	--	--	**0.0014 J**	**0.00094 J**
Beryllium	mg/L	0.004	0.025	--	--	--	--	--	--	--
Cadmium	mg/L	-	0.0092	--	--	--	0.00034 J	--	--	--
Chromium	mg/L	0.1	-	0.0014 J	0.0022	0.0018 UJ	0.0014 J	0.0050	0.0021	0.00085 UJ
Iron	mg/L	-	14	--	--	--	--	0.165	0.0775 J	0.211
Lead	mg/L	0.015	0.015	--	--	--	--	0.00017 J	0.00013 J	--
Potassium	mg/L	-	-	0.709	0.602	0.627	2.80	1.48	13.3	2.40
Sodium	mg/L	-	-	5.61	6.85	6.17	6.42	21.5	60.3	11.4
Thallium	mg/L	0.002	0.0002	--	--	--	--	--	--	--
Zinc	mg/L	-	6	--	--	--	0.0102 J	--	--	--
Mercury	mg/L	0.002	0.00063	--	--	--	--	--	--	--

Table A.7.3.3-8
Total and Dissolved Metal Results
Area B Landfills, Fort Detrick, Maryland

Analyte			Location	BMW67C	BMW68A	BMW72	BMW74	BMW76	BMW77	MW81
			Sample ID	FTD72-BMW67C-041017	FTD72-BMW68A-041017	FTD72-BMW72-040517	FTD72-BMW74-040417	FTD72-BMW76-040417	FTD72-BMW77-040517	FTD72-MW81-040617
			Date	4/10/17	4/10/17	4/5/17	4/4/17	4/4/17	4/5/17	4/6/17
	Unit	MCL	RSL Tapwater							
Total Metals										
Barium	mg/L	2	3.8	0.392 (0.383)	0.135	0.0825	0.0445	0.0736	0.119	0.246
Calcium	mg/L	-	-	83.2 (83.3)	101	47.4	35.8	37.9	126	104
Cobalt	mg/L	-	0.006	--(--)	--	--	--	--	--	--
Copper	mg/L	1.3	0.8	-- (--)	--	--	--	--	--	--
Magnesium	mg/L	-	-	33.8 (33.5)	13.1	10.5	9.30	17.1	31.9	40.6
Manganese	mg/L	-	0.43	0.356 (0.365)	0.0850	--	0.0028 UJ	--	0.0073	0.0553
Nickel	mg/L	-	0.39	0.0109 (0.0098 J)	--	--	--	--	--	0.0042 J
Selenium	mg/L	0.05	0.1	-- (--)	--	--	--	--	--	--
Silver	mg/L	-	0.094	-- (--)	--	--	--	--	--	--
Vanadium	mg/L	-	0.086	-- (--)	--	0.0035 J	0.0048 J	0.0023 J	--	--
Antimony	mg/L	0.006	0.0078	-- (--)	--	--	0.00059 J	--	--	--
Arsenic	mg/L	0.01	0.000052	**0.00086 J (0.00085 J)**	--	**0.0015 J**	**0.0014 J**	**0.0013 J**	--	--
Beryllium	mg/L	0.004	0.025	-- (--)	--	--	--	--	--	--
Cadmium	mg/L	-	0.0092	-- (--)	--	--	--	--	--	--
Chromium	mg/L	0.1	-	0.0025U (0.0014 UJ)	0.0021	0.0189	0.0047	0.0027	0.0019 J	0.0039
Iron	mg/L	-	14	0.130 (0.0819 J)	0.0737 J	--	--	--	0.0478 J	0.814
Lead	mg/L	0.015	0.015	0.00012 J (--)	--	--	--	--	--	0.00041UJ
Potassium	mg/L	-	-	2.02 (2.05)	6.35	3.49	63.3	1.15	2.12	2.43
Sodium	mg/L	-	-	10.8 (10.5)	13.9	2.86	26.2	5.85	11.9	10.9
Thallium	mg/L	0.002	0.0002	**0.00049 J (0.00056)**	--	--	--	--	--	--
Zinc	mg/L	-	6	0.0309 (0.0281)	--	--	--	0.0043 UJ	--	0.0041UJ
Mercury	mg/L	0.002	0.00063	-- (--)	--	--	--	--	--	--

Table A.7.3.3-8
Total and Dissolved Metal Results
Area B Landfills, Fort Detrick, Maryland

Analyte			Location	BMW2	BMW3	BMW5	BMW9D	BMW11	BMW18	BMW20
			Sample ID	FTD72-BMW2-040317	FTD72-BMW3-040317	FTD72-BMW5-040411	FTD72-BMW9D-040417	FTD72-BMW11-040517	FTD72-BMW18-040717	FTD72-BMW20-040617
			Date	4/3/17	4/3/17	4/4/17	4/4/17	4/5/17	4/7/17	4/6/17
	Unit	MCL	RSL Tapwater							
Dissolved Metals										
Barium	mg/L	2	3.8	0.0346	0.0339	0.0383	0.157	0.0790 (0.0816)	0.177	0.0405
Calcium	mg/L	-	-	42.9	47.9	63.6	28.1	62.2 (64.6)	107	28.0
Cobalt	mg/L	-	0.006	--	--	--	--	-- (--)	**0.0862**	--
Copper	mg/L	1.3	0.8	--	--	--	--	-- (--)	--	--
Magnesium	mg/L	-	-	12.1	15.3	18.8	19.5	16.3 (16.9)	42.1	11.4
Manganese	mg/L	-	0.43	--	0.0028 UJ	0.0034 UJ	--	0.0059 (0.0056)	**5.87**	--
Nickel	mg/L	-	0.39	0.0028 J	--	0.0050 J	--	-- (--)	0.0585	--
Selenium	mg/L	0.05	0.1	--	--	--	--	-- (--)	--	--
Silver	mg/L	-	0.094	--	--	--	--	-- (--)	--	--
Vanadium	mg/L	-	0.086	--	--	--	0.0121	-- (--)	--	--
Antimony	mg/L	0.006	0.0078	--	--	--	--	-- (--)	--	--
Arsenic	mg/L	0.01	0.000052	--	--	--	**0.0175**	-- (--)	**0.00075 J**	--
Beryllium	mg/L	0.004	0.025	--	--	--	--	-- (--)	--	--
Cadmium	mg/L	-	0.0092	--	--	--	--	-- (--)	0.00034 J	--
Chromium	mg/L	0.1	-	0.0017 UJ	0.0018 UJ	0.0022	0.0025	0.0031 (0.0037)	0.0014 UJ	0.00088 UJ
Iron	mg/L	-	14	--	--	--	--	-- (--)	2.67	--
Lead	mg/L	0.015	0.015	--	--	--	--	-- (--)	0.00017 J	--
Potassium	mg/L	-	-	3.2	3.18	2.25	1.91	1.24 (1.14)	7.09	2.23
Sodium	mg/L	-	-	5.65	17.9	13.3	22.6	2.58 (2.46)	19.2	47.4
Thallium	mg/L	0.002	0.0002	--	--	--	--	-- (--)	**0.00086**	--
Zinc	mg/L	-	6	--	0.0051 J	0.0074 UJ	--	0.0035 J (--)	0.0687	--
Mercury	mg/L	0.002	0.00063	--	--	--	--	-- (--)	--	--

Table A.7.3.3-8
Total and Dissolved Metal Results
Area B Landfills, Fort Detrick, Maryland

Analyte			Location	BMW21	BMW24	BMW25	BMW29A	BMW37	BMW38	BMW39
			Sample ID	FTD72-BMW21-040517	FTD72-BMW24-040617	FTD72-BMW25-040417	FTD72-BMW29A-040617	FTD72-BMW37-040717	FTD72-BMW38-040417	FTD72-BMW39-040417
			Date	4/5/17	4/6/17	4/4/17	4/6/17	4/7/17	4/4/17	4/4/17
	Unit	MCL	RSL Tapwater							
Dissolved Metals										
Barium	mg/L	2	3.8	0.119	0.0485	0.0478	0.0581	0.0785	0.0644	0.0414
Calcium	mg/L	-	-	26.2	63.5	16.6	63.0	85.1	64.4	78.0
Cobalt	mg/L	-	0.006	**0.0304**	--	--	--	--	--	--
Copper	mg/L	1.3	0.8	--	--	--	0.0051 J	--	--	--
Magnesium	mg/L	-	-	2.86	11.1	6.36	16.9	24.5	25.6	12.0
Manganese	mg/L	-	0.43	**1.70**	--	--	--	--	--	--
Nickel	mg/L	-	0.39	0.0079 J	--	0.0045 J	0.0031 J	--	--	--
Selenium	mg/L	0.05	0.1	--	--	--	--	--	--	--
Silver	mg/L	-	0.094	--	--	--	--	--	--	--
Vanadium	mg/L	-	0.086	--	--	--	--	--	--	--
Antimony	mg/L	0.006	0.0078	--	--	--	--	--	--	--
Arsenic	mg/L	0.01	0.000052	--	--	--	--	--	--	--
Beryllium	mg/L	0.004	0.025	--	--	--	--	--	--	--
Cadmium	mg/L	-	0.0092	0.00034 J	--	--	--	--	--	--
Chromium	mg/L	0.1	-	0.0023	0.0024 U	0.0019 J	0.0027 U	--	0.0011 J	0.0015 J
Iron	mg/L	-	14	4.02	--	--	--	--	--	--
Lead	mg/L	0.015	0.015	--	--	--	--	--	--	--
Potassium	mg/L	-	-	2.43	5.40	2.98	1.33	3.70	1.49	3.69
Sodium	mg/L	-	-	9.27	3.82	3.20	11.6	15.5	22.6	16.9
Thallium	mg/L	0.002	0.0002	--	--	--	--	--	--	--
Zinc	mg/L	-	6	0.0066 J	0.0121 UJ	0.0056 UJ	0.0052 J	--	--	--
Mercury	mg/L	0.002	0.00063	--	--	--	--	--	--	--

Table A.7.3.3-8
Total and Dissolved Metal Results
Area B Landfills, Fort Detrick, Maryland

Analyte			Location	BMW41	BMW42	BMW44	BMW49	BMW59D	BMW65A	BMW67A
			Sample ID	FTD72-BMW41-040417	FTD72-BMW42-040417	FTD72-BMW44-040517	FTD72-BMW49-040517	FTD72-BMW59D-040517	FTD72-BMW65A-040517	FTD72-BMW67A-041017
			Date	4/4/17	4/4/17	4/5/17	4/5/17	4/5/17	4/5/17	4/10/17
	Unit	MCL	RSL Tapwater							
Dissolved Metals										
Barium	mg/L	2	3.8	0.0471	0.0402	0.0768	0.0686	0.0728	0.0254	0.0447
Calcium	mg/L	-	-	61.0	72.9	62.7	138	54.3	35.4	94.2
Cobalt	mg/L	-	0.006	--	--	--	--	--	--	--
Copper	mg/L	1.3	0.8	--	--	--	--	--	--	--
Magnesium	mg/L	-	-	10.4	8.81	9.29	16.8	23.1	5.53	28.0
Manganese	mg/L	-	0.43	--	--	--	0.191	0.0019 J	--	**1.03**
Nickel	mg/L	-	0.39	--	--	--	0.0045 J	--	--	0.0126
Selenium	mg/L	0.05	0.1	--	--	--	--	--	--	--
Silver	mg/L	-	0.094	--	--	--	--	--	--	--
Vanadium	mg/L	-	0.086	--	0.0046 J	0.0046 J	--	--	0.0017 J	--
Antimony	mg/L	0.006	0.0078	--	--	--	--	--	--	--
Arsenic	mg/L	0.01	0.000052	--	**0.0011 J**	**0.0010 J**	--	--	**0.0011 J**	**0.00077 J**
Beryllium	mg/L	0.004	0.025	--	--	--	--	--	--	--
Cadmium	mg/L	-	0.0092	--	--	--	0.00030 J	--	--	--
Chromium	mg/L	0.1	-	0.0012 J	0.0012 J	0.0013 UJ	0.00095 J	0.0023	0.00093 J	--
Iron	mg/L	-	14	--	--	--	0.0678 J	0.0435 J	--	0.150
Lead	mg/L	0.015	0.015	--	--	--	--	--	--	--
Potassium	mg/L	-	-	0.671	0.576	0.621	2.58	1.48	11.5	2.46
Sodium	mg/L	-	-	5.51	6.63	6.27	7.18	21.6	58.2	11.6
Thallium	mg/L	0.002	0.0002	--	--	--	--	--	--	--
Zinc	mg/L	-	6	--	0.0036 J	--	0.0119 J	--	--	--
Mercury	mg/L	0.002	0.00063	--	--	--	--	--	--	--

Table A.7.3.3-8
Total and Dissolved Metal Results
Area B Landfills, Fort Detrick, Maryland

Analyte			Location	BMW67C	BMW68A	BMW72	BMW74	BMW76	BMW77	MW81
			Sample ID	FTD72-BMW67C-041017	FTD72-BMW68A-041017	FTD72-BMW72-040517	FTD72-BMW74-040417	FTD72-BMW76-040417	FTD72-BMW77-040517	FTD72-MW81-040617
			Date	4/10/17	4/10/17	4/5/17	4/4/17	4/4/17	4/5/17	4/6/17
	Unit	MCL	RSL Tapwater							
Dissolved Metals										
Barium	mg/L	2	3.8	0.386 (0.381)	0.128	0.0829	0.0413	0.0759	0.117	0.234
Calcium	mg/L	-	-	83.9 (83.6)	99.0	47.0	39.2	38.9	131	106
Cobalt	mg/L	-	0.006	-- (--)	--	--	--	--	--	--
Copper	mg/L	1.3	0.8	-- (--)	--	--	--	--	--	0.0082 J
Magnesium	mg/L	-	-	33.8 (33.5)	12.6	10.5	10.1	17.5	32.5	41.3
Manganese	mg/L	-	0.43	0.381 (0.374)	0.0473	--	--	--	0.0056	0.0063
Nickel	mg/L	-	0.39	0.0098 J (0.0102)	0.0043 J	--	--	--	--	--
Selenium	mg/L	0.05	0.1	-- (--)	--	--	--	--	--	--
Silver	mg/L	-	0.094	-- (--)	--	--	--	--	--	--
Vanadium	mg/L	-	0.086	-- (--)	--	0.0029 J	0.0034 J	0.0022 J	--	--
Antimony	mg/L	0.006	0.0078	-- (--)	--	--	--	--	--	--
Arsenic	mg/L	0.01	0.000052	**-- (0.00090 J)**	--	**0.0013 J**	**0.0010 J**	**0.0013 J**	--	--
Beryllium	mg/L	0.004	0.025	-- (--)	--	--	--	--	--	--
Cadmium	mg/L	-	0.0092	-- (--)	--	--	--	--	--	--
Chromium	mg/L	0.1	-	0.00073 UJ (0.00060 UJ)	0.0014 UJ	0.0178	0.0031	0.0021	0.0020 J	0.0020 UJ
Iron	mg/L	-	14	-- (--)	--	--	--	--	--	0.120
Lead	mg/L	0.015	0.015	-- (--)	--	--	--	--	--	--
Potassium	mg/L	-	-	2.07 (2.00)	6.34	3.39	46.2	1.09	2.15	2.29
Sodium	mg/L	-	-	11.3 (10.9)	14.0	3.13	24.1	5.63	12.2	10.8
Thallium	mg/L	0.002	0.0002	**0.00053 (0.00056)**	--	--	--	--	--	--
Zinc	mg/L	-	6	0.0296 (0.0306)	0.0041 J	--	--	--	0.0035 UJ	--
Mercury	mg/L	0.002	0.00063	-- (--)	--	--	--	--	--	--

Table A.7.3.3-8
Total and Dissolved Metal Results
Area B Landfills, Fort Detrick, Maryland

Notes:

Results in **bold** and shaded gray have exceeded their respective Maximum Contaminant Level (MCL) and Regional Screening Level (RSL).
Results in **bold** have exceeded either their respective MCL or RSL.
-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.
Duplicate sample results are presented in parenthesis adjacent to the parent sample result.

mg/L = Milligrams per Liter
RSL = Regional Screening Levels for Tapwater, THQ - 1.0, EPA May 2016

Data Qualifiers:
J = Estimated Value
U - Qualified as Non-Detect Based on Field and/or Lab Blanks

Table A.7.3.3-9
Investigation Derived Waste Analytical Results
Area B Landfills, Fort Detrick, Maryland

Analyte			Location	IDW-001
			Sample ID	AreaBLF-IDW-001-041017
			Date	4/10/17
	Unit	MCL		
Acetone	µg/L	-		--
Acrolein	µg/L	-		--
Acrylonitrile	µg/L	-		--
Benzene	µg/L	5		--
Bromochloromethane	µg/L	-		--
Bromodichloromethane	µg/L	80[1]		--
Bromoform	µg/L	80[1]		--
Bromomethane	µg/L	-		--
2-Butanone	µg/L	-		--
Carbon Disulfide	µg/L	-		--
Carbon Tetrachloride	µg/L	5		--
Chlorobenzene	µg/L	100		--
Chloroethane	µg/L	-		--
Chloroform	µg/L	70[1]		1.8
Chloromethane	µg/L	-		--
1,2-Dibromo-3-chloropropane	µg/L	0.2		--
Dibromochloromethane	µg/L	60[1]		--
1,2-Dibromoethane	µg/L	0.05		--
Dibromomethane	µg/L	-		--
trans-1,4-Dichloro-2-butene	µg/L	-		--
1,2-Dichlorobenzene	µg/L	600		--
1,4-Dichlorobenzene	µg/L	75		--
1,1-Dichloroethane	µg/L	-		--
1,2-Dichloroethane	µg/L	5		0.1 J
1,1-Dichloroethene	µg/L	7		0.6
cis-1,2-Dichloroethene	µg/L	70		1.3
trans-1,2-Dichloroethene	µg/L	100		--
1,2-Dichloropropane	µg/L	5		--
cis-1,3-Dichloropropene	µg/L	-		--
trans-1,3-Dichloropropene	µg/L	-		--
Ethylbenzene	µg/L	700		--
2-Hexanone	µg/L	-		--
Methyl Iodide	µg/L	-		--
Methyl Tertiary Butyl Ether	µg/L	-		--
4-Methyl-2-pentanone	µg/L	-		--
Methylene Chloride	µg/L	5		--
Styrene	µg/L	100		--

Table A.7.3.3-9
Investigation Derived Waste Analytical Results
Area B Landfills, Fort Detrick, Maryland

Analyte	Location		IDW-001
	Sample ID		AreaBLF-IDW-001-041017
	Date		4/10/17
	Unit	MCL	
1,1,1,2-Tetrachloroethane	µg/L	-	--
1,1,2,2-Tetrachloroethane	µg/L	-	--
Tetrachloroethene	µg/L	5	170
Toluene	µg/L	1,000	--
1,1,1-Trichloroethane	µg/L	200	0.1 J
1,1,2-Trichloroethane	µg/L	5	--
Trichloroethene	µg/L	5	10
Trichlorofluoromethane	µg/L	-	1
1,2,3-Trichloropropane	µg/L	-	--
Vinyl Acetate	µg/L	-	--
Vinyl Chloride	µg/L	2	--
m+p-Xylene	µg/L	10,000[2]	--
o-Xylene	µg/L	10,000[2]	--

Notes:

-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.

[1] = 80 µg/L is the MCL for total trihalomethanes (total of bromodichloromethane, bromoform, dibromochloromethane, and chloroform) and is applicable to public drinking water supplies that use disinfection products. Chloroform has a Maximum Contaminant Level Goal (MCLG) of 70 µg/L. Dibromochloromethane has a MCLG of 60 µg/L.

[2] = 10,000 µg/L is the MCL for total xylenes

µg/L = Micrograms per Liter
MCL = Maximum Contaminant Level

Data Qualifier:
J = Estimated Value

Attachment 7.3.3
FIGURES

Legend

- Area B Boundary
- Installation Area

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill Semi-Annual Monitoring Report	
Date: 1 December 2016 By: J. Gatherer	FIGURE A.7.3.3-1 Site Location
FT. DETRICK GIS File Path: *C:\GIS_Projects\Ft_Detrick\Maps\AreaB\SemiAnnualReports\2016\November 1-1_SiteLocation_AreaB_2016.mxd*	Fort Detrick Frederick, MD

B-3 East

B-3 West

B-2

B-18

Western Disposal Area

B-10

B-6

Legend

- Stream
- Landfill Boundary
- Landfill Cap Area
- Area B Boundary

N

Scale:

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Semi-Annual Monitoring Report

Date: 1 December 2016
By: J. Gatherer

FIGURE A.7.3.3-2

Site Layout

FT. DETRICK
GIS File Path:
C:\GIS_Projects\Ft_Detrick\Maps\AreaB\AnnualReports\2016 2-1_SiteLayout_AreaB_2016.mxd

Fort Detrick
Frederick, MD

BMW3
BMW2
BMW77
BMW81
BMW5
BMW76
BMW42
BMW29A
BMW6
B-3 East
BMW44
B-3 West
BMW9D
BMW41
BMW49
B-2
BMW11
BMW72
BMW65A
BMW73
BMW16
B-18
BMW26
BMW68A
BMW37
Western Disposal Area
BMW67A
BMW25
BMW67C
BMW38
BMW18
BMW24
BMW59D
B-10
BMW39
B-6
BMW74
BMW20
BMW21

Legend

- Stream
- Landfill Boundary
- Landfill Cap Area
- Area B Boundary

Notes:
Following the April 2017 sampling event, specific wells were replaced and/or re-named, as follows:
Wells BMW6, BMW18, BMW25, BMW26 and BMW81 were replaced and re-named BMW6R, BMW18R, BMW25R, BMW26R and BMW81R, respectively.

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Semi-Annual Monitoring Report

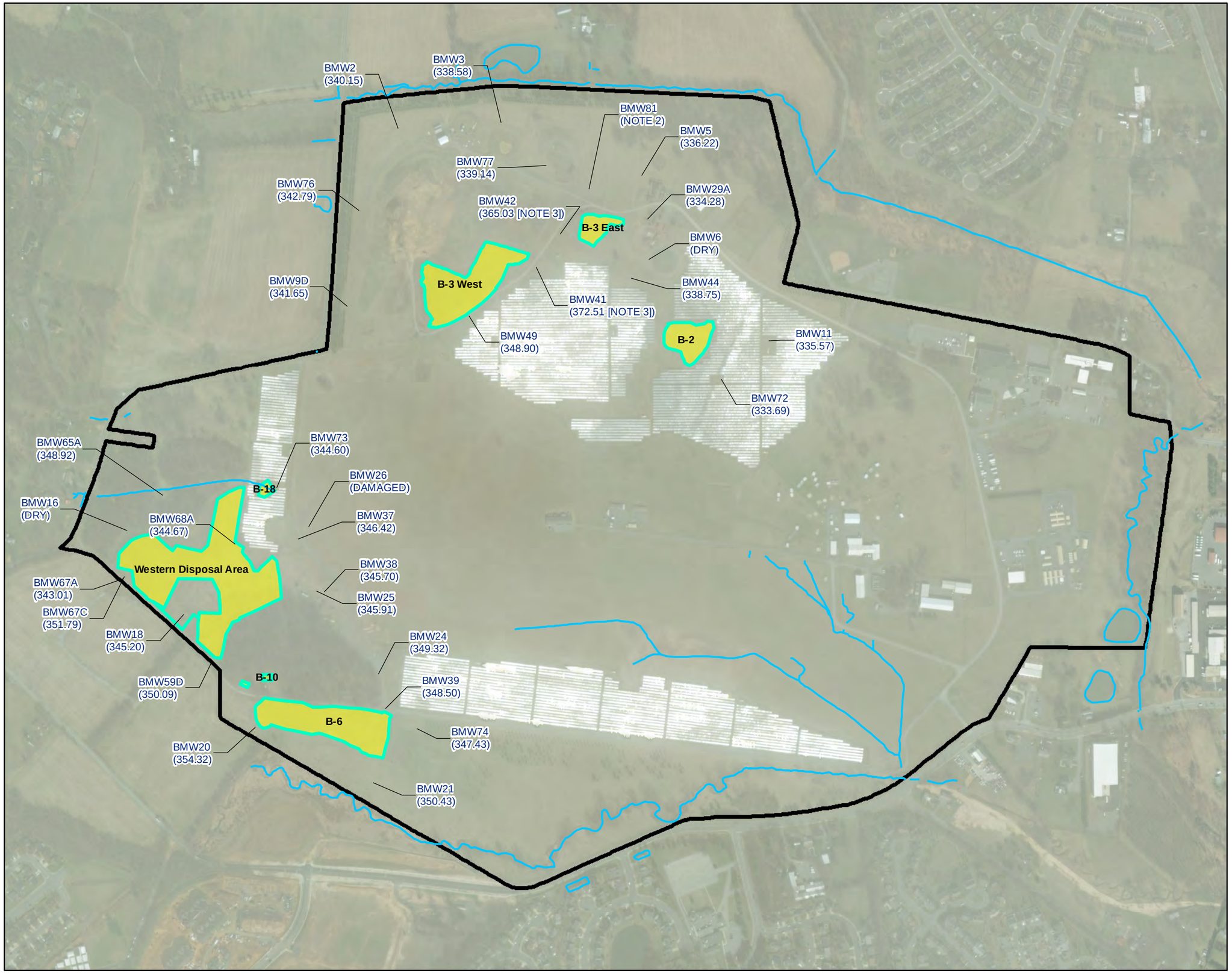
Date: 24 July 2018
By: J. Gatherer

FT. DETRICK
GIS File Path:
C:\GIS_Projects\Ft_Detrick\Maps\AreaB\AnnualReports\2016 3-1_MonitoringNetwork_AreaB_2016.mxd

FIGURE A.7.3.3-3

Area B Landfill
Groundwater
Monitoring Network

Fort Detrick
Frederick, MD



Legend

- Landfill Boundary
- Landfill Cap Area
- Area B Boundary
- Stream

Notes:
1) Elevation data are shown as ft MSL.
2) MW-81 was gauged but no elevation data is available for this well.
3) Elevations are anomalous due to groundwater mounding under adjacent landfill cap.

Following the April 2017 sampling event, specific wells were replaced and/or re-named, as follows:
Wells BMW6, BMW18, BMW25, BMW26 and BMW81 were replaced and re-named BMW6R, BMW18R, BMW25R, BMW26R and BMW81R, respectively.

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Semi-Annual Monitoring Report

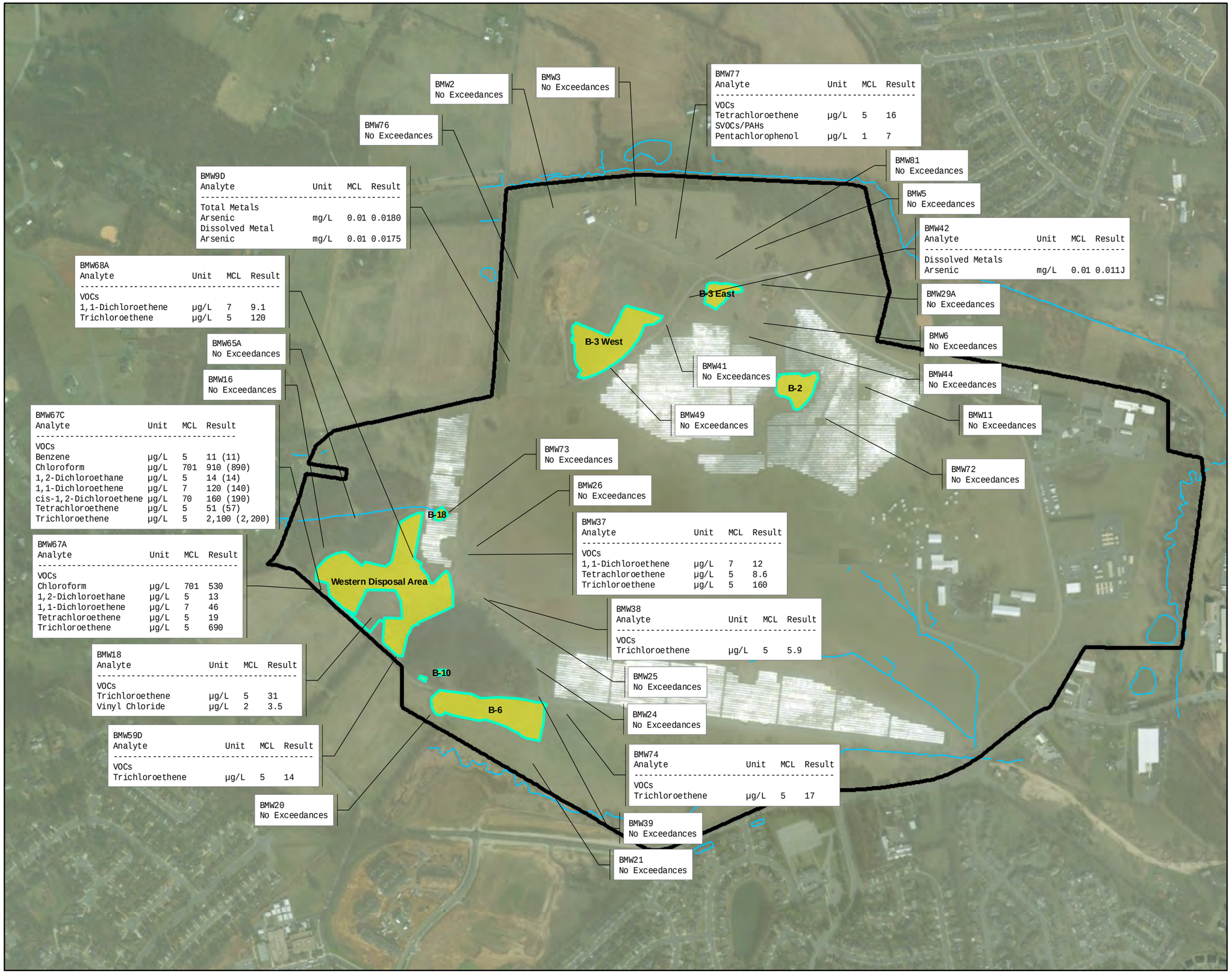
Date: 24 July 2018
By: J. Gatherer

FT. DETRICK
GIS File Path:
C:\GIS_Projects\Ft_Detrick\Maps\AreaB\AnnualReports\2016 3-1_MonitoringNetwork_AreaB_2016.mxd

FIGURE A.7.3.3-4

Groundwater Elevations April 2017

Fort Detrick
Frederick, MD



Legend

- Landfill Boundary
- Landfill Cap Area
- Area B Boundary
- Stream

Notes:
1. Results in parentheses indicate duplicate sample results.
MCL = Maximum Contaminant Level
µg/L = micrograms per liter
mg/L = milligrams per liter
J = Estimated

Following the April 2017 sampling event, specific wells were replaced and/or re-named, as follows:
Wells BMW6, BMW18, BMW25, BMW26 and BMW81 were replaced and re-named BMW6R, BMW18R, BMW25R, BMW26R and BMW81R, respectively.

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Semi-Annual Monitoring Report

Date: 24 July 2018
By: J. Gatherer

FT. DETRICK
GIS File Path:
C:\GIS_Projects\Ft_Detrick\Maps\AreaB\SemiAnnualReports\2016\November 5-2_ResultsAboveMCL_AreaB_2016.mxd

FIGURE A.7.3.3-5

Analytical Results Above the MCL April 2017

Fort Detrick
Frederick, MD

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Attachment 7.3.4
Area B Landfill Monitoring
May-June 2018 Monitoring Report
Tables and Figures

(Watermark ECC LLC, 2019)

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Attachment 7.3.4
TABLES

Table 7.3.4-1
Water Level Survey Data
Area B Landfills, Fort Detrick, Maryland

Monitoring Well	Top of Screen (ft BTOC)	Bottom of Screen (ft BTOC)	Depth to Groundwater (ft BTOC)	TOC Elevation (ft msl)	Groundwater Elevation (ft msl)
BMW2	25	35	6.93	376.30	369.37
BMW3	25	35	5.80	366.90	361.10
BMW5	25	35	8.80	362.01	353.21
BMW-6R	75	90	27.55	380.48	352.93
BMW9D	91	106	14.45	387.88	373.43
BMW11	25	35	9.40	357.20	347.80
BMW16	25	35	17.42	390.70	373.28
BMW18R	54	64	22.61	386.00	363.39
BMW20	25	35	3.81	368.70	364.89
BMW21	25	35	0.80	359.84	359.04
BMW24	25	35	8.55	368.34	359.79
BMW25R	46	61	8.31	369.40	361.09
BMW26R	30	45	8.89	371.30	362.41
BMW29A	48	58	19.80	371.03	351.23
BMW37	39.5	59.5	9.70	373.70	364.00
BMW38	50.6	80.6	6.45	368.38	361.93
BMW39	21.1	51.1	12.19	370.45	358.26
BMW41	49	69	6.21	399.02	386.02*
BMW42	48.5	68.5	11.31	397.78	375.16*
BMW44	58.6	88.6	43.61	400.14	356.53
BMW49	30	50	14.50	386.60	372.10
BMW59D	163	183	26.91	391.65	364.74
BMW65A	112	127	16.30	388.47	372.17
BMW67A	50	55	25.41	395.91	370.50
BMW67C	140	155	27.00	397.47	370.47
BMW68A	32	42	10.55	374.35	363.80
BMW72	85	95	9.90	355.04	345.14
BMW73	22.5	37.5	NM	370.80	NM
BMW74	59	69	9.60	366.65	357.05
BMW76	98	108	15.93	388.32	372.39
BMW77	56	71	7.50	366.26	358.76
BMW-81R	41	56	21.10	373.77	352.67
BMW-82	60	75	22.75	402.66	379.91
BMW-83	65	85	8.50	395.08	386.58
BMW-84	26	41	3.60	367.96	364.36
BMW-85	30	45	8.65	371.43	362.78
BMW-86	31	46	9.42	369.21	359.79
BMW-87	31	46	6.61	366.44	359.83
BMW-88	45	60	24.60	388.16	363.56
BMW-89	75	90	13.70	370.75	357.05
BMW-90	30	45	10.75	379.27	368.52
BMW-91	68	83	18.05	394.32	376.27
BMW-92	39	54	11.30	364.73	353.43
BMW-93	33	48	8.42	396.14	387.72
BMW-94	39	54	13.89	386.75	372.86
BMW-95	73	88	29.10	NS	NS
BMW-96	22	32	23.80	NS	NS
BMW-97	20	35	8.10	354.13	346.03

Notes:

Depth to groundwater was measured on 19 November 2018.
NA = Not Applicable
* = Elevations are anomalous
ft BTOC = Feet Below Top of Casing
ft msl = Feet Relative to Mean Sea Level
NM = Not measured due to obstruction in the well.
NS = Well elevations not yet surveyed.

Table 7.3.4-2
Analytical Samples Collected
Area B Landfills, Fort Detrick, Maryland

Sample Identification	Description	Dissolved Metals	Metals	Water Quality Parameters	VOCs	SVOCs
Quality Assurance Samples						
AREA BLF-RB-001-112818	Rinse Blank		X	X	X	X
AREA BLF-RB-002-112918	Rinse Blank		X	X	X	X
AREA BLF-RB-003-113018	Rinse Blank		X	X	X	X
AREA BLF-RB-004-120318	Rinse Blank		X	X	X	X
AREA BLF-RB-005-120418	Rinse Blank		X	X	X	X
AREA BLF-RB-006-120518	Rinse Blank		X	X	X	X
AREA BLF-RB-007-120618	Rinse Blank		X	X	X	X
AREA BLF-RB-008-120718	Rinse Blank		X	X	X	X
AREA BLF-RB-009-121018	Rinse Blank		X	X	X	X
AREA BLF-RB-010-121118	Rinse Blank		X	X	X	X
AREA-BLF-TB-001-112818	Trip Blank				X	
AREA-BLF-TB-002-113018	Trip Blank				X	
AREA-BLF-TB-003-120318	Trip Blank				X	
AREA-BLF-TB-004-120418	Trip Blank				X	
AREA-BLF-TB-005-120618	Trip Blank				X	
AREA-BLF-TB-006-121018	Trip Blank				X	
FTD72-DUP002-121018	Duplicate Sample - BMW68A	X	X	X		X
FTD72-DUP003-121018	Duplicate Sample - BMW67A	X	X	X	X	X
FTD72-DUP004-121018	Duplicate Sample - BMW67C	X	X	X	X	X
FTD72-IDW-001	Investigation Derived Waste Sample				X	
FTD72-IDW-002	Investigation Derived Waste Sample				X	
FTD72-IDW-003	Investigation Derived Waste Sample				X	
FTD72-IDW-004	Investigation Derived Waste Sample				X	
FTD72-IDW-005	Investigation Derived Waste Sample				X	
FTD72-IDW-006	Investigation Derived Waste Sample				X	
FTD72-IDW-007	Investigation Derived Waste Sample				X	
Monitoring Wells						
FTD72-BMW2-112818	Groundwater Sample	X	X	X	X	X
FTD72-BMW3-120418	Groundwater Sample	X	X	X	X	X
FTD72-BMW5-113018	Groundwater Sample	X	X	X	X	X
FTD72-BMW6R-120418	Groundwater Sample	X	X	X	X	X
FTD72-BMW9D-112818	Groundwater Sample	X	X	X	X	X
FTD72-BMW11-120518	Groundwater Sample	X	X	X	X	X
FTD72-BMW16-120618	Groundwater Sample	X	X	X	X	X
FTD72-BMW18R-120618	Groundwater Sample	X	X	X	X	X
FTD72-BMW20-120518	Groundwater Sample	X	X	X	X	X
FTD72-BMW21-120618	Groundwater Sample	X	X	X	X	X
FTD72-BMW24-120318	Groundwater Sample	X	X	X	X	X
FTD72-BMW25R-120318	Groundwater Sample	X	X	X	X	X
FTD72-BMW26R-120318	Groundwater Sample	X	X	X	X	X
FTD72-BMW29A-120518	Groundwater Sample	X	X	X	X	X
FTD72-BMW37-120318	Groundwater Sample	X	X	X	X	X
FTD72-BMW38-120318	Groundwater Sample	X	X	X	X	X
FTD72-BMW39-120318	Groundwater Sample	X	X	X	X	X
FTD72-BMW41-120518	Groundwater Sample	X	X	X	X	X

Table 7.3.4-2
Analytical Samples Collected
Area B Landfills, Fort Detrick, Maryland

Sample Identification	Description	Dissolved Metals	Metals	Water Quality Parameters	VOCs	SVOCs
Monitoring Wells (Continued)						
FTD72-BMW42-120418	Groundwater Sample	X	X	X	X	X
FTD72-BMW44-120518	Groundwater Sample	X	X	X	X	X
FTD72-BMW49-120418	Groundwater Sample	X	X	X	X	X
FTD72-BMW59D-120618	Groundwater Sample	X	X	X	X	X
FTD72-BMW65A-121018	Groundwater Sample	X	X	X	X	X
FTD72-BMW67A-121018	Groundwater Sample	X	X	X	X	X
FTD72-BMW67C-121018	Groundwater Sample	X	X	X	X	X
FTD72-BMW68A-121018	Groundwater Sample	X	X	X	X	X
FTD72-BMW72-120518	Groundwater Sample	X	X	X	X	X
FTD72-BMW74-120318	Groundwater Sample	X	X	X	X	X
FTD72-BMW76-112818	Groundwater Sample	X	X	X	X	X
FTD72-BMW77-120718	Groundwater Sample	X	X	X	X	X
FTD72-BMW81R-113018	Groundwater Sample	X	X	X	X	X
FTD72-BMW82-120318	Groundwater Sample	X	X	X	X	X
FTD72-BMW83-120618	Groundwater Sample	X	X	X	X	X
FTD72-BMW84-120318	Groundwater Sample	X	X	X	X	X
FTD72-BMW85-120318	Groundwater Sample	X	X	X	X	X
FTD72-BMW86-120318	Groundwater Sample	X	X	X	X	X
FTD72-BMW87-120318	Groundwater Sample	X	X	X	X	X
FTD72-BMW88-120418	Groundwater Sample	X	X	X	X	X
FTD72-BMW89-120318	Groundwater Sample	X	X	X	X	X
FTD72-BMW90-113018	Groundwater Sample	X	X	X	X	X
FTD72-BMW91-113018	Groundwater Sample	X	X	X	X	X
FTD72-BMW92-120418	Groundwater Sample	X	X	X	X	X
FTD72-BMW93-120418	Groundwater Sample	X	X	X	X	X
FTD72-BMW94-120418	Groundwater Sample	X	X	X	X	X
FTD72-BMW95-120518	Groundwater Sample	X	X	X	X	X
FTD72-BMW97-120618	Groundwater Sample	X	X	X	X	X

Notes:

Water quality parameters include ammonia/nitrogen, chemical oxygen demand, chloride, total alkalinity, total nitrite/nitrogen, total dissolved solids, turbidity, pH, sulfate, total hardness, and specific conductance.

Total and dissolved metals include antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium and zinc.

VOCs = Volatile Organic Compounds

SVOCs = Semi-Volatile Organic Compounds

Samples were analyzed using U.S Environmental Protection (USEPA) Methods SW-846/8260B (VOCs), SW-846/8270C (SVOCs), SW-846/8270 Selective Ion Monitoring [(SIM)PAHs], SW-846/6010B/6020/7470A (total and dissolved metals),SM 4500-H+/B-2000 (pH), SM 2320/B-1997 (alkalinity), SM 2340/B-1997 (total hardness), SW-846/9056 (chloride), SM 2510/B-1997 (specific conductance), EPA 353.2 (nitrate),EPA 410.4 (COD), SM 2130/B-2001 (turbidity), EPA 350.1 (ammonia), SW-846/9056 (sulfate) and SM 2540/C-1997 (TDS).

VOCs = Volatile Organic Compounds

SVOCs = Semi-Volatile Organic Compounds

Table 7.3.4-3
Duplicate Analysis - BMW67A
Area B Landfills, Fort Detrick, Maryland

Location	Sample Date	Analyte	Unit	Sample		Duplicate		Relative Percent Difference
				Sample Result	Validation Qualifier	Duplicate Result	Validation Qualifier	
BMW67A	December 2018	**Total Metals**						
		Antimony	mg/L	0.0004	J	--	UJ	200.00%
		Chromium	mg/L	0.008	J	0.0013	UJ	144.09%
		Iron	mg/L	0.879	J	0.284	J	102.32%
		Nickel	mg/L	0.015	J	0.0076	J	65.49%
		Zinc	mg/L	0.009	J	--	UJ	200.00%
		Dissolved Metals						
		Cobalt	mg/L	--	UJ	0.002	J	200.00%
		Chromium	mg/L	0.008	J	0.0013	UJ	144.09%
		SVOCs						
		1,4-Dioxane	µg/L	11	J	8	J	31.58%
		Naphthalene	µg/L	0.3	J	--	UJ	200.00%
		VOCs						
		Carbon Tetrachloride	µg/L	--	UJ	1.2	J	200.00%
		1,1-Dichloroethane	µg/L	--	UJ	1	J	200.00%
		Methylene Chloride	µg/L	--	UJ	1.1	J	200.00%
		Water Quality Parameters						
		COD	mg/L	3.3	J	--	UJ	200.00%
		Turbidity	NTU	5.9	J	2.6	J	77.65%

Notes:

-- Indicates that an analyte was analyzed for but was not detected at or above laboratory reporting limits.

µg/L = Micrograms per Liter
umhos/cm = Micromhos per Centimeter
mg/L = Milligrams per Liter
mg/L* = mg/L as Calcium Carbonate (CaCO3)
VOCs = Volatile Organic Compounds

NTU = Nephelometric Turbidity Unit
SU = Standard Units
°C = Degrees Celsius
SVOCs = Semi-Volatile Organic Compounds

Data Qualifier:
J = Estimated Value
U = Re-Qualified as Non-Detect

Table 7.3.4-4
Duplicate Analysis - BMW67C
Area B Landfills, Fort Detrick, Maryland

Location	Sample Date	Analyte	Unit	Sample		Duplicate		Relative Percent Difference
				Sample Result	Validation Qualifier	Duplicate Result	Validation Qualifier	
BMW67C	December 2018	**Total Metals**						
		Thallium	mg/L	0.00035	J	0.00049	J	33.33%
		Dissolved Metals						
		Cobalt	mg/L	0.0037	J	0.0029	J	24.24%
		Mercury	mg/L	0.0017	J	0.00011	J	175.69%
		SVOCs						
		2-Chlorophenol	µg/L	0.6	J	--	UJ	200.00%
		2-Methylnaphthalene	µg/L	0.2	J	--	UJ	200.00%
		Polycyclic Aromatic Hydrocarbons						
		Benzo(a)anthracene	µg/L	0.09	J	--	UJ	200.00%
		Benzo(a)pyrene	µg/L	0.1	J	--	UJ	200.00%
		Benzo(b)fluoranthene	µg/L	0.09	J	--	UJ	200.00%
		Benzo(g,h,i)perylene	µg/L	0.07	J	--	UJ	200.00%
		Benzo(k)fluoranthene	µg/L	0.09	J	--	UJ	200.00%
		Dibenz(a,h)anthracene	µg/L	0.08	J	--	UJ	200.00%
		Indeno(1,2,3-cd)pyrene	µg/L	0.08	J	--	UJ	200.00%
		VOCs						
		Carbon Disulfide	µg/L	--	UJ	10	J	200.00%
		trans-1,2-Dichloroethene	µg/L	2.8	J	--	UJ	200.00%
		1,1,2,2-Tetrachloroethene	µg/L	5.9	J	--	UJ	200.00%
		Water Quality Parameters						
		COD	mg/L	12.1	J	6.4	J	61.62%

Notes:

-- Indicates that an analyte was analyzed for but was not detected at or above laboratory reporting limits.

µg/L = Micrograms per Liter
umhos/cm = Micromhos per Centimeter
mg/L = Milligrams per Liter
mg/L* = mg/L as Calcium Carbonate (CaCO3)
VOCs = Volatile Organic Compounds
NTU = Nephelometric Turbidity Unit
SU = Standard Units
°C = Degrees Celsius
SVOCs = Semi-Volatile Organic Compounds

Data Qualifier:
J = Estimated Value

Table 7.3.4-5
Duplicate Analysis - BMW68A
Area B Landfills, Fort Detrick, Maryland

Location	Sample Date	Analyte	Unit	Sample		Duplicate		Relative Percent Difference
				Sample Result	Validation Qualifier	Duplicate Result	Validation Qualifier	
BMW68A	December 2018	**SVOCs**						
		1,4-Dioxane	µg/L	2	J	3	J	40.00%
		VOCs						
		Chlorobenzene	µg/L	0.2	J	--	UJ	200.00%
		1,2-Dichlorobenzene	µg/L	0.1	J	--	UJ	200.00%
		1,4-Dichlorobenzene	µg/L	0.2	J	--	UJ	200.00%
		trans-1,2-Dichloroethene	µg/L	0.2	J	--	UJ	200.00%
		1,2-Dichloropropane	µg/L	0.1	J	--	UJ	200.00%
		Water Quality Parameters						
		Turbidity	NTU	0.25		0.15		50.00%

Notes:

-- Indicates that an analyte was analyzed for but was not detected at or above laboratory reporting limits.

µg/L = Micrograms per Liter
umhos/cm = Micromhos per Centimeter
mg/L = Milligrams per Liter
mg/L* = mg/L as Calcium Carbonate (CaCO3)
VOCs = Volatile Organic Compounds

NTU = Nephelometric Turbidity Unit
SU = Standard Units
°C = Degrees Celsius
SVOCs = Semi-Volatile Organic Compounds

Data Qualifier:
J = Estimated Value

Table 7.3.4-5
Volatile Organic Compound Results
Area B Landfills, Fort Detrick, Maryland

Analyte	Landfill Cap Area			Area B-2									Area B-3 East										
	Well Position			Upgradient					Downgradient				Upgradient							Downgradient			
	Location			BMW6R	BMW41	BMW44	BMW49	BMW94	BMW11	BMW72	BMW95	BMW97	BMW2	BMW3	BMW42	BMW77	MW81R	BMW92	BMW93	BMW5	BMW6R	BMW29A	BMW44
	Sample ID			FTD72-BMW6R-120418	FTD72-BMW41-120518	FTD72-BMW44-120518	FTD72-BMW49-120418	FTD72-BMW94-120418	FTD72-BMW11-120518	FTD72-BMW72-120518	FTD72-BMW95-120518	FTD72-BMW97-120618	FTD72-BMW2-112818	FTD72-BMW3-120418	FTD72-BMW42-120418	FTD72-BMW77-120718	FTD72-MW81R-113018	FTD72-BMW92-120418	FTD72-BMW93-120418	FTD72-BMW5-113018	FTD72-BMW6R-120418	FTD72-BMW29A-120518	FTD72-BMW44-120518
	Date			12/4/18	12/5/18	12/5/18	12/4/18	12/4/18	12/5/18	12/5/18	12/5/18	12/6/18	11/28/18	12/4/18	12/4/18	12/7/18	11/30/18	12/4/18	12/4/18	11/30/18	12/4/18	12/5/18	12/5/18
	Unit	MCL	RSL Tapwater																				
Acetone	µg/L	-	1,400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	µg/L	-	0.0042	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrylonitrile	µg/L	-	0.052	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	µg/L	5	0.46	--	--	--	--	--	--	--	--	--	--	--	--	0.2 J	--	--	--	--	--	--	--
Bromochloromethane	µg/L	-	8.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	µg/L	80[1]	0.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	µg/L	80[1]	3.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	µg/L	-	0.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Disulfide	µg/L	-	81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	µg/L	5	0.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	µg/L	100	7.8	--	--	--	--	0.08 J	--	--	--	--	--	--	--	0.3 J	--	--	--	--	--	--	--
Chloroethane	µg/L	-	2,100	--	--	0.4 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4 J
Chloroform	µg/L	70[1]	0.22	--	--	--	--	0.06 JU	--	0.06 JU	--	**0.3 J**	--	0.1 JU	--	**1.1**	0.6 U	0.1 JU	**--**	0.2 JU	--	--	--
Chloromethane	µg/L	-	19	--	--	--	--	--	--	--	--	--	--	--	--	0.1 J	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	µg/L	0.2	0.00033	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	µg/L	60[1]	0.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	µg/L	0.05	0.0075	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromomethane	µg/L	-	0.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	µg/L	-	0.0013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	600	30	--	--	--	--	--	--	--	--	--	--	--	--	0.2 J	--	--	--	--	--	--	--
1,4-Dichlorobenzene	µg/L	75	0.48	--	--	--	--	0.1 J	--	--	--	--	--	--	--	0.3 J	--	--	--	--	--	--	--
1,1-Dichloroethane	µg/L	-	2.8	--	--	--	--	0.4 J	--	--	--	--	--	--	--	0.3 J	--	--	--	--	--	--	--
1,2-Dichloroethane	µg/L	5	0.17	--	--	--	--	--	--	--	--	--	--	--	--	0.1 J	--	--	--	--	--	--	--
1,1-Dichloroethene	µg/L	7	28	--	--	--	--	--	--	--	--	0.2 J	--	0.3 JU	--	8.7	0.06 J	0.4 J	--	--	--	--	--
cis-1,2-Dichloroethene	µg/L	70	3.6	--	--	--	--	0.1 J	--	--	--	--	--	--	--	1.9	--	0.07 J	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	100	36	--	--	--	--	--	--	--	--	--	--	--	--	0.05 J	--	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	5	0.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	µg/L	700	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	µg/L	-	3.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl Iodide	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl Tertiary Butyl Ether	µg/L	-	14	--	--	--	--	0.2 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	µg/L	-	630	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	µg/L	5	11	--	--	--	--	--	--	--	--	--	--	--	--	0.09 J	--	--	--	--	--	--	--
Styrene	µg/L	100	120	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1,2-Tetrachloroethane	µg/L	-	0.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	-	0.076	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	µg/L	5	4.1	--	--	--	--	--	--	--	--	0.1 J	--	0.2 J	--	**28**	0.5 J	1.3	--	0.4 J	--	--	--
Toluene	µg/L	1,000	110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	µg/L	200	800	--	--	--	--	--	--	--	--	--	--	--	--	0.1 J	--	--	--	--	--	--	--
1,1,2-Trichloroethane	µg/L	5	0.041	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	µg/L	5	0.28	--	--	--	--	--	--	0.08 J	--	0.05 J	--	--	--	**9.5**	0.1 J	**0.5 J**	--	--	--	--	--
Trichlorofluoromethane	µg/L	-	520	--	--	--	--	--	--	0.1 J	--	0.3 J	--	--	--	--	--	--	--	0.07 J	--	13	--
1,2,3-Trichloropropane	µg/L	-	0.00075	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Acetate	µg/L	-	41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	µg/L	2	0.019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
m+p-Xylene	µg/L	10,000[2]	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	µg/L	10,000[2]	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 7.3.4-5
Volatile Organic Compound Results
Area B Landfills, Fort Detrick, Maryland

Analyte	Landfill Cap Area			Area B-3 West									Area B-6 and B-10									
	Well Position			Upgradient				Downgradient					Upgradient					Downgradient					
	Location			BMW9D	BMW76	BMW90	BMW91	BMW41	BMW42	BMW49	BMW93	BMW94	BMW20	BMW21	BMW59D	BMW88	BMW89	BMW24	BMW25R	BMW38	BMW39	BMW74	BMW87
	Sample ID			FTD72-BMW9D-112818	FTD72-BMW76-112818	FTD72-BMW90-113018	FTD72-BMW91-113018	FTD72-BMW41-120518	FTD72-BMW42-120418	FTD72-BMW49-120418	FTD72-BMW93-120418	FTD72-BMW94-120418	FTD72-BMW20-120518	FTD72-BMW21-120618	FTD72-BMW59D-120618	FTD72-BMW88-120418	FTD72-BMW89-120318	FTD72-BMW24-120318	FTD72-BMW25R-120318	FTD72-BMW38-120318	FTD72-BMW39-120318	FTD72-BMW74-120318	FTD72-BMW87-120318
	Date			11/28/18	11/28/18	11/30/18	11/30/18	12/5/18	12/4/18	12/4/18	12/4/18	12/4/18	12/5/18	12/6/18	12/6/18	12/4/18	12/3/18	12/3/18	12/3/18	12/3/18	12/3/18	12/3/18	12/3/18
	Unit	MCL	RSL Tapwater																			
Acetone	µg/L	-	1,400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.2 J	--
Acrolein	µg/L	-	0.0042	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrylonitrile	µg/L	-	0.052	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	µg/L	5	0.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromochloromethane	µg/L	-	8.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	µg/L	80[1]	0.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	µg/L	80[1]	3.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	µg/L	-	0.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Disulfide	µg/L	-	81	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1 J	--	--	--	--	--	--
Carbon Tetrachloride	µg/L	5	0.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	µg/L	100	7.8	--	--	--	--	--	--	--	--	0.08 J	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	µg/L	-	2,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	µg/L	70[1]	0.22	0.2 JU	--	--	--	--	--	--	--	0.06 J	--	--	**6.1**	--	1.4 U	0.07 JU	**2.2**	**2.1**	1.0 U	1.1 U	**2.0**
Chloromethane	µg/L	-	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	µg/L	0.2	0.00033	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	µg/L	60[1]	0.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	µg/L	0.05	0.0075	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromomethane	µg/L	-	0.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	µg/L	-	0.0013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	600	30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	µg/L	75	0.48	--	--	--	--	--	--	--	--	0.1 J	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	µg/L	-	2.8	--	--	--	--	--	--	--	--	0.4 J	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	µg/L	5	0.17	--	--	--	--	--	--	--	--	--	--	--	0.2 J	--	0.08 J	--	0.08 J	0.09 J	0.06 J	0.06 J	0.08 J
1,1-Dichloroethene	µg/L	7	28	--	0.2 J	--	--	--	--	--	--	--	--	--	1.2	--	0.4 J	--	0.6	0.5	0.2 J	0.2 J	0.4 J
cis-1,2-Dichloroethene	µg/L	70	3.6	--	--	--	--	--	--	--	--	0.1 J	--	--	0.8	--	0.2 J	--	0.6	0.5	0.1 J	0.2 J	0.3 J
trans-1,2-Dichloroethene	µg/L	100	36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	5	0.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	µg/L	700	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	µg/L	-	3.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl Iodide	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl Tertiary Butyl Ether	µg/L	-	14	--	--	--	--	--	--	--	--	0.2 J	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	µg/L	-	630	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	µg/L	5	11	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1 J	--	--	--	--	--	--
Styrene	µg/L	100	120	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1,2-Tetrachloroethane	µg/L	-	0.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	-	0.076	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	µg/L	5	4.1	0.1 J	--	--	--	--	--	--	--	--	--	--	0.9	--	0.2 J	--	0.3 J	0.3 J	0.2 J	0.2 J	0.3 J
Toluene	µg/L	1,000	110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	µg/L	200	800	--	--	--	--	--	--	--	--	--	--	--	0.2 J	--	0.08 J	--	0.1 J	0.1 J	--	--	0.08 J
1,1,2-Trichloroethane	µg/L	5	0.041	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	µg/L	5	0.28	--	--	--	--	--	--	--	--	--	--	--	**17**	--	**14**	0.2 J	**8.4**	**8.1**	**4.6**	**23**	**8.5**
Trichlorofluoromethane	µg/L	-	520	--	--	--	--	--	--	--	--	--	--	--	8.3	--	2.0	--	1.8	1.9	1.7	1.4	2.3
1,2,3-Trichloropropane	µg/L	-	0.00075	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Acetate	µg/L	-	41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	µg/L	2	0.019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
m+p-Xylene	µg/L	10,000[2]	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	µg/L	10,000[2]	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 7.3.4-5
Volatile Organic Compound Results
Area B Landfills, Fort Detrick, Maryland

Analyte	Landfill Cap Area			WDA and B-18														
	Well Position			Upgradient							Downgradient							
	Location			BMW18R	BMW59D	BMW65A	BMW67A	BMW67C	MW82	BMW83	BMW25R	BMW26R	BMW37	BMW38	BMW68A	BMW84	BMW85	BMW86	BMW87
	Sample ID			FTD72-BMW18R-120618	FTD72-BMW59D-120618	FTD72-BMW65A-12118	FTD72-BMW67A-121018	FTD72-BMW67C-121018	FTD72-MW82-120318	FTD72-BMW83-120618	FTD72-BMW25R-120318	FTD72-BMW26R-120318	FTD72-BMW37-120418	FTD72-BMW38-120318	FTD72-BMW68A-121018	FTD72-BMW84-120318	FTD72-BMW85-120318	FTD72-BMW86-120318	FTD72-BMW87-120318
	Date			12/6/18	12/6/18	12/11/18	12/10/18	12/10/18	12/3/18	12/6/18	12/3/18	12/3/18	12/4/18	12/3/18	12/10/18	12/3/18	12/3/18	12/3/18	12/3/18
	Unit	MCL	RSL Tapwater															
Acetone	µg/L	-	1,400	--	--	3.4 J	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Acrolein	µg/L	-	0.0042	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Acrylonitrile	µg/L	-	0.052	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Benzene	µg/L	5	0.46	--	--	--	**2.0 J (1.9 J)**	**42 (42)**	--	--	--	--	--	--	**1.4 (1.5 J)**	--	--	--	--
Bromochloromethane	µg/L	-	8.3	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Bromodichloromethane	µg/L	80[1]	0.13	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Bromoform	µg/L	80[1]	3.3	--	--	--	**23 (23)**	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Bromomethane	µg/L	-	0.75	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
2-Butanone	µg/L	-	-	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Carbon Disulfide	µg/L	-	81	--	--	1 J	-- (--)	-- (10 J)	--	1 J	--	--	--	--	-- (--)	--	--	--	--
Carbon Tetrachloride	µg/L	5	0.46	--	--	--	**-- (1.2 J)**	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Chlorobenzene	µg/L	100	7.8	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	0.2 J (--)	--	--	--	--
Chloroethane	µg/L	-	2,100	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Chloroform	µg/L	70[1]	0.22	**62**	**6.1**	**--**	**660 (660)**	**700 (700)**	--	--	2.2 U	0.8 U	2.0 U	2.1 U	**4.9 (5.1)**	--	0.2 JU	5.1 U	2 U
Chloromethane	µg/L	-	19	--	--	0.2 J	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
1,2-Dibromo-3-chloropropane	µg/L	0.2	0.00033	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Dibromochloromethane	µg/L	60[1]	0.87	--	--	--	**4.6 J (4.7 J)**	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
1,2-Dibromoethane	µg/L	0.05	0.0075	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Dibromomethane	µg/L	-	0.83	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
trans-1,4-Dichloro-2-butene	µg/L	-	0.0013	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
1,2-Dichlorobenzene	µg/L	600	30	--	--	0.1 J	-- (--)	-- (--)	--	--	--	--	--	--	0.1 J (--)	--	--	--	--
1,4-Dichlorobenzene	µg/L	75	0.48	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	0.2 J (--)	--	--	--	--
1,1-Dichloroethane	µg/L	-	2.8	0.7 J	--	--	-- (1.0 J)	**9.9J (9.9 J)**	--	--	--	0.07 J	0.2 J	--	1.4 (1.4 J)	--	--	0.3 J	--
1,2-Dichloroethane	µg/L	5	0.17	**1.7 J**	0.2 J	--	**16 (16)**	**26 (26)**	--	**--**	0.08 J	0.08 J	**0.2 J**	0.09 J	**0.8 J (0.9 J)**	**--**	--	**0.3 J**	0.08 J
1,1-Dichloroethene	µg/L	7	28	**14**	1.2	--	**35 (36)**	**390 (400)**	--	**--**	0.6	0.8	2.5	0.5	**15 (16)**	**--**	--	3.4	0.4 J
cis-1,2-Dichloroethene	µg/L	70	3.6	**14**	0.8	--	**18 (19)**	**480 480)**	--	**--**	0.6	2.6	**8.0**	0.5	**35 (37)**	--	0.2 J	7.6	0.3 J
trans-1,2-Dichloroethene	µg/L	100	36	--	--	--	-- (--)	2.8 J(--)	--	--	--	--	--	--	0.2 J (--)	--	--	--	--
1,2-Dichloropropane	µg/L	5	0.82	--	--	--	**1.8 J (2.1 J)**	-- (--)	--	--	--	--	--	--	0.1 J (--)	--	--	--	--
cis-1,3-Dichloropropene	µg/L	-	-	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
trans-1,3-Dichloropropene	µg/L	-	-	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Ethylbenzene	µg/L	700	1.5	--	--	--	-- (--)	**29 (28 J)**	--	0.06 J	--	--	--	--	-- (--)	--	--	--	--
2-Hexanone	µg/L	-	3.8	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Methyl Iodide	µg/L	-	-	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Methyl Tertiary Butyl Ether	µg/L	-	14	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
4-Methyl-2-pentanone	µg/L	-	630	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Methylene Chloride	µg/L	5	11	--	--	--	**-- (1.1 J)**	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Styrene	µg/L	100	120	--	--	--	-- (--)	-- (--)	--	0.3 J	--	--	--	--	-- (--)	--	--	--	--
1,1,1,2-Tetrachloroethane	µg/L	-	0.57	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	-	0.076	--	--	--	-- (--)	**5.9 J (--)**	--	--	--	--	--	--	-- (--)	--	--	--	--
Tetrachloroethene	µg/L	5	4.1	**7.4**	0.9	0.9 J	**30 (31)**	**150 (150)**	--	**--**	0.3 J	1.4	3.6	0.3 J	**5.5 (5.7)**	0.2 J	0.3 J	2.8	0.3 J
Toluene	µg/L	1,000	110	--	--	0.2 J	-- (--)	6.4(7.0 J)	--	0.08 J	--	--	--	--	-- (--)	--	--	--	--
1,1,1-Trichloroethane	µg/L	200	800	3.0	0.2 J	--	9.5 J (9.8 J)	160 (160)	--	--	0.1 J	0.1 J	0.3 J	0.1 J	1.7 (1.8 J)	--	--	0.5 J	0.08 J
1,1,2-Trichloroethane	µg/L	5	0.041	--	--	--	-- (--)	**4.8 J (5.1 J)**	--	--	--	--	--	--	-- (--)	--	--	--	--
Trichloroethene	µg/L	5	0.28	**230**	**17**	0.1 J	**830 (820)**	**5,100**	--	**--**	**8.4**	**13**	**35**	**8.1**	**220 (250)**	0.08 J	**0.9**	**39**	**8.5**
Trichlorofluoromethane	µg/L	-	520	51	8.3	--	480 (510)	**620 (610)**	--	--	1.8	0.5	1.4	1.9	4.9 (5.7)	--	--	3.8	2.3
1,2,3-Trichloropropane	µg/L	-	0.00075	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Vinyl Acetate	µg/L	-	41	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Vinyl Chloride	µg/L	2	0.019	--	--	**0.1 J**	-- (--)	-- (--)	--	--	--	--	**0.1 J**	--	**1.4 J (1.5 J)**	--	--	**0.1 J**	--
m+p-Xylene	µg/L	10,000[2]	19	--	--	--	-- (--)	**40 (39)**	--	0.1 J	--	--	--	--	-- (--)	--	--	--	--
o-Xylene	µg/L	10,000[2]	19	--	--	--	-- (--)	**110(110)**	--	--	--	--	--	--	-- (--)	--	--	--	--

Notes:

Duplicate sample results are presented in parenthesis adjacent to the parent sample result.

Results in **bold** and shaded gray have exceeded both their respective Maximum Contaminant Level (MCL) and Regional Screening Level (RSL)

Results in **bold** have exceeded either their respective Maximum Contaminant Level (MCL) or Regional Screening Level (RSL)

-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.

[1] = 80 µg/L is the MCL for total trihalomethanes and is applicable to public drinking water supplies that use disinfection products. Chloroform has a MCLG of 70 µg/L. Dibromochloromethane has a MCLG of 60 µg/L

[2] = 10,000 µg/L is the MCL for total xylenes

RSL = Regional Screening Levels for Tapwater, THQ = 0.1, EPA November 2018

Data Qualifier:
J = Estimated Value
U = Re-Qualified as Non-Detect Based on Lab and/or Field Blanks

Table 7.3.4-6
Semi-Volatile Organic Compound and Polycyclic Aromatic Hydrocarbon Results
Area B Landfills, Fort Detrick, Maryland

Analyte			Landfill Cap Area	Area B-2									Area B-3 East										
			Well Position	Upgradient					Downgradient				Upgradient							Downgradient			
			Location	BMW6R	BMW41	BMW44	BMW49	BMW94	BMW11	BMW72	BMW95	BMW97	BMW2	BMW3	BMW42	BMW77	MW81R	BMW92	BMW93	BMW5	BMW6R	BMW29A	BMW44
			Sample ID	FTD72-BMW6R-120418	FTD72-BMW41-120518	FTD72-BMW44-120518	FTD72-BMW49-120418	FTD72-BMW94-120418	FTD72-BMW11-120518	FTD72-BMW72-120518	FTD72-BMW95-120518	FTD72-BMW97-120618	FTD72-BMW2-112818	FTD72-BMW3-120418	FTD72-BMW42-120418	FTD72-BMW77-120718	FTD72-MW81R-113018	FTD72-BMW92-120418	FTD72-BMW93-120418	FTD72-BMW5-113018	FTD72-BMW6R-120418	FTD72-BMW29A-120518	FTD72-BMW44-120518
			Date	12/4/18	12/5/18	12/5/18	12/4/18	12/4/18	12/5/18	12/5/18	12/5/18	12/6/18	11/28/18	12/4/18	12/4/18	12/7/18	11/30/18	12/4/18	12/4/18	11/30/18	12/4/18	12/5/18	12/5/18
	Unit	MCL	RSL Tapwater																				
Semi-Volatile Organic Compounds																							
Atrazine	µg/L	3	0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	µg/L	-	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1'-Biphenyl	µg/L	-	0.083	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl-phenylether	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butylbenzylphthalate	µg/L	-	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butylphthalate	µg/L	-	90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Caprolactam	µg/L	-	990	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	µg/L	-	1400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	µg/L	-	0.37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	µg/L	-	59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	µg/L	-	0.014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	µg/L	-	750	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	µg/L	-	9.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl-phenylether	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2'-oxybis(1-Chloropropane)	µg/L	-	710	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	µg/L	-	0.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	µg/L	-	0.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	µg/L	-	4.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	µg/L	-	1500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	µg/L	-	36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethylphthalate	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	-	0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	µg/L	-	3.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	µg/L	-	0.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	µg/L	-	0.049	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dioxane	µg/L	-	0.046	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate	µg/L	6	5.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	µg/L	1	0.0098	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	µg/L	-	0.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	µg/L	50	0.041	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	µg/L	-	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	µg/L	-	78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	µg/L	-	36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	µg/L	-	930	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	µg/L	-	1900	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Naphthoquinone	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	µg/L	-	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	µg/L	-	3.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	µg/L	-	0.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitroso-di-n-propylamine	µg/L	-	0.011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	µg/L	-	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octylphthalate	µg/L	-	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	µg/L	1	0.041	--	--	--	--	--	--	--	--	--	--	--	--	**21**	--	--	--	--	--	--	--
Phenol	µg/L	-	580	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	µg/L	-	120	--	--	--	--	--	--	--	--	--	--	--	--	4	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	µg/L	-	1.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 7.3.4-6
Semi-Volatile Organic Compound and Polycyclic Aromatic Hydrocarbon Results
Area B Landfills, Fort Detrick, Maryland

Analyte	Landfill Cap Area			Area B-3 West									Area B-6 and B-10									
	Well Position			Upgradient				Downgradient					Upgradient					Downgradient					
	Location			BMW9D	BMW76	BMW90	BMW91	BMW41	BMW42	BMW49	BMW93	BMW94	BMW20	BMW21	BMW59D	BMW88	BMW89	BMW24	BMW25R	BMW38	BMW39	BMW74	BMW87
	Sample ID			FTD72-BMW9D-112818	FTD72-BMW76-112818	FTD72-BMW90-113018	FTD72-BMW91-113018	FTD72-BMW41-120518	FTD72-BMW42-120418	FTD72-BMW49-120418	FTD72-BMW93-120418	FTD72-BMW94-120418	FTD72-BMW20-120518	FTD72-BMW21-120618	FTD72-BMW59D-120618	FTD72-BMW88-120418	FTD72-BMW89-120318	FTD72-BMW24-120318	FTD72-BMW25R-120318	FTD72-BMW38-120318	FTD72-BMW39-120318	FTD72-BMW74-120318	FTD72-BMW87-120318
	Date			11/28/18	11/28/18	11/30/18	11/30/18	12/5/18	12/4/18	12/4/18	12/4/18	12/4/18	12/5/18	12/6/18	12/6/18	12/4/18	12/3/18	12/3/18	12/3/18	12/3/18	12/3/18	12/3/18	12/3/18
	Unit	MCL	RSL Tapwater																			
Semi-Volatile Organic Compounds																						
Atrazine	µg/L	3	0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	µg/L	-	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1'-Biphenyl	µg/L	-	0.083	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl-phenylether	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butylbenzylphthalate	µg/L	-	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butylphthalate	µg/L	-	90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Caprolactam	µg/L	-	990	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	µg/L	-	1400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	µg/L	-	0.37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	µg/L	-	59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	µg/L	-	0.014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	µg/L	-	750	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	µg/L	-	9.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl-phenylether	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2'-oxybis(1-Chloropropane)	µg/L	-	710	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	µg/L	-	0.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	µg/L	-	0.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	µg/L	-	4.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	µg/L	-	1500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	µg/L	-	36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethylphthalate	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	-	0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	µg/L	-	3.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	µg/L	-	0.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	µg/L	-	0.049	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dioxane	µg/L	-	0.046	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate	µg/L	6	5.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	µg/L	1	0.0098	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	µg/L	-	0.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	µg/L	50	0.041	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	µg/L	-	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	µg/L	-	78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	µg/L	-	36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	µg/L	-	930	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	µg/L	-	1900	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Naphthoquinone	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	µg/L	-	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	µg/L	-	3.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	µg/L	-	0.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitroso-di-n-propylamine	µg/L	-	0.011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	µg/L	-	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octylphthalate	µg/L	-	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	µg/L	1	0.041	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	µg/L	-	580	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	µg/L	-	120	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	µg/L	-	1.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 7.3.4-6
Semi-Volatile Organic Compound and Polycyclic Aromatic Hydrocarbon Results
Area B Landfills, Fort Detrick, Maryland

Analyte	Landfill Cap Area			Area WDA and B-18															
	Well Position			Upgradient							Downgradient								
	Location			BMW18R	BMW59D	BMW65A	BMW67A	BMW67C	MW82	BMW83	BMW25R	BMW26R	BMW37	BMW38	BMW68A	BMW84	BMW85	BMW86	BMW87
	Sample ID			FTD72-BMW18R-120618	FTD72-BMW59D-120618	FTD72-BMW65A-12118	FTD72-BMW67A-121018	FTD72-BMW67C-121018	FTD72-MW82-120318	FTD72-BMW83-120618	FTD72-BMW25R-120318	FTD72-BMW26R-120318	FTD72-BMW37-120418	FTD72-BMW38-120318	FTD72-BMW68A-121018	FTD72-BMW84-120318	FTD72-BMW85-120318	FTD72-BMW86-120318	FTD72-BMW87-120318
	Date			12/6/18	12/6/18	12/11/18	12/10/18	12/10/18	12/3/18	12/6/18	12/3/18	12/3/18	12/4/18	12/3/18	12/10/18	12/3/18	12/3/18	12/3/18	12/3/18
	Unit	MCL	RSL Tapwater																
Semi-Volatile Organic Compounds																			
Atrazine	µg/L	3	0.30	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Benzaldehyde	µg/L	-	19	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
1,1'-Biphenyl	µg/L	-	0.083	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
4-Bromophenyl-phenylether	µg/L	-	-	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Butylbenzylphthalate	µg/L	-	16	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Di-n-butylphthalate	µg/L	-	90	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Caprolactam	µg/L	-	990	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Carbazole	µg/L	-	-	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
4-Chloro-3-methylphenol	µg/L	-	1400	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
4-Chloroaniline	µg/L	-	0.37	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
bis(2-Chloroethoxy)methane	µg/L	-	59	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
bis(2-Chloroethyl)ether	µg/L	-	0.014	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
2-Chloronaphthalene	µg/L	-	750	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
2-Chlorophenol	µg/L	-	9.1	--	--	--	-- (--)	0.6 J (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
4-Chlorophenyl-phenylether	µg/L	-	-	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
2,2'-oxybis(1-Chloropropane)	µg/L	-	710	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Dibenzofuran	µg/L	-	0.79	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
3,3'-Dichlorobenzidine	µg/L	-	0.13	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
2,4-Dichlorophenol	µg/L	-	4.6	--	--	--	-- (--)	**9 (8)**	--	--	--	--	--	--	-- (--)	--	--	--	--
Diethylphthalate	µg/L	-	1500	--	--	3 J	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
2,4-Dimethylphenol	µg/L	-	36	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Dimethylphthalate	µg/L	-	-	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	-	0.15	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
2,4-Dinitrophenol	µg/L	-	3.9	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
2,4-Dinitrotoluene	µg/L	-	0.24	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
2,6-Dinitrotoluene	µg/L	-	0.049	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
1,4-Dioxane	µg/L	-	0.046	**3 J**	--	--	**11 (8)**	**22 (21)**	--	--	--	--	--	--	**2 J (3 J)**	--	--	--	--
bis(2-Ethylhexyl)phthalate	µg/L	6	5.6	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Hexachlorobenzene	µg/L	1	0.0098	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Hexachlorobutadiene	µg/L	-	0.14	--	--	--	**0.8 J (0.7 J)**	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Hexachlorocyclopentadiene	µg/L	50	0.041	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Hexachloroethane	µg/L	-	0.33	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Isophorone	µg/L	-	78	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
2-Methylnaphthalene	µg/L	-	36	--	--	--	-- (--)	0.2 J(--)	--	--	--	--	--	--	-- (--)	--	--	--	--
2-Methylphenol	µg/L	-	930	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
4-Methylphenol	µg/L	-	1900	--	--	0.6 J	-- (--)	-- (--)	--	1 J	--	--	--	--	-- (--)	--	--	--	--
1,4-Naphthoquinone	µg/L	-	-	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
2-Nitroaniline	µg/L	-	19	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
3-Nitroaniline	µg/L	-	-	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
4-Nitroaniline	µg/L	-	3.8	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Nitrobenzene	µg/L	-	0.14	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
2-Nitrophenol	µg/L	-	-	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
4-Nitrophenol	µg/L	-	-	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
N-Nitroso-di-n-propylamine	µg/L	-	0.011	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
N-Nitrosodiphenylamine	µg/L	-	12	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Di-n-octylphthalate	µg/L	-	20	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Pentachlorophenol	µg/L	1	0.041	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Phenol	µg/L	-	580	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
2,4,5-Trichlorophenol	µg/L	-	120	--	--	--	-- (--)	8 (7)	--	--	--	--	--	--	-- (--)	--	--	--	--
2,4,6-Trichlorophenol	µg/L	-	1.2	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--

Table 7.3.4-6
Semi-Volatile Organic Compound and Polycyclic Aromatic Hydrocarbon Results
Area B Landfills, Fort Detrick, Maryland

Analyte	Landfill Cap Area			Area B-2									Area B-3 East										
	Well Position			Upgradient					Downgradient				Upgradient							Downgradient			
	Location			BMW6R	BMW41	BMW44	BMW49	BMW94	BMW11	BMW72	BMW95	BMW97	BMW2	BMW3	BMW42	BMW77	MW81R	BMW92	BMW93	BMW5	BMW6R	BMW29A	BMW44
	Sample ID			FTD72-BMW6R-120418	FTD72-BMW41-120518	FTD72-BMW44-120518	FTD72-BMW49-120418	FTD72-BMW94-120418	FTD72-BMW11-120518	FTD72-BMW72-120518	FTD72-BMW95-120518	FTD72-BMW97-120618	FTD72-BMW2-112818	FTD72-BMW3-120418	FTD72-BMW42-120418	FTD72-BMW77-120718	FTD72-MW81R-113018	FTD72-BMW92-120418	FTD72-BMW93-120418	FTD72-BMW5-113018	FTD72-BMW6R-120418	FTD72-BMW29A-120518	FTD72-BMW44-120518
	Date			12/4/18	12/5/18	12/5/18	12/4/18	12/4/18	12/5/18	12/5/18	12/5/18	12/6/18	11/28/18	12/4/18	12/4/18	12/7/18	11/30/18	12/4/18	12/4/18	11/30/18	12/4/18	12/5/18	12/5/18
	Unit	MCL	RSL Tapwater																				
Polycyclic Aromatic Hydrocarbons																							
Acenaphthene	µg/L	-	53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetophenone	µg/L	-	190	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	µg/L	-	180	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	µg/L	-	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	µg/L	-	80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	µg/L	-	29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	µg/L	-	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	µg/L	-	0.030	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	µg/L	0.2	0.025	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	µg/L	-	0.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	µg/L	-	2.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	µg/L	-	0.025	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	-	0.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	µg/L	-	0.017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 7.3.4-6
Semi-Volatile Organic Compound and Polycyclic Aromatic Hydrocarbon Results
Area B Landfills, Fort Detrick, Maryland

Analyte	Landfill Cap Area			Area B-3 West									Area B-6 and B-10										
	Well Position			Upgradient				Downgradient					Upgradient					Downgradient						
	Location			BMW9D	BMW76	BMW90	BMW91	BMW41	BMW42	BMW49	BMW93	BMW94	BMW20	BMW21	BMW59D	BMW88	BMW89	BMW24	BMW25R	BMW38	BMW39	BMW74	BMW87
	Sample ID			FTD72-BMW9D-112818	FTD72-BMW76-112818	FTD72-BMW90-113018	FTD72-BMW91-113018	FTD72-BMW41-120518	FTD72-BMW42-120418	FTD72-BMW49-120418	FTD72-BMW93-120418	FTD72-BMW94-120418	FTD72-BMW20-120518	FTD72-BMW21-120618	FTD72-BMW59D-120618	FTD72-BMW88-120418	FTD72-BMW89-120318	FTD72-BMW24-120318	FTD72-BMW25R-120318	FTD72-BMW38-120318	FTD72-BMW39-120318	FTD72-BMW74-120318	FTD72-BMW87-120318
	Date			11/28/18	11/28/18	11/30/18	11/30/18	12/5/18	12/4/18	12/4/18	12/4/18	12/4/18	12/5/18	12/6/18	12/6/18	12/4/18	12/3/18	12/3/18	12/3/18	12/3/18	13/03/2018	12/3/18	12/3/18
	Unit	MCL	RSL Tapwater																				
Polycyclic Aromatic Hydrocarbons																							
Acenaphthene	µg/L	-	53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetophenone	µg/L	-	190	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	µg/L	-	180	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	µg/L	-	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	µg/L	-	80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	µg/L	-	29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	µg/L	-	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	µg/L	-	0.030	--	--	--	--	--	--	--	--	--	--	--	--	0.02 J	--	--	--	--	--	--	--
Benzo(a)pyrene	µg/L	0.2	0.025	--	--	--	--	--	--	--	--	--	--	--	--	0.01 J	--	--	--	--	--	--	--
Benzo(b)fluoranthene	µg/L	-	0.25	--	--	--	--	--	--	--	--	--	--	--	--	0.01 J	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	µg/L	-	-	--	--	--	--	--	--	--	--	--	--	--	--	0.01 J	--	--	--	--	--	--	--
Benzo(k)fluoranthene	µg/L	-	2.5	--	--	--	--	--	--	--	--	--	--	--	--	0.02 J	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	µg/L	-	0.025	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	-	0.25	--	--	--	--	--	--	--	--	--	--	--	--	0.02 J	--	--	--	--	--	--	--
Naphthalene	µg/L	-	0.017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Watermark ECC LLC

Table 7.3.4-6
Semi-Volatile Organic Compound and Polycyclic Aromatic Hydrocarbon Results
Area B Landfills, Fort Detrick, Maryland

Analyte			Landfill Cap Area	Area WDA and B-18												
			Well Position	Upgradient							Downgradient					
			Location	BMW18R	BMW59D	BMW65A	BMW67A	BMW67C	MW82	BMW83	BMW24	BMW25R	BMW38	BMW39	BMW74	BMW87
			Sample ID	FTD72-BMW18R-120618	FTD72-BMW59D-120618	FTD72-BMW65A-12118	FTD72-BMW67A-121018	FTD72-BMW67C-121018	FTD72-MW82-120318	FTD72-BMW83-120618	FTD72-BMW24-120318	FTD72-BMW25R-120318	FTD72-BMW38-120318	FTD72-BMW39-120318	FTD72-BMW74-120318	FTD72-BMW87-120318
			Date	12/6/18	12/6/18	12/11/18	12/10/18	12/10/18	12/3/18	12/6/18	12/3/18	12/3/18	12/3/18	13/03/2018	12/3/18	12/3/18
	Unit	MCL	RSL Tapwater													
Polycyclic Aromatic Hydrocarbons																
Acenaphthene	µg/L	-	53	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Acenaphthylene	µg/L	-	-	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Acetophenone	µg/L	-	190	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Anthracene	µg/L	-	180	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Chrysene	µg/L	-	25	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Fluoranthene	µg/L	-	80	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Fluorene	µg/L	-	29	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Phenanthrene	µg/L	-	-	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Pyrene	µg/L	-	12	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	--	--
Benzo(a)anthracene	µg/L	-	0.030	--	--	--	-- (--)	**0.09(--)**	--	--	--	--	--	--	--	--
Benzo(a)pyrene	µg/L	0.2	0.025	--	--	--	-- (--)	**0.1 (--)**	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	µg/L	-	0.25	--	--	--	-- (--)	0.09 (--)	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	µg/L	-	-	--	--	--	-- (--)	0.07 (--)	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	µg/L	-	2.5	--	--	--	-- (--)	0.09 (--)	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	µg/L	-	0.025	--	--	--	-- (--)	**0.08 (--)**	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	-	0.25	--	--	--	-- (--)	**0.08 (--)**	--	--	--	--	--	--	--	--
Naphthalene	µg/L	-	0.017	--	--	--	0.03(--)	**6 (6)**	--	**0.03 J**	--	--	--	--	--	--

Notes:
µg/L = Micrograms per Liter
Duplicate sample results are presented in parenthesis adjacent to the parent sample result.
Results in **bold** have exceeded either their respective MCL or RSL.
Results in bold and shaded gray have exceeded both their respective MCL and RSL.
-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.
MCL = Maximum Contaminant Level
RSL = Regional Screening Levels for Tapwater, THQ = 0.1, EPA November 2018

Data Qualifier:
J = Estimated Value

Table 7.3.4-7
Water Quality Parameter Results
Area B Landfills, Fort Detrick, Maryland

Analyte	Landfill Cap Area			Area B-2									Area B-3 East									
	Well Position			Upgradient					Downgradient				Upgradient							Downgradient			
	Location			BMW6R	BMW41	BMW44	BMW49	BMW94	BMW11	BMW72	BMW95	BMW97	BMW2	BMW3	BMW42	BMW77	MW81R	BMW92	BMW93	BMW5	BMW6R	BMW29A	BMW44
	Sample ID			FTD72-BMW6R-120418	FTD72-BMW41-120518	FTD72-BMW44-120518	FTD72-BMW49-120418	FTD72-BMW94-120418	FTD72-BMW11-120518	FTD72-BMW72-120518	FTD72-BMW95-120518	FTD72-BMW97-120618	FTD72-BMW2-112818	FTD72-BMW3-120418	FTD72-BMW42-120418	FTD72-BMW77-120718	FTD72-MW81R-113018	FTD72-BMW92-120418	FTD72-BMW93-120418	FTD72-BMW5-113018	FTD72-BMW6R-120418	FTD72-BMW29A-120518	FTD72-BMW44-120518
	Date			12/4/18	12/5/18	12/5/18	12/4/18	12/4/18	12/5/18	12/5/18	12/5/18	12/6/18	11/28/18	12/4/18	12/4/18	12/7/18	11/30/18	12/4/18	12/4/18	11/30/18	12/4/18	12/5/18	12/5/18
	Unit	MCL	RSL Tapwater																			
Water Quality Parameters																						
Ammonia Nitrogen	mg/L	-	-	--	--	--	--	--	--	--	--	--	--	0.082 J	0.061 J	--	--	--	0.059 J	--	--	--	--
Total Nitrite / Nitrate Nitrogen	mg/L	-	-	4.3	8.0	8.4	12.8	10	8.6	4.6	4.0	4.6	3.7	0.84	5.4	1.1	3.4	1.0	2.7	1.9	4.3	3.7	8.4
Chloride	mg/L	-	-	1.7 J	4.5	3.1	3.4	5.3	5.9	6.0	4.7	31.9	13.9	62.9	2.8	28.0	8.7	57.9	4.0	9.7	1.7 J	18.4	3.1
Sulfate	mg/L	-	-	6.1	15.9	11.1	5.8	6.7	7.1	14.3	8.9	9.0	8.6	27.0	17.2	25.8	28.9	24.8	15.4	17.1	6.1	13.1	11.1
Chemical Oxygen Demand	mg/L	-	-	N.D.	N.D.	--	3.6 J	N.D.	--	--	N.D.	3.6 J	3.6 J	3.9 J	3.9 J	3.6 J	4.2 J	N.D.	N.D.	3.6 J	N.D.	--	--
Temperature of pH	Degrees Celsius	-	-	23.1	22.3	22.8	23.1	22.6	22.7	22.8	22.6	22.6	22.7	22.5	22.6	22.5	22.3	22.5	22.8	22.3	23.1	22.4	22.8
Turbidity	NTU	-	-	3.3	3.8	1.3	0.55 J	35	1.9	24	2.0	33	0.25 J	0.45 J	0.20 J	0.25 J	0.80 J	18	1.9	0.45 J	3.3	0.20 J	1.3
Total Alkalinity to pH 4.5	mg/L as CaCO3	-	-	122	150	155	181	264	161	57.0	130	171	144	207	186	377	297	225	157	238	122	153	155
Specific Conductance	umhos/cm	-	-	283	393	420	479	562	404	212	307	500	369	672	439	918	687	679	375	528	283	436	420
Total Dissolved Solids	mg/L	-	-	168	224	244	279	325	214	122	176	275	183	355	239	521	390	368	223	298	168	239	244
pH	Standard Units	-	-	7.9	7.9	7.9	7.4	7.4	7.7	8.4	7.9	8.3	7.8	7.5	7.8	7.7	7.5	7.5	7.9	7.9	7.9	7.7	7.9
Total Hardness as CaCO3	mg/L	-	-	139	189	191	227	298	204	167	152	229	164	237	207	480	339	269	171	258	139	187	191

Table 7.3.4-7
Water Quality Parameter Results
Area B Landfills, Fort Detrick, Maryland

Analyte	Landfill Cap Area			Area B-3 West									Area B-6 and B-10									
	Well Position			Upgradient				Downgradient					Upgradient					Downgradient					
	Location			BMW9D	BMW76	BMW90	BMW91	BMW41	BMW42	BMW49	BMW93	BMW94	BMW20	BMW21	BMW59D	BMW88	BMW89	BMW24	BMW25R	BMW38	BMW39	BMW74	BMW87
	Sample ID			FTD72-BMW9D-112818	FTD72-BMW76-112818	FTD72-BMW90-113018	FTD72-BMW91-113018	FTD72-BMW41-120518	FTD72-BMW42-120418	FTD72-BMW49-120418	FTD72-BMW93-120418	FTD72-BMW94-120418	FTD72-BMW20-120518	FTD72-BMW21-120618	FTD72-BMW59D-120618	FTD72-BMW88-120418	FTD72-BMW89-120318	FTD72-BMW24-120318	FTD72-BMW25R-120318	FTD72-BMW38-120318	FTD72-BMW39-120318	FTD72-BMW74-120318	FTD72-BMW87-120318
	Date			11/28/18	11/28/18	11/30/18	11/30/18	12/5/18	12/4/18	12/4/18	12/4/18	12/4/18	12/5/18	12/6/18	12/6/18	12/4/18	12/3/18	12/3/18	12/3/18	12/3/18	12/3/18	12/3/18	12/3/18
	Unit	MCL	RSL Tapwater																			
Water Quality Parameters																						
Ammonia Nitrogen	mg/L	-	-	--	--	--	--	--	0.061 J	--	0.059 J	--	--	--	--	--	--	0.053 J	--	--	--	0.080 J	--
Total Nitrite / Nitrate Nitrogen	mg/L	-	-	2.5	6.3	4.5	8.0	8.0	5.4	12.8	2.7	10	5.9	0.25	4.7	5.0	2.7	1.4	4.4	4.7	4.2	6.5	4.7
Chloride	mg/L	-	-	18.0	11.0	23.1	23.9	4.5	2.8	3.4	4.0	5.3	27.1	18.7	43.5	22.5	39.1	3.1	30.0	35.0	21.5	40.0	36.0
Sulfate	mg/L	-	-	24.7	9.3	9.4	7.0	15.9	17.2	5.8	15.4	6.7	8.3	17.5	5.9	5.2	13.9	2.2 J	6.1	6.2	8.5	13.4	6.2
Chemical Oxygen Demand	mg/L	-	-	--	5.5 J	3.6 J	--	N.D.	3.9 J	3.6 J	N.D.	N.D.	--	3.6 J	4.2 J	4.2 J	14.6	8.9 J	3.9 J	4.2 J	4.5 J	7.3 J	4.8 J
Temperature of pH	Degrees Celsius	-	-	22.5	23.0	22.2	22.3	22.3	22.6	23.1	22.8	22.6	22.6	22.6	23.0	22.9	22.8	22.6	22.5	22.5	22.6	22.6	22.5
Turbidity	NTU	-	-	0.25 J	0.30 J	10	0.70 J	3.8	0.20 J	0.55 J	1.9	35	1.2	40	3.6	60	3.6	0.70 J	450	45	0.25 J	33	5.2
Total Alkalinity to pH 4.5	mg/L as CaCO3	-	-	138	123	210	40.6	150	186	181	157	264	125	54.8	166	138	211	138	197	195	221	115	192
Specific Conductance	umhos/cm	-	-	381	334	618	252	393	439	479	375	562	434	228	489	399	577	330	573	551	555	487	562
Total Dissolved Solids	mg/L	-	-	203	178	320	147	224	239	279	223	325	221	102	228	220	497	187	187	268	290	268	293
pH	Standard Units	-	-	8.1	8.1	8.1	6.9	7.9	7.8	7.4	7.9	7.4	7.9	7.2	8.1	7.9	7.8	7.3	7.9	7.8	7.6	8.3	7.8
Total Hardness as CaCO3	mg/L	-	-	150	163	278	84.5	189	207	227	171	298	157	80.1	221	176	235	143	267	236	260	147	231

Table 7.3.4-7
Water Quality Parameter Results
Area B Landfills, Fort Detrick, Maryland

Analyte	Landfill Cap Area			Area WDA and B-18															
	Well Position			Upgradient							Downgradient								
	Location			BMW18R	BMW59D	BMW65A	BMW67A	BMW67C	MW82	BMW83	BMW25R	BMW26R	BMW37	BMW38	BMW67A	BMW84	BMW85	BMW86	BMW87
	Sample ID			FTD72-BMW18R-120618	FTD72-BMW59D-120618	FTD72-BMW65A-12118	FTD72-BMW67A-121018	FTD72-BMW67C-121018	FTD72-MW82-120318	FTD72-BMW83-120618	FTD72-BMW25R-120318	FTD72-BMW26R-120318	FTD72-BMW37-120418	FTD72-BMW38-120318	FTD72-BMW67A-121018	FTD72-BMW84-120318	FTD72-BMW85-120318	FTD72-BMW86-120318	FTD72-BMW87-120318
	Date			12/6/18	12/6/18	12/11/18	12/10/18	12/10/18	12/3/18	12/6/18	12/3/18	12/3/18	12/4/18	12/3/18	12/10/18	12/3/18	12/3/18	12/3/18	12/3/18
	Unit	MCL	RSL Tapwater																
Water Quality Parameters																			
Ammonia Nitrogen	mg/L	-	-	0.11	--	0.29	0.21 (0.23)	0.48 (0.48)	--	--	--	--	--	--	0.21 (0.23)	--	--	--	--
Total Nitrite / Nitrate Nitrogen	mg/L	-	-	3.6	4.7	0.040 J	2.1 (2.3)	0.32 (0.34)	2.7	0.052 J	4.4	4.1	4.0	4.7	2.1 (2.3)	4.6	4.1	3.5	4.7
Chloride	mg/L	-	-	25.0	43.5	26.6	26.4 (26.1)	39.9 (35.2)	157	3.2	30.0	15.8	15.3	35.0	26.4 (26.1)	10.5	12.5	19.4	36.0
Sulfate	mg/L	-	-	9.5	5.9	98.0	116 (118)	33.5 (33.7)	8.0	23.0	6.1	9.3	9.3	6.2	116 (118)	6.5	7.0	9.1	6.2
Chemical Oxygen Demand	mg/L	-	-	4.5 J	4.2 J	62.4	3.3 J (--)	12.1 (6.4 J)	6.7 J	7.7	3.9 J	6.1 J	5.5 J	4.2 J	3.3 J (--)	3.6 J	5.1 J	N.D.	4.8 J
Temperature of pH	Degrees Celsius	-	-	22.8	23.0	22.5	22.9 (22.7)	22.6 (22.6)	22.5	7.0 J	22.5	22.9	22.5	22.5	22.9 (22.7)	22.5	22.8	22.7	22.5
Turbidity	NTU	-	-	0.15 J	3.6	40	5.9(2.6)	9.1 (8.7)	6.8	22.3	450	0.30 J	0.20 J	45	5.9(2.6)	1.9	16	1.2	5.2
Total Alkalinity to pH 4.5	mg/L as CaCO3	-	-	240	166	83.2	295 (295)	341 (345)	334	2.6	197	227	244	195	295 (295)	216	219	242	192
Specific Conductance	umhos/cm	-	-	584	489	490	867 (865)	847 (845)	1,100	239	573	540	569	551	867 (865)	514	523	583	562
Total Dissolved Solids	mg/L	-	-	309	228	299	507 (534)	476 (481)	546	567	187	282	303	268	507 (534)	268	289	307	293
pH	Standard Units	-	-	7.9	8.1	8.7	7.8 (7.6)	7.7 (7.7)	7.9	295	7.9	8.0	8.0	7.8	7.8 (7.6)	8.0	8.0	7.6	7.8
Total Hardness as CaCO3	mg/L	-	-	290	221	162	491 (464)	442 (434)	443	8.1	267	245	278	236	491 (464)	251	252	275	231

Notes:
-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.
Duplicate sample results are presented in parenthesis adjacent to the parent sample result.
mg/L = Milligrams per Liter
umhos/cm = Micromhos per Centimeter
MCL = Maximum Contaminant Level
RSL = Regional Screening Levels for Tapwater, THQ = 0.1, EPA November 2018

Data Qualifier:
J = Estimated Value
NTU = Nephelometric Turbidity Unit
CaCO3 = Calcium Carbonate

Table 7.3.4-8
Total and Dissolved Metals Results
Area B Landfills, Fort Detrick, Maryland

Analyte			Landfill Cap	Area B-2									Area B-3 East									
			Well Position	Upgradient					Downgradient				Upgradient							Downgradient			
			Location	BMW6R	BMW41	BMW44	BMW49	BMW94	BMW11	BMW72	BMW95	BMW97	BMW2	BMW3	BMW42	BMW77	MW81R	BMW92	BMW93	BMW5	BMW6R	BMW29A	BMW44
			Sample ID	FTD72-BMW6R-120418	FTD72-BMW41-120518	FTD72-BMW44-120518	FTD72-BMW49-120418	FTD72-BMW94-120418	FTD72-BMW11-120518	FTD72-BMW72-120518	FTD72-BMW95-120518	FTD72-BMW97-120618	FTD72-BMW2-112818	FTD72-BMW3-120418	FTD72-BMW42-120418	FTD72-BMW77-120718	FTD72-MW81R-113018	FTD72-BMW92-120418	FTD72-BMW93-120418	FTD72-BMW5-113018	FTD72-BMW6R-120418	FTD72-BMW29A-120518	FTD72-BMW44-120518
			Date	12/4/18	12/5/18	12/5/18	12/4/18	12/4/18	12/5/18	12/5/18	12/5/18	12/6/18	11/28/18	12/4/18	12/4/18	12/7/18	11/30/18	12/4/18	12/4/18	11/30/18	12/4/18	12/5/18	12/5/18
	Unit	MCL	RSL Tapwater																			
Total Metals																						
Barium	mg/L	2	0.38	0.0216	0.0517	0.0812	0.0424	0.108	0.0769	0.107	0.0187	0.0815	0.0286	0.0644	0.0416	0.146	0.0506	0.0719	0.0243	0.0412	0.0216	0.0498	0.0812
Calcium	mg/L	-	-	41.2	60.0	61.8	75.8	102	53.5	49.6	43.6	65.8	44.0	63.1	69.5	135	96.2	74.5	58.3	70.3	41.2	52.8	61.8
Cobalt	mg/L	-	0.0006	--	--	--	--	--	--	--	--	**0.0027 J**	--	--	--	--	--	--	--	--	--	--	--
Copper	mg/L	1.3	0.080	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Magnesium	mg/L	-	-	8.76	9.59	8.94	9.17	10.5	17.1	10.6	10.5	15.8	13.2	19.2	8.22	35.0	23.9	20.0	6.05	20.2	8.76	13.3	8.94
Manganese	mg/L	-	0.043	0.0131 J	0.0028 J	--	0.0012 J	**0.456**	0.0027 J	--	**--**	**0.813**	0.0011 J	0.0019 J	--	0.0030 J	--	**0.239**	0.0028 J	--	0.0131 J	0.0014 J	--
Nickel	mg/L	-	0.039	0.0039 J	--	--	--	0.0057 J	--	--	--	0.0043 J	--	--	--	--	--	0.0073 J	--	--	0.0039 J	--	--
Selenium	mg/L	0.05	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	mg/L	-	0.0094	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium	mg/L	-	0.0086	--	--	0.0046 J	--	0.0033 J	--	--	--	0.0032 J	--	--	0.0060 J	--	--	--	0.0033 J	--	--	--	0.0046 J
Antimony	mg/L	0.006	0.00078	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	mg/L	0.01	0.000052	--	**0.00075 J**	**0.0012 J**	--	--	--	**0.00080 J**	**--**	**--**	--	--	**0.00072 J**	--	--	--	**--**	--	--	--	**0.0012 J**
Beryllium	mg/L	0.004	0.0025	--	--	--	--	0.00020 J	--	--	--	0.00017 J	--	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/L	-	0.00092	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	mg/L	0.1	-	0.0073	0.0013 J	0.0010 J	0.00085 J	0.0060	0.0018 J	0.0125	0.0010 J	0.0018 J	0.0019 J	--	0.00096 J	--	0.0016 JU	0.0030 J	0.0015 J	0.0042	0.0073	0.0021 J	0.0010 J
Iron	mg/L	-	1.4	0.195	0.0683 J	--	--	**1.90**	--	--	'--	0.894	0.132	--	--	--	--	1.21	'--	--	0.195	0.0442 J	--
Lead	mg/L	0.015	0.0015	--	--	--	--	0.0014 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Potassium	mg/L	-	-	0.938	0.599	0.582	2.63	2.52	1.33	2.37	0.586	1.66	2.73	6.14	0.578	2.00	1.60	4.21	0.592	2.07	0.938	1.22	0.582
Sodium	mg/L	-	-	2.95	5.90	6.46	5.60	6.24	2.47	2.61	3.44	12.0	6.90	34.5	7.31	19.4	9.81	28.2	9.64	7.77	2.95	11.1	6.46
Thallium	mg/L	0.002	0.00002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	mg/L	-	0.6	--	--	--	--	0.0168	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	mg/L	0.002	0.000063	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dissolved Metals																							
Barium	mg/L	2	0.38	0.0201	0.0495	0.0815	0.0417	0.0959	0.0750	0.104	0.0185	0.0755	0.0286	0.0682	0.0415	0.144	0.0512	0.0622	0.0241	0.0384	0.0201	0.0506	0.0815
Calcium	mg/L	-	-	41.0	61.4	63.7	75.5	101	52.0	46.7	43.6	66.7	47.0	66.0	69.6	134	99.3	72.0	58.9	66.3	41.0	55.3	63.7
Cobalt	mg/L	-	0.0006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	mg/L	1.3	0.080	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Magnesium	mg/L	-	-	8.63	10.4	9.19	9.02	10.1	16.6	9.83	10.5	15.9	14.2 U	20.0	8.25	34.5	24.4	19.2	6.18	19.0	8.63	14.0	9.19
Manganese	mg/L	-	0.043	--	--	--	--	0.365	0.0023 J	--	--	**0.724**	--	0.0016 J	--	0.0023 J	--	0.201	--	--	--	--	--
Nickel	mg/L	-	0.039	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0034 J	--	--	--	--	--
Selenium	mg/L	0.05	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	mg/L	-	0.0094	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium	mg/L	-	0.0086	--	--	0.0047 J	--	--	--	0.0044 J	--	--	--	--	0.0053 J	--	--	--	0.0032 J	--	--	--	0.0047 J
Antimony	mg/L	0.006	0.00078	--	--	--	--	--	--	0.00045 J	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	mg/L	0.01	0.000052	--	--	**0.0010 J**	--	--	--	**0.00090 J**	--	--	--	--	**0.00098 J**	--	--	--	--	--	--	--	**0.0010 J**
Beryllium	mg/L	0.004	0.0025	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/L	-	0.00092	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	mg/L	0.1	-	0.0025 J	0.00085 J	0.00073 J	--	0.0012 J	0.0018 J	0.0116	0.0015 J	--	0.00072 JU	--	--	--	0.0021 JU	0.00093 J	0.00083 J	0.0013 JU	0.0025 J	0.0020 J	0.00073 J
Iron	mg/L	-	1.4	--	--	--	--	0.0443 J	--	--	--	0.183	--	--	--	--	--	0.943	--	--	--	--	--
Lead	mg/L	0.015	0.0015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Potassium	mg/L	-	-	0.895	0.570	0.574	2.58	1.95	1.40	2.31	0.646	1.50	2.04	5.80	0.586	1.77	1.63	3.91	0.584	2.19	0.895	1.28	0.574
Sodium	mg/L	-	-	2.98	5.94	7.22	5.61	6.20	2.54	2.55	3.66	12.5	7.52	36.0	7.34	18.9	9.24	25.6	9.08	7.67	2.98	11.2	7.22
Thallium	mg/L	0.002	0.00002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	mg/L	-	0.6	--	--	--	0.0066 J	--	--	--	--	--	--	0.0085 J	--	--	--	--	--	--	--	--	--
Mercury	mg/L	0.002	0.000063	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 7.3.4-8
Total and Dissolved Metals Results
Area B Landfills, Fort Detrick, Maryland

Analyte			Landfill Cap	Area B-3 West									Area B-6 and B-10									
			Well Position	Upgradient				Downgradient					Upgradient					Downgradient				
			Location	BMW9D	BMW76	BMW90	BMW91	BMW41	BMW42	BMW49	BMW93	BMW94	BMW20	BMW21	BMW59D	BMW88	BMW89	BMW24	BMW25R	BMW38	BMW39	BMW74	BMW87
			Sample ID	FTD72-BMW9D-112818	FTD72-BMW76-112818	FTD72-BMW90-113018	FTD72-BMW91-113018	FTD72-BMW41-120518	FTD72-BMW42-120418	FTD72-BMW49-120418	FTD72-BMW93-120418	FTD72-BMW94-120418	FTD72-BMW20-120518	FTD72-BMW21-120618	FTD72-BMW59D-120618	FTD72-BMW88-120418	FTD72-BMW89-120318	FTD72-BMW24-120318	FTD72-BMW25R-120318	FTD72-BMW38-120318	FTD72-BMW39-120318	FTD72-BMW74-120318	FTD72-BMW87-120318
			Date	11/28/18	11/28/18	11/30/18	11/30/18	12/5/18	12/4/18	12/4/18	12/4/18	12/4/18	12/5/18	12/6/18	12/6/18	12/4/18	12/3/18	12/3/18	12/3/18	12/3/18	13/03/2018	12/3/18	12/3/18
	Unit	MCL	RSL Tapwater																			
Total Metals																						
Barium	mg/L	2	0.38	0.146	0.0758	0.103	0.0322	0.0517	0.0416	0.0424	0.0243	0.108	0.0474	0.0926	0.0662	0.0776	0.140	0.0422	0.190	0.0620	0.0494	0.0490	0.0526
Calcium	mg/L	-	-	27.8	37.7	59.1	21.7	60.0	69.5	75.8	58.3	102	37.0	27.1	52.8	39.6	62.7	47.2	63.3	59.7	82.1	39.9	58.9
Cobalt	mg/L	-	0.0006	--	--	0.0022 JU	--	--	--	--	--	--	--	**0.0158**	--	0.0057	--	--	**0.0135**	--	--	--	--
Copper	mg/L	1.3	0.080	--	--	--	--	--	--	--	--	--	--	0.0071 J	--	--	--	--	0.0163 J	--	--	--	--
Magnesium	mg/L	-	-	19.4 U	16.6 U	31.8	7.35	9.59	8.22	9.17	6.05	10.5	15.7	3.02	21.6	18.8	18.9	6.24	26.4	21.1	13.4	11.6	20.4
Manganese	mg/L	-	0.043	0.0012 J	--	0.0711	--	0.0028 J	--	0.0012 J	0.0028 J	**0.456**	0.0062 J	**1.16**	0.0055 J	0.364	0.137	0.0034 J	**1.18**	0.111	--	0.0059 J	0.0028 J
Nickel	mg/L	-	0.039	--	--	0.0137	--	--	--	--	--	0.0057 J	--	0.0050 J	--	0.0188	--	--	**0.0393**	0.0054 J	--	--	--
Selenium	mg/L	0.05	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	mg/L	-	0.0094	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium	mg/L	-	0.0086	0.0166	--	0.0050 J	--	--	0.0060 J	--	0.0033 J	0.0033 J	--	--	--	0.0107	--	--	**0.0308**	0.0031 J	--	--	--
Antimony	mg/L	0.006	0.00078	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00051 J	--
Arsenic	mg/L	0.01	0.000052	**0.0141**	**0.0013 J**	0.00095 JU	--	**0.00075 J**	**0.00072 J**	--	**--**	--	--	--	--	**0.00094 J**	**0.0033**	--	**0.0036**	--	--	**--**	--
Beryllium	mg/L	0.004	0.0025	--	--	0.00021 J	--	--	--	--	--	0.00020 J	--	--	--	0.0016	--	--	0.0021	0.00021 J	--	--	--
Cadmium	mg/L	-	0.00092	--	--	--	--	--	--	--	--	--	--	0.00026 J	--	0.00030 J	--	--	0.00068 J	--	--	--	--
Chromium	mg/L	0.1	-	0.0030 J	0.0016 JU	0.0187	0.0056	0.0013 J	0.00096 J	0.00085 J	0.0015 J	0.0060	0.0019 J	0.0015 J	0.0016 J	0.0107	0.0010 J	0.0012 J	0.0209	0.0040	0.00082 J	0.0022 J	0.0012 J
Iron	mg/L	-	1.4	--	--	2.92	'--	0.0683 J	--	--	'--	**1.90**	0.0235 J	2.35	0.170	**11.2**	0.345	--	**24.6**	2.31	--	0.193	0.130
Lead	mg/L	0.015	0.0015	--	--	0.0024 J	--	--	--	--	--	0.0014 J	--	--	--	0.0080	--	--	**0.0175**	**0.0028 J**	--	--	--
Potassium	mg/L	-	-	1.57	1.07	2.13	1.33	0.599	0.578	2.63	0.592	2.52	2.25	2.68	1.43	2.61	1.68	4.82	4.02	2.32	3.34	47.1	1.94
Sodium	mg/L	-	-	16.7	5.23	22.8	10.2	5.90	7.31	5.60	9.64	6.24	23.8	9.60	20.3	13.7	22.2	3.09	18.7	17.6	12.6	24.9	20.1
Thallium	mg/L	0.002	0.00002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.00021 J**	--	--	--	--
Zinc	mg/L	-	0.6	--	--	0.0123 J	--	--	--	--	--	0.0168	--	0.0075 J	--	0.0882	0.0085 J	--	0.141	0.0169	--	--	--
Mercury	mg/L	0.002	0.000063	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.000066 J**	--	--	--	--
Dissolved Metals																						
Barium	mg/L	2	0.38	0.145	0.0770	0.0795	0.0319	0.0495	0.0415	0.0417	0.0241	0.0959	0.0453	0.0855	0.0693	0.0391	0.162	0.0432	0.122	0.0552	0.0475	0.0528	0.0532
Calcium	mg/L	-	-	27.7	37.9	53.6	22.0	61.4	69.6	75.5	58.9	101	35.8	26.7	52.0	37.4	65.6	48.4	59.6	59.3	80.1	44.9	60.9
Cobalt	mg/L	-	0.0006	--	--	--	--	--	--	--	--	--	--	**0.0133**	--	--	--	--	0.0048 J	--	--	--	--
Copper	mg/L	1.3	0.080	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0080 J	--	--	--	--
Magnesium	mg/L	-	-	19.0 U	16.5 U	28.4	7.42	10.4	8.25	9.02	6.18	10.1	15.0	2.96	21.7	17.3	18.6	6.34	23.7	21.0	13.1	12.2	20.5
Manganese	mg/L	-	0.043	--	--	--	--	--	--	--	--	0.365	--	**0.908**	--	0.0042 J	0.198	0.0031 J	**0.514**	0.0068 J	--	0.0012 J	0.0012 J
Nickel	mg/L	-	0.039	--	--	--	--	--	--	--	--	--	--	0.0033 J	--	--	--	--	0.0166	--	--	--	--
Selenium	mg/L	0.05	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	mg/L	-	0.0094	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium	mg/L	-	0.0086	0.0167	--	--	--	--	0.0053 J	--	0.0032 J	--	--	--	--	--	--	--	0.0081 J	--	--	--	--
Antimony	mg/L	0.006	0.00078	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	mg/L	0.01	0.000052	**0.0183**	**0.0012 J**	--	--	--	**0.00098 J**	--	--	--	--	--	--	--	**0.0040**	--	**--**	--	--	**0.00083 J**	--
Beryllium	mg/L	0.004	0.0025	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/L	-	0.00092	--	--	--	--	--	--	--	--	--	--	0.00040 J	--	--	--	--	--	--	--	--	--
Chromium	mg/L	0.1	-	0.0021 J	0.0011 JU	0.0018 JU	0.00093 JU	0.00085 J	--	--	0.00083 J	0.0012 J	--	0.0015 J	0.0011 J	0.00096 J	--	0.0011 J	0.0011 J	0.0013 J	0.00090 J	0.0016 J	0.00087 J
Iron	mg/L	-	1.4	--	--	--	0.0243 J	--	--	--	--	0.0443 J	--	1.70	--	0.105	0.439	--	0.506	0.101	--	--	0.0323 J
Lead	mg/L	0.015	0.0015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Potassium	mg/L	-	-	1.86	1.04	1.69	1.28	0.570	0.586	2.58	0.584	1.95	2.16	2.72	1.37	1.55	1.63	4.64	21.1	1.78	3.36	44.3	2.00
Sodium	mg/L	-	-	20.2	5.05	22.3	10.4	5.94	7.34	5.61	9.08	6.20	24.0	10.1	19.4	13.7	22.6	2.94	5.93	17.4	11.5	25.2	19.6
Thallium	mg/L	0.002	0.00002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	mg/L	-	0.6	--	--	--	--	--	--	0.0066 J	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	mg/L	0.002	0.000063	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 7.3.4-8
Total and Dissolved Metals Results
Area B Landfills, Fort Detrick, Maryland

Analyte			Landfill Cap	Area WDA and B-18															
			Well Position	Upgradient							Downgradient								
			Location	BMW18R	BMW59D	BMW65A	BMW67A	BMW67C	MW82	BMW83	BMW25R	BMW26R	BMW37	BMW38	BMW68A	BMW84	BMW85	BMW86	BMW87
			Sample ID	FTD72-BMW18R-120618	FTD72-BMW59D-120618	FTD72-BMW65A-12118	FTD72-BMW67A-121018	FTD72-BMW67C-121018	FTD72-MW82-120318	FTD72-BMW83-120618	FTD72-BMW25R-120318	FTD72-BMW26R-120318	FTD72-BMW37-120418	FTD72-BMW38-120318	FTD72-BMW68A-121018	FTD72-BMW84-120318	FTD72-BMW85-120318	FTD72-BMW86-120318	FTD72-BMW87-120318
			Date	12/6/18	12/6/18	12/11/18	12/10/18	12/10/18	12/3/18	12/6/18	12/3/18	12/3/18	12/4/18	12/3/18	12/10/18	12/3/18	12/3/18	12/3/18	12/3/18
	Unit	MCL	RSL Tapwater																
Total Metals																			
Barium	mg/L	2	0.38	0.0792	0.0662	0.0337	0.0702 (0.0656)	0.340 (0.338)	0.0540	0.0718	0.190	0.0521	0.0655	0.0620	0.179 (0.176)	0.0392	0.0423	0.0635	0.0526
Calcium	mg/L	-	-	71.2	52.8	44.1	135 (127)	113 (111)	96.4	60.7	63.3	67.9	81.2	59.7	128(124)	63.8	65.2	73.2	58.9
Cobalt	mg/L	-	0.0006	--	--	--	0.0023 J (0.0023 J)	**0.0035 J (0.0032 J)**	--	--	**0.0135**	--	--	--	-- (--)	--	--	--	--
Copper	mg/L	1.3	0.080	--	--	--	-- (--)	-- (--)	--	--	0.0163 J	--	--	--	-- (--)	--	--	--	--
Magnesium	mg/L	-	-	27.2	21.6	12.6	37.4 (35.9)	38.6 (37.9)	49.2	32.7	26.4	18.4	18.3	21.1	20.1 (19.7)	22.4	21.6	22.4	20.4
Manganese	mg/L	-	0.043	**0.151**	0.0055 J	0.0070 J	**0.936 (0.918)**	**2.40 (2.33)**	0.0095 J	0.0395	**1.18**	--	--	0.111	0.272 (0.264)	0.0094 J	0.0170 J	--	0.0028 J
Nickel	mg/L	-	0.039	--	--	0.0035 J	0.0153 (0.0076 J)	0.0105 (0.0106)	--	--	**0.0393**	--	--	0.0054 J	-- (--)	--	--	--	--
Selenium	mg/L	0.05	0.01	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Silver	mg/L	-	0.0094	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Vanadium	mg/L	-	0.0086	--	--	--	-- (--)	-- (--)	--	--	**0.0308**	--	--	0.0031 J	-- (--)	--	--	--	--
Antimony	mg/L	0.006	0.00078	--	--	**0.0106**	0.00042 (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Arsenic	mg/L	0.01	0.000052	--	--	**0.0011 J**	**0.0011 J (--)**	**0.0020 (0.0021)**	--	**0.0019 J**	**0.0036**	--	--	--	-- (--)	--	--	--	--
Beryllium	mg/L	0.004	0.0025	--	--	--	-- (--)	-- (--)	--	--	0.0021	--	--	0.00021 J	-- (--)	--	--	--	--
Cadmium	mg/L	-	0.00092	--	--	--	-- (--)	-- (--)	--	--	0.00068 J	--	--	--	-- (--)	--	--	--	--
Chromium	mg/L	0.1	-	--	0.0016 J	0.0033 J	0.0082(0.0013 J)	0.00072 J (--)	0.0027 J	--	0.0209	--	--	0.0040	0.00078 J (--)	0.00099 J	0.00089 J	0.0011 J	0.0012 J
Iron	mg/L	-	1.4	--	0.170	0.109	0.879 (0.284)	0.798(0.0766)	0.445	0.190	**24.6**	--	--	2.31	0.0668 J (--)	0.156	0.194	--	0.130
Lead	mg/L	0.015	0.0015	--	--	--	-- (--)	-- (--)	--	--	**0.0175**	--	--	**0.0028 J**	-- (--)	--	--	--	--
Potassium	mg/L	-	-	1.79	1.43	13.0	3.72 (3.31)	2.23 (2.48)	0.928	2.10	4.02	2.75	3.29	2.32	7.37 (7.39)	2.19	2.37	2.51	1.94
Sodium	mg/L	-	-	10.4	20.3	49.7	13.4 (12.3)	12.4 (11.8)	53.5	11.2	18.7	9.91	10.9	17.6	12.8 (12.7)	9.10	9.78	13.6	20.1
Thallium	mg/L	0.002	0.00002	--	--	--	-- (--)	**0.00035 (0.00049 J)**	--	--	**0.00021 J**	--	--	--	-- (--)	--	--	--	--
Zinc	mg/L	-	0.6	--	--	--	0.0090 J (--)	0.0553 (0.0626)	--	--	0.141	--	--	0.0169	-- (--)	--	--	--	--
Mercury	mg/L	0.002	0.000063	--	--	--	-- (--)	**0.00011 J (0.00011 J)**	--	--	**0.000066 J**	--	--	--	-- (--)	--	--	--	--
Dissolved Metals																			
Barium	mg/L	2	0.38	0.0787	0.0693	0.0275	0.0581 (0.0629)	0.340 (0.326)	0.0555	0.0711	0.122	0.0527	0.0657	0.0552	0.177 (0.177)	0.0365	0.0401	0.0631	0.0532
Calcium	mg/L	-	-	71.8	52.0	35.4	112 (122)	115 (111)	103	60.5	59.6	72.9	80.9	59.3	126 (124)	62.2	65.3	71.5	60.9
Cobalt	mg/L	-	0.0006	--	--	--	**-- (0.0020 J)**	**0.0037 J (0.0029)**	--	--	0.0048 J	--	--	--	-- (--)	--	--	--	--
Copper	mg/L	1.3	0.080	--	--	--	-- (--)	-- (--)	--	--	0.0080 J	--	--	--	-- (--)	--	--	--	--
Magnesium	mg/L	-	-	27.4	21.7	11.7	31.6 (34.5)	39.1 (37.8)	50.6	32.5	23.7	18.8	18.2	21.0	19.9 (19.6)	21.5	21.6	22.4	20.5
Manganese	mg/L	-	0.043	**0.154**	--	0.0064 J	**0.803 (0.874)**	**2.44 (2.35)**	--	0.0388	**0.514**	**--**	--	0.0068 J	0.267 (0.262)	0.0023 J	0.0064 J	--	0.0012 J
Nickel	mg/L	-	0.039	--	--	--	0.0056 (0.0060 J)	0.0108 (0.0101)	--	--	0.0166	--	--	--	-- (--)	--	--	--	--
Selenium	mg/L	0.05	0.01	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Silver	mg/L	-	0.0094	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Vanadium	mg/L	-	0.0086	--	--	--	-- (--)	-- (--)	--	--	0.0081 J	--	--	--	-- (--)	--	--	--	--
Antimony	mg/L	0.006	0.00078	--	--	**0.0111**	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Arsenic	mg/L	0.01	0.000052	--	--	**0.0014 J**	-- (--)	**0.0022 (0.0021)**	--	**0.0011 J**	**--**	**--**	--	--	-- (--)	--	--	--	--
Beryllium	mg/L	0.004	0.0025	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Cadmium	mg/L	-	0.00092	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Chromium	mg/L	0.1	-	--	0.0011 J	0.00087 J	0.0016 J (0.0012 J)	-- (--)	--	--	0.0011 J	--	--	0.0013 J	-- (--)	--	--	--	0.00087 J
Iron	mg/L	-	1.4	--	--	--	0.244 (0.258)	0.581 (0.630)	--	0.190	0.506	--	--	0.101	-- (--)	--	--	--	0.0323 J
Lead	mg/L	0.015	0.0015	--	--	--	-- (--)	-- (--)	--	--	--	--	--	--	-- (--)	--	--	--	--
Potassium	mg/L	-	-	1.88	1.37	13.9	3.35 (3.48)	2.46 (2.18)	0.419	2.13	21.1	2.78	3.28	1.78	7.96 (7.78)	2.19	2.29	2.76	2.00
Sodium	mg/L	-	-	11.1	19.4	47.9	12.5 (12.7)	11.6 (12.2)	25.7	11.1	5.93	9.98	10.6	17.4	13.8 (13.4)	8.99	10.3	13.6	19.6
Thallium	mg/L	0.002	0.00002	--	--	--	-- (--)	**0.00053 (0.00063)**	--	--	--	--	--	--	-- (--)	--	--	--	--
Zinc	mg/L	-	0.6	--	--	--	-- (--)	0.0593 (0.0579)	--	--	--	--	--	--	-- (--)	--	--	--	--
Mercury	mg/L	0.002	0.000063	--	--	--	-- (--)	**0.0017 J (0.00011 J)**	--	--	--	--	--	--	-- (--)	--	--	--	--

Notes:
Duplicate sample results are presented in parenthesis adjacent to the parent sample result.
Results in **bold** and shaded gray have exceeded their respective Maximum Contaminant Level (MCL) and Regional Screening Level (RSL)
Results in **bold** have exceeded either their respective Maximum Contaminant Level (MCL) or Regional Screening Levels (RSL)
-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.

Data Qualifiers:
J = Estimated Value
U = Re-Qualified as Non-Detect Based on Laboratory and/or Field Blanks

Table 7.3.4-9
Investigation Derived Waste Analytical Results
Area B Landfills, Fort Detrick, Maryland

Analyte	Location	IDW-01	IDW-02	IDW-03	IDW-04	IDW-05	IDW-06	IDW-07
	Sample ID	FTD72-IDW01	FTD72-IDW02	FTD72-IDW03	FTD72-IDW04	FTD72-IDW05	FTD72-IDW06	FTD72-IDW07
	Sample Date	12/10/18	12/10/18	12/10/18	12/10/18	12/10/18	12/10/18	12/10/18
	Unit							
Acetone	µg/L	--	1.2 J	--	--	--	--	--
Acrolein	µg/L	--	--	--	--	--	--	--
Acrylonitrile	µg/L	--	--	--	--	--	--	--
Benzene	µg/L	--	--	--	--	--	--	--
Bromochloromethane	µg/L	--	--	--	--	--	--	--
Bromodichloromethane	µg/L	--	--	--	--	--	--	--
Bromoform	µg/L	--	--	--	--	--	--	--
Bromomethane	µg/L	--	--	--	--	--	--	--
2-Butanone	µg/L	--	--	--	--	--	--	--
Carbon Disulfide	µg/L	--	0.5 J	0.3 J	0.3 J	0.2 J	0.1 J	0.1 J
Carbon Tetrachloride	µg/L	--	--	--	--	--	--	--
Chlorobenzene	µg/L	--	--	--	--	--	--	--
Chloroethane	µg/L	--	--	--	--	--	--	--
Chloroform	µg/L	1.7	1.3	0.3 J	6.8	--	--	1.6
Chloromethane	µg/L	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	µg/L	--	--	--	--	--	--	--
Dibromochloromethane	µg/L	--	--	--	--	--	--	--
1,2-Dibromoethane	µg/L	--	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	--	--	--	--	--	--	--
1,4-Dichlorobenzene	µg/L	--	--	--	--	--	--	--
1,1-Dichloroethane	µg/L	0.08 J	0.06 J	0.06 J	0.08 J	--	--	0.09 J
1,2-Dichloroethane	µg/L	0.4 J	0.1 J	0.06 J	0.2 J	--	--	0.4 J
1,1-Dichloroethene	µg/L	0.3 J	0.6	--	1.7	--	--	0.3 J
cis-1,2-Dichloroethene	µg/L	--	1.8	--	1.4	--	--	--
trans-1,2-Dichloroethene	µg/L	--	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--
Ethylbenzene	µg/L	--	--	--	--	--	--	--
2-Hexanone	µg/L	--	--	--	--	--	--	--
Methyl Tertiary Butyl Ether	µg/L	--	--	--	--	--	--	--
4-Methyl-2-pentanone	µg/L	--	--	--	--	--	--	--
Methylene Chloride	µg/L	--	--	--	--	--	--	--
Styrene	µg/L	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	--	--	--	--	--	--	--
Tetrachloroethene	µg/L	0.2 J	0.6	0.2 J	3.0	0.1 J	0.1 J	0.2 J
Toluene	µg/L	--	--	--	--	--	--	--
1,1,1-Trichloroethane	µg/L	--	0.1 J	--	0.2 J	--	--	0.1 J
1,1,2-Trichloroethane	µg/L	--	--	--	19	--	--	--
Trichloroethene	µg/L	5.0	10	1.4	4.6	0.08 J	0.1 J	8.2
Trichlorofluoromethane	µg/L	1.3	0.7	0.2 J	--	0.9	--	1.2
Vinyl Chloride	µg/L	--	--	--	--	--	--	--
m+p-Xylene	µg/L	--	--	--	--	--	--	--
o-Xylene	µg/L	--	--	--	--	--	--	--

Notes:

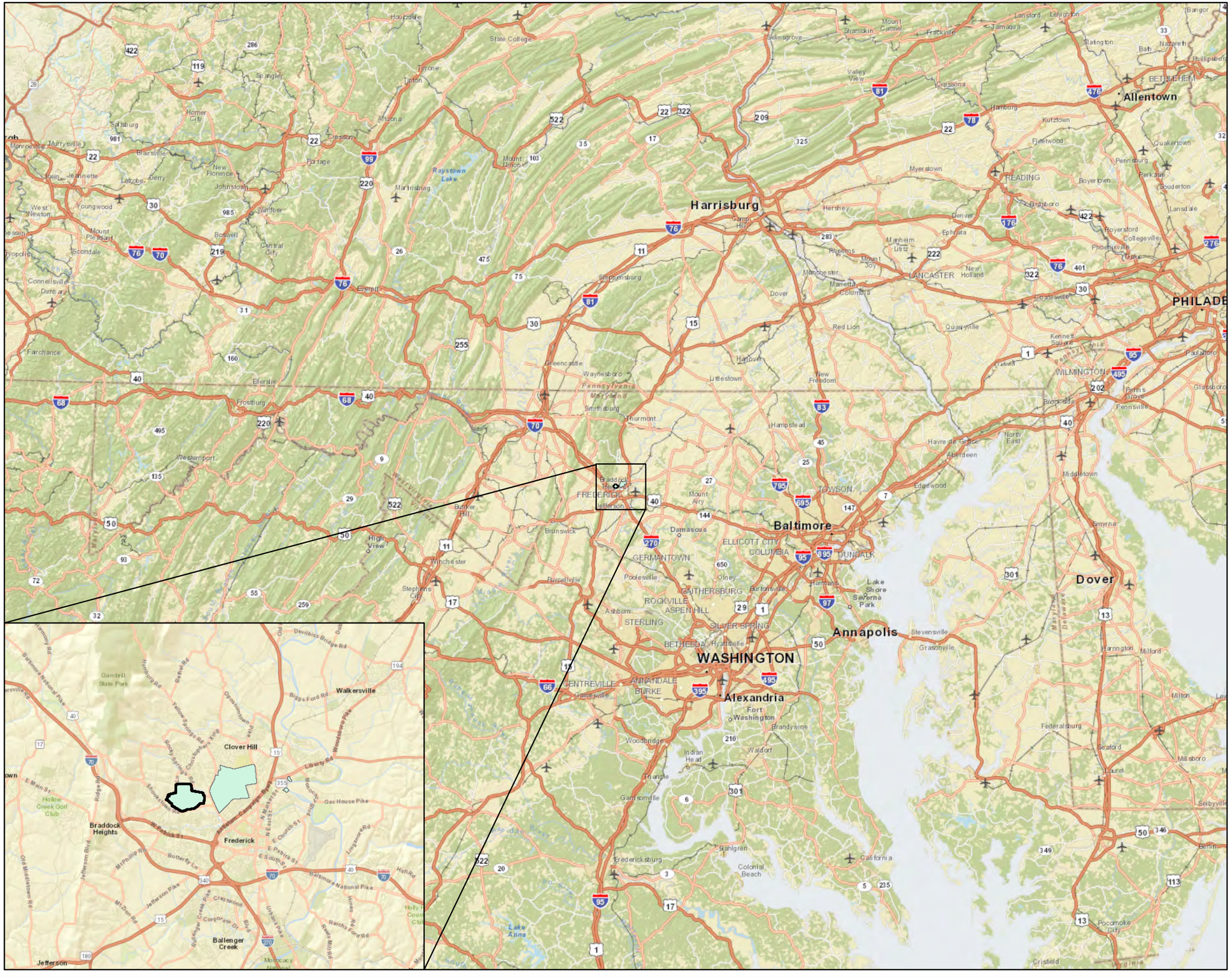
-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.

[1] = 80 µg/L is the MCL for total trihalomethanes (total of bromodichloromethane, bromoform, dibromochloromethane, and chloroform) and is applicable to public drinking water supplies that use disinfection products. Chloroform has a maximum contaminant level goal (MCLG) of 70 µg/L. Dibromochloromethane has a MCLG of 60 µg/L.

[2] = 10,000 µg/L is the MCL for total xylenes

µg/L = Micrograms per Liter
J = Estimated Value

Attachment 7.3.4
FIGURES



Legend

- Area B Boundary
- Installation Area

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Semi-Annual Monitoring Report

Date: 1 December 2016
By: J. Gatherer

FIGURE A.7.3.4-1

Site Location

Fort Detrick
Frederick, MD

FT. DETRICK
GIS File Path:

C:\GIS_Projects\Ft_Detrick\Maps\AreaB\SemiAnnualReports\2016\November\1-1_SiteLocation_AreaB_2016.mxd

B-3 East

B-3 West

B-2

B-18

Western Disposal Area

B-10

B-6

Legend

- Stream
- Landfill Boundary
- Landfill Cap Area
- Area B Boundary

N

Scale:

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Semi-Annual Monitoring Report

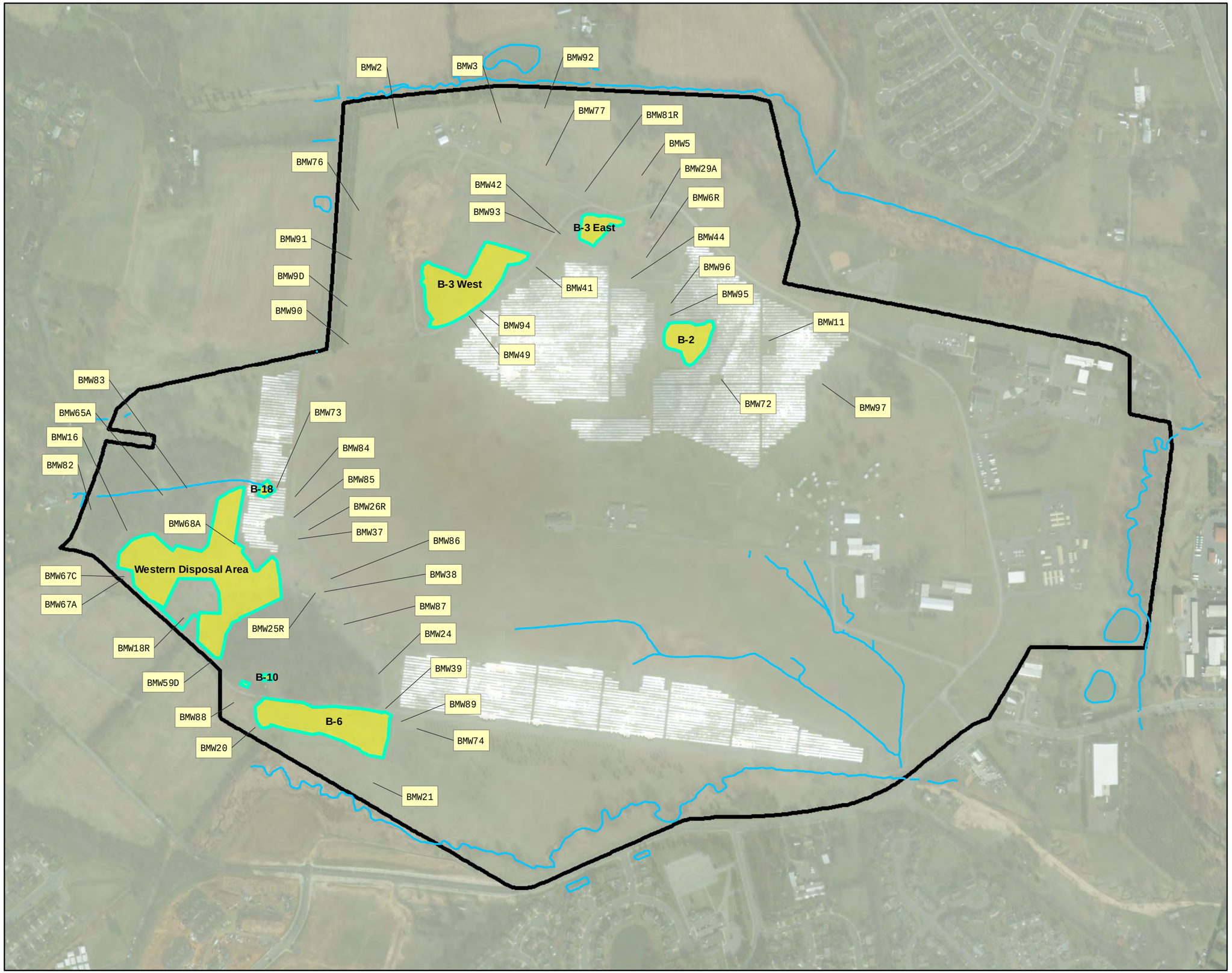
Date: 1 December 2016
By: J. Gatherer

FIGURE A.7.3.4-2

Site Layout

FT. DETRICK
GIS File Path:
C:\GIS_Projects\Ft_Detrick\Maps\AreaB\AnnualReports\2016 2-1_SiteLayout_AreaB_2016.mxd

Fort Detrick
Frederick, MD



Legend

- Stream
- Landfill Boundary
- Landfill Cap Area
- Area B Boundary

Notes:
In October/November 2017, wells BMW6, BMW18, BMW25, BMW26 and BMW81 were abandoned and replaced. The new wells are identified as BMW6R, BMW18R, BMW25R, BMW26R and BMW81R, respectively.

In addition, sixteen new wells were installed between October 2017 and May 2018. These wells are identified as BMW-82 through BMW-97.

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Semi-Annual Monitoring Report

Date: 18 March 2019
By: J. Gatherer

FIGURE A.7.3.4-3

Area B Landfill Groundwater Monitoring Network

Fort Detrick
Frederick, MD

FT. DETRICK
GIS File Path:

C:\GIS_Projects\Ft_Detrick\Maps\AreaB\AnnualReports\2016 3-1_MonitoringNetwork_AreaB_2016.mxd

BMW2 (369.37)
BMW3 (361.10)
BMW92 (353.43)
BMW77 (358.76)
BMW81R (352.67)
BMW5 (353.21)
BMW76 (372.39)
BMW93 (387.72)
BMW29A (351.23)
BMW6R (352.93)
BMW91 (376.27)
BMW42 (375.16)
B-3 East
BMW44 (356.53)
BMW9D (373.43)
B-3 West
BMW96 (NM)
BMW95 (NM)
BMW90 (368.52)
BMW41 (386.02)
BMW11 (347.80)
B-2
BMW94 (372.86)
BMW97 (346.03)
BMW49 (372.10)
BMW83 (386.58)
BMW73 (NM)
BMW72 (345.14)
BMW84 (364.36)
BMW65A (372.17)
BMW85 (362.78)
BMW37 (364.00)
BMW82 (379.91)
B-18
BMW26R (362.41)
BMW16 (373.28)
BMW68A (363.80)
BMW86 (359.79)
BMW38 (361.93)
Western Disposal Area
BMW67A (370.50)
BMW25R (361.09)
BMW67C (370.47)
BMW87 (359.83)
BMW18R (363.39)
BMW24 (359.79)
BMW59D (364.74)
B-10
BMW39 (358.26)
BMW88 (363.56)
B-6
BMW74 (357.05)
BMW20 (364.89)
BMW89 (357.05)
BMW21 (359.04)

Legend

sqryWaterLevels_201811_AreaB Events
Landfill Boundary
Landfill Cap Area
Area B Boundary
Stream

Notes:
1) Elevation data are shown as ft MSL.

NM = Not measured

In October/November 2017, wells BMW6, BMW18, BMW25, BMW26 and BMW81 were abandoned and replaced. The new wells are identified as BMW6R, BMW18R, BMW25R, BMW26R and BMW81R, respectively.

In addition, sixteen new wells were installed between October 2017 and May 2018. These wells are identified as BMW-82 through BMW-97.

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Semi-Annual Monitoring Report

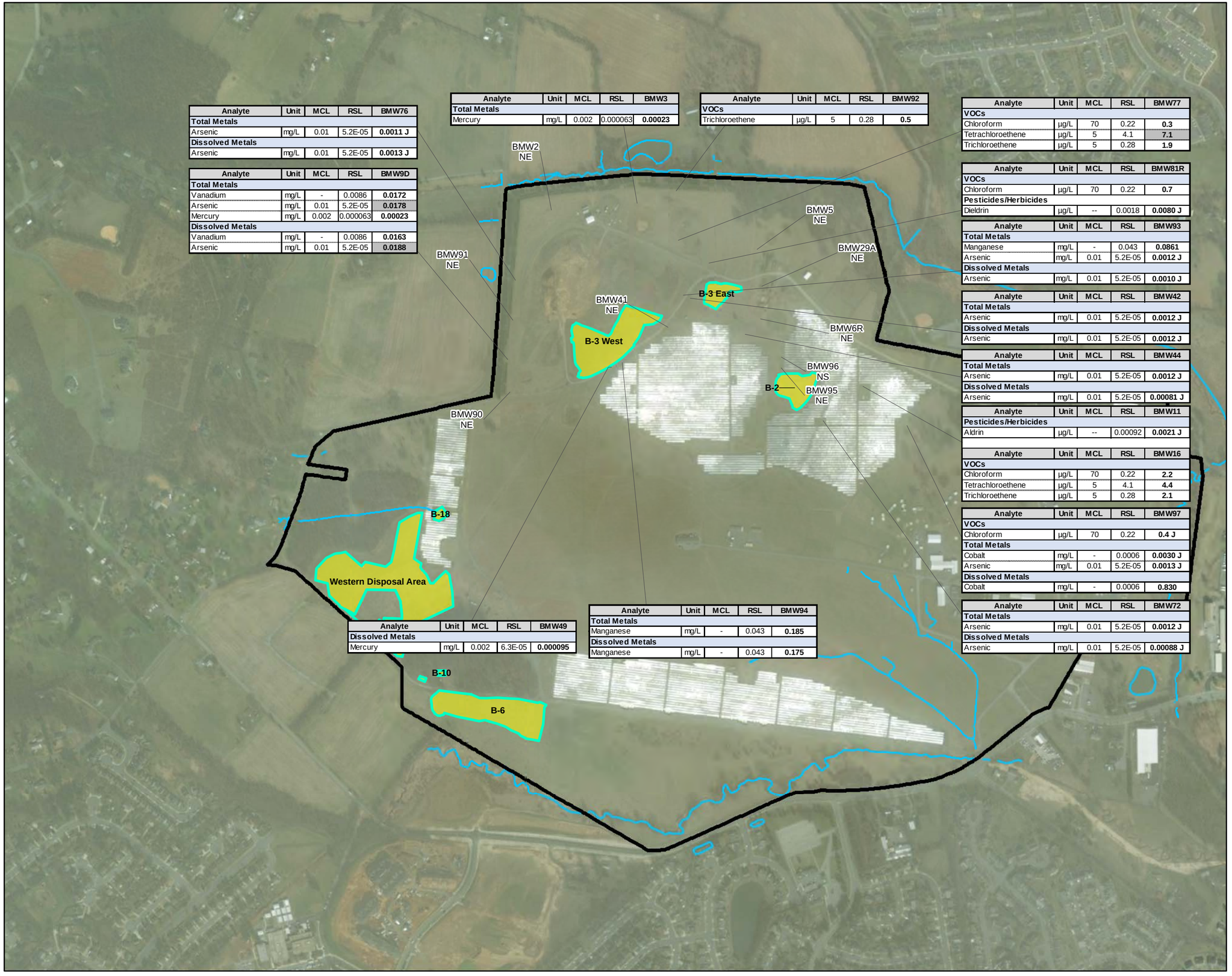
Date: 31 October 2019
By: J. Gatherer

FIGURE A.7.3.4-4
Groundwater Elevations November/ December 2019

Fort Detrick
Frederick, MD

FT. DETRICK
GIS File Path:

C:\GIS_Projects\Ft_Detrick\Maps\AreaB\AnnualReports\2016 3-1_MonitoringNetwork_AreaB_2016.mxd



Analyte	Unit	MCL	RSL	BMW76
Total Metals				
Arsenic	mg/L	0.01	5.2E-05	**0.0011 J**
Dissolved Metals				
Arsenic	mg/L	0.01	5.2E-05	**0.0013 J**

Analyte	Unit	MCL	RSL	BMW9D
Total Metals				
Vanadium	mg/L	-	0.0086	**0.0172**
Arsenic	mg/L	0.01	5.2E-05	**0.0178**
Mercury	mg/L	0.002	0.000063	**0.00023**
Dissolved Metals				
Vanadium	mg/L	-	0.0086	**0.0163**
Arsenic	mg/L	0.01	5.2E-05	**0.0188**

Analyte	Unit	MCL	RSL	BMW3
Total Metals				
Mercury	mg/L	0.002	0.000063	**0.00023**

Analyte	Unit	MCL	RSL	BMW92
VOCs				
Trichloroethene	µg/L	5	0.28	**0.5**

Analyte	Unit	MCL	RSL	BMW77
VOCs				
Chloroform	µg/L	70	0.22	**0.3**
Tetrachloroethene	µg/L	5	4.1	**7.1**
Trichloroethene	µg/L	5	0.28	**1.9**

Analyte	Unit	MCL	RSL	BMW81R
VOCs				
Chloroform	µg/L	70	0.22	**0.7**
Pesticides/Herbicides				
Dieldrin	µg/L	--	0.0018	**0.0080 J**

Analyte	Unit	MCL	RSL	BMW93
Total Metals				
Manganese	mg/L	-	0.043	**0.0861**
Arsenic	mg/L	0.01	5.2E-05	**0.0012 J**
Dissolved Metals				
Arsenic	mg/L	0.01	5.2E-05	**0.0010 J**

Analyte	Unit	MCL	RSL	BMW42
Total Metals				
Arsenic	mg/L	0.01	5.2E-05	**0.0012 J**
Dissolved Metals				
Arsenic	mg/L	0.01	5.2E-05	**0.0012 J**

Analyte	Unit	MCL	RSL	BMW44
Total Metals				
Arsenic	mg/L	0.01	5.2E-05	**0.0012 J**
Dissolved Metals				
Arsenic	mg/L	0.01	5.2E-05	**0.00081 J**

Analyte	Unit	MCL	RSL	BMW11
Pesticides/Herbicides				
Aldrin	µg/L	--	0.00092	**0.0021 J**

Analyte	Unit	MCL	RSL	BMW16
VOCs				
Chloroform	µg/L	70	0.22	**2.2**
Tetrachloroethene	µg/L	5	4.1	**4.4**
Trichloroethene	µg/L	5	0.28	**2.1**

Analyte	Unit	MCL	RSL	BMW97
VOCs				
Chloroform	µg/L	70	0.22	**0.4 J**
Total Metals				
Cobalt	mg/L	-	0.0006	**0.0030 J**
Arsenic	mg/L	0.01	5.2E-05	**0.0013 J**
Dissolved Metals				
Cobalt	mg/L	-	0.0006	**0.830**

Analyte	Unit	MCL	RSL	BMW72
Total Metals				
Arsenic	mg/L	0.01	5.2E-05	**0.0012 J**
Dissolved Metals				
Arsenic	mg/L	0.01	5.2E-05	**0.00088 J**

Analyte	Unit	MCL	RSL	BMW49
Dissolved Metals				
Mercury	mg/L	0.002	6.3E-05	**0.000095**

Analyte	Unit	MCL	RSL	BMW94
Total Metals				
Manganese	mg/L	-	0.043	**0.185**
Dissolved Metals				
Manganese	mg/L	-	0.043	**0.175**

Legend

- Landfill Boundary
- Landfill Cap Area
- Area B Boundary
- Stream

Notes:
1. Results in parentheses indicate duplicate sample results.
MCL = Maximum Contaminant Level
RSL = USEPA Regional Screening level for tapwater (THQ = 0.1)
µg/L = micrograms per liter
mg/L = milligrams per liter
J = Estimated
NS = Not Sampled
NE = No Exceedances

Results that are both bolded and shaded exceed both the RSL and MCL.

In October/November 2017, wells BMW6, BMW18, BMW25, BMW26 and BMW81 were abandoned and replaced. The new wells are identified as BMW6R, BMW18R, BMW25R, BMW26R and BMW81R, respectively.

In addition, sixteen new wells were installed between October 2017 and May 2018. These wells are identified as BMW-82 through BMW-97.

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

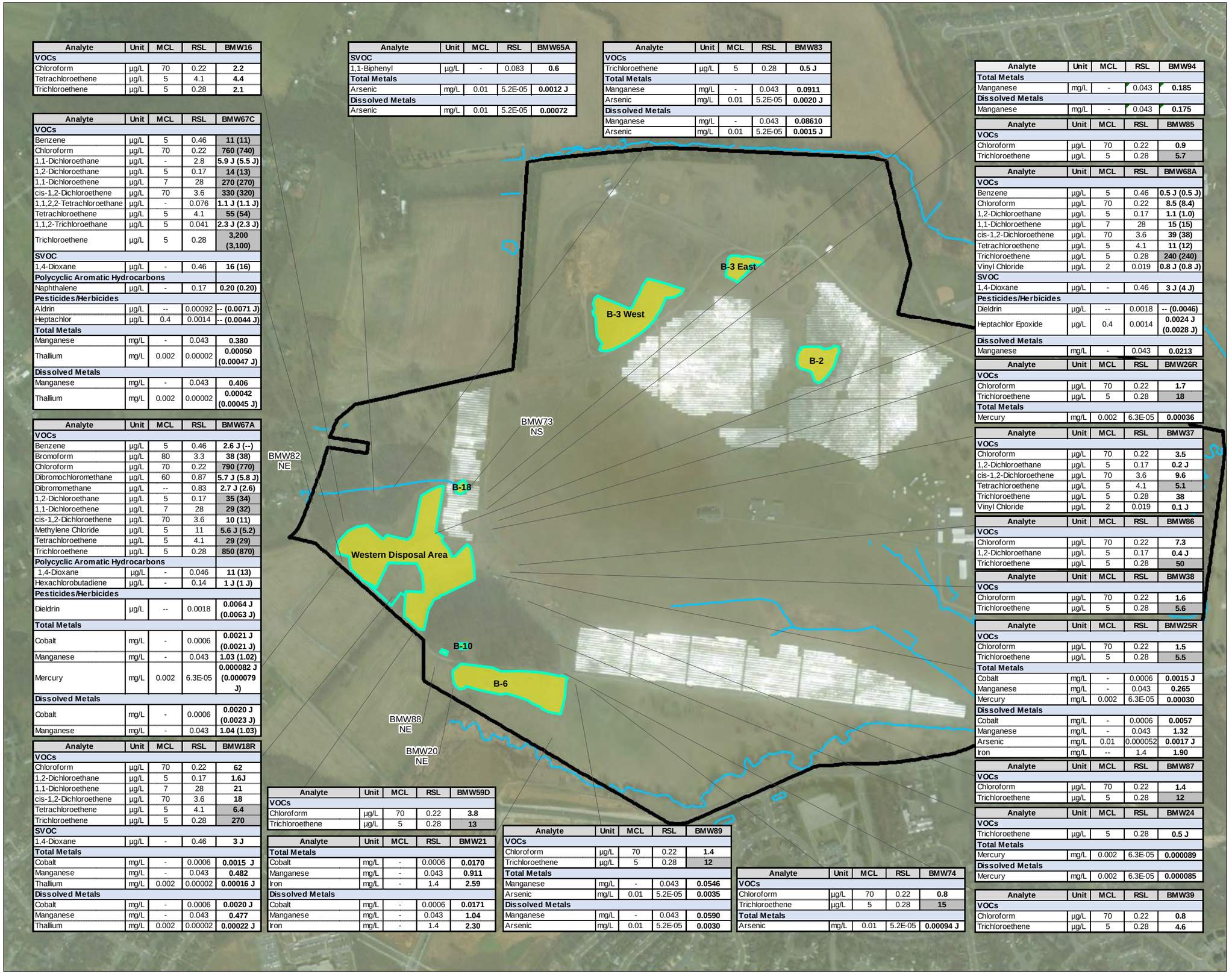
Area B Landfill
Semi-Annual Monitoring Report

Date: 31 October 2019
By: J. Gatherer

FIGURE A.7.3.4-5
Analytical Results Above the MCL/RSL November/ December 2018

FT. DETRICK
GIS File Path:
C:\GIS_Projects\Ft_Detrick\Maps\AreaB\SemiAnnualReports\2016\November 5-2_ResultsAboveMCL_AreaB_2016.mxd

Fort Detrick
Frederick, MD



Analyte	Unit	MCL	RSL	BMW16
VOCs				
Chloroform	µg/L	70	0.22	**2.2**
Tetrachloroethene	µg/L	5	4.1	**4.4**
Trichloroethene	µg/L	5	0.28	**2.1**

Analyte	Unit	MCL	RSL	BMW67C
VOCs				
Benzene	µg/L	5	0.46	**11 (11)**
Chloroform	µg/L	70	0.22	**760 (740)**
1,1-Dichloroethane	µg/L	-	2.8	**5.9 J (5.5 J)**
1,2-Dichloroethane	µg/L	5	0.17	**14 (13)**
1,1-Dichloroethene	µg/L	7	28	**270 (270)**
cis-1,2-Dichloroethene	µg/L	70	3.6	**330 (320)**
1,1,2,2-Tetrachloroethane	µg/L	-	0.076	**1.1 J (1.1 J)**
Tetrachloroethene	µg/L	5	4.1	**55 (54)**
1,1,2-Trichloroethane	µg/L	5	0.041	**2.3 J (2.3 J)**
Trichloroethene	µg/L	5	0.28	**3,200 (3,100)**
SVOC				
1,4-Dioxane	µg/L	-	0.46	**16 (16)**
Polycyclic Aromatic Hydrocarbons				
Naphthalene	µg/L	-	0.17	**0.20 (0.20)**
Pesticides/Herbicides				
Aldrin	µg/L	--	0.00092	**-- (0.0071 J)**
Heptachlor	µg/L	0.4	0.0014	**-- (0.0044 J)**
Total Metals				
Manganese	mg/L	-	0.043	**0.380**
Thallium	mg/L	0.002	0.00002	**0.00050 (0.00047 J)**
Dissolved Metals				
Manganese	mg/L	-	0.043	**0.406**
Thallium	mg/L	0.002	0.00002	**0.00042 (0.00045 J)**

Analyte	Unit	MCL	RSL	BMW67A
VOCs				
Benzene	µg/L	5	0.46	**2.6 J (--)**
Bromoform	µg/L	80	3.3	**38 (38)**
Chloroform	µg/L	70	0.22	**790 (770)**
Dibromochloromethane	µg/L	60	0.87	**5.7 J (5.8 J)**
Dibromomethane	µg/L	--	0.83	**2.7 J (2.6)**
1,2-Dichloroethane	µg/L	5	0.17	**35 (34)**
1,1-Dichloroethene	µg/L	7	28	**29 (32)**
cis-1,2-Dichloroethene	µg/L	70	3.6	**10 (11)**
Methylene Chloride	µg/L	5	11	**5.6 J (5.2)**
Tetrachloroethene	µg/L	5	4.1	**29 (29)**
Trichloroethene	µg/L	5	0.28	**850 (870)**
Polycyclic Aromatic Hydrocarbons				
1,4-Dioxane	µg/L	-	0.046	**11 (13)**
Hexachlorobutadiene	µg/L	-	0.14	**1 J (1 J)**
Pesticides/Herbicides				
Dieldrin	µg/L	--	0.0018	**0.0064 J (0.0063 J)**
Total Metals				
Cobalt	mg/L	-	0.0006	**0.0021 J (0.0021 J)**
Manganese	mg/L	-	0.043	**1.03 (1.02)**
Mercury	mg/L	0.002	6.3E-05	**0.000082 J (0.000079 J)**
Dissolved Metals				
Cobalt	mg/L	-	0.0006	**0.0020 J (0.0023 J)**
Manganese	mg/L	-	0.043	**1.04 (1.03)**

Analyte	Unit	MCL	RSL	BMW18R
VOCs				
Chloroform	µg/L	70	0.22	**62**
1,2-Dichloroethane	µg/L	5	0.17	**1.6J**
1,1-Dichloroethene	µg/L	7	28	**21**
cis-1,2-Dichloroethene	µg/L	70	3.6	**18**
Tetrachloroethene	µg/L	5	4.1	**6.4**
Trichloroethene	µg/L	5	0.28	**270**
SVOC				
1,4-Dioxane	µg/L	-	0.46	**3 J**
Total Metals				
Cobalt	mg/L	-	0.0006	**0.0015 J**
Manganese	mg/L	-	0.043	**0.482**
Thallium	mg/L	0.002	0.00002	**0.00016 J**
Dissolved Metals				
Cobalt	mg/L	-	0.0006	**0.0020 J**
Manganese	mg/L	-	0.043	**0.477**
Thallium	mg/L	0.002	0.00002	**0.00022 J**

Analyte	Unit	MCL	RSL	BMW65A
SVOC				
1,1-Biphenyl	µg/L	-	0.083	**0.6**
Total Metals				
Arsenic	mg/L	0.01	5.2E-05	**0.0012 J**
Dissolved Metals				
Arsenic	mg/L	0.01	5.2E-05	**0.00072**

Analyte	Unit	MCL	RSL	BMW83
VOCs				
Trichloroethene	µg/L	5	0.28	**0.5 J**
Total Metals				
Manganese	mg/L	-	0.043	**0.0911**
Arsenic	mg/L	0.01	5.2E-05	**0.0020 J**
Dissolved Metals				
Manganese	mg/L	-	0.043	**0.08610**
Arsenic	mg/L	0.01	5.2E-05	**0.0015 J**

Analyte	Unit	MCL	RSL	BMW94
Total Metals				
Manganese	mg/L	-	0.043	**0.185**
Dissolved Metals				
Manganese	mg/L	-	0.043	**0.175**

Analyte	Unit	MCL	RSL	BMW85
VOCs				
Chloroform	µg/L	70	0.22	**0.9**
Trichloroethene	µg/L	5	0.28	**5.7**

Analyte	Unit	MCL	RSL	BMW68A
VOCs				
Benzene	µg/L	5	0.46	**0.5 J (0.5 J)**
Chloroform	µg/L	70	0.22	**8.5 (8.4)**
1,2-Dichloroethane	µg/L	5	0.17	**1.1 (1.0)**
1,1-Dichloroethene	µg/L	7	28	**15 (15)**
cis-1,2-Dichloroethene	µg/L	70	3.6	**39 (38)**
Tetrachloroethene	µg/L	5	4.1	**11 (12)**
Trichloroethene	µg/L	5	0.28	**240 (240)**
Vinyl Chloride	µg/L	2	0.019	**0.8 J (0.8 J)**
SVOC				
1,4-Dioxane	µg/L	-	0.46	**3 J (4 J)**
Pesticides/Herbicides				
Dieldrin	µg/L	--	0.0018	**-- (0.0046)**
Heptachlor Epoxide	µg/L	0.4	0.0014	**0.0024 J (0.0028 J)**
Dissolved Metals				
Manganese	mg/L	-	0.043	**0.0213**

Analyte	Unit	MCL	RSL	BMW26R
VOCs				
Chloroform	µg/L	70	0.22	**1.7**
Trichloroethene	µg/L	5	0.28	**18**
Total Metals				
Mercury	mg/L	0.002	6.3E-05	**0.00036**

Analyte	Unit	MCL	RSL	BMW37
VOCs				
Chloroform	µg/L	70	0.22	**3.5**
1,2-Dichloroethane	µg/L	5	0.17	**0.2 J**
cis-1,2-Dichloroethene	µg/L	70	3.6	**9.6**
Tetrachloroethene	µg/L	5	4.1	**5.1**
Trichloroethene	µg/L	5	0.28	**38**
Vinyl Chloride	µg/L	2	0.019	**0.1 J**

Analyte	Unit	MCL	RSL	BMW86
VOCs				
Chloroform	µg/L	70	0.22	**7.3**
1,2-Dichloroethane	µg/L	5	0.17	**0.4 J**
Trichloroethene	µg/L	5	0.28	**50**

Analyte	Unit	MCL	RSL	BMW38
VOCs				
Chloroform	µg/L	70	0.22	**1.6**
Trichloroethene	µg/L	5	0.28	**5.6**

Analyte	Unit	MCL	RSL	BMW25R
VOCs				
Chloroform	µg/L	70	0.22	**1.5**
Trichloroethene	µg/L	5	0.28	**5.5**
Total Metals				
Cobalt	mg/L	-	0.0006	**0.0015 J**
Manganese	mg/L	-	0.043	**0.265**
Mercury	mg/L	0.002	6.3E-05	**0.00030**
Dissolved Metals				
Cobalt	mg/L	-	0.0006	**0.0057**
Manganese	mg/L	-	0.043	**1.32**
Arsenic	mg/L	0.01	0.000052	**0.0017 J**
Iron	mg/L	--	1.4	**1.90**

Analyte	Unit	MCL	RSL	BMW87
VOCs				
Chloroform	µg/L	70	0.22	**1.4**
Trichloroethene	µg/L	5	0.28	**12**

Analyte	Unit	MCL	RSL	BMW24
VOCs				
Trichloroethene	µg/L	5	0.28	**0.5 J**
Total Metals				
Mercury	mg/L	0.002	6.3E-05	**0.000089**
Dissolved Metals				
Mercury	mg/L	0.002	6.3E-05	**0.000085**

Analyte	Unit	MCL	RSL	BMW39
VOCs				
Chloroform	µg/L	70	0.22	**0.8**
Trichloroethene	µg/L	5	0.28	**4.6**

Analyte	Unit	MCL	RSL	BMW59D
VOCs				
Chloroform	µg/L	70	0.22	**3.8**
Trichloroethene	µg/L	5	0.28	**13**

Analyte	Unit	MCL	RSL	BMW21
Total Metals				
Cobalt	mg/L	-	0.0006	**0.0170**
Manganese	mg/L	-	0.043	**0.911**
Iron	mg/L	-	1.4	**2.59**
Dissolved Metals				
Cobalt	mg/L	-	0.0006	**0.0171**
Manganese	mg/L	-	0.043	**1.04**
Iron	mg/L	-	1.4	**2.30**

Analyte	Unit	MCL	RSL	BMW89
VOCs				
Chloroform	µg/L	70	0.22	**1.4**
Trichloroethene	µg/L	5	0.28	**12**
Total Metals				
Manganese	mg/L	-	0.043	**0.0546**
Arsenic	mg/L	0.01	5.2E-05	**0.0035**
Dissolved Metals				
Manganese	mg/L	-	0.043	**0.0590**
Arsenic	mg/L	0.01	5.2E-05	**0.0030**

Analyte	Unit	MCL	RSL	BMW74
VOCs				
Chloroform	µg/L	70	0.22	**0.8**
Trichloroethene	µg/L	5	0.28	**15**
Total Metals				
Arsenic	mg/L	0.01	5.2E-05	**0.00094 J**

Legend

- Landfill Boundary
- Landfill Cap Area
- Area B Boundary
- Stream

Notes:
1. Results in parentheses indicate duplicate sample results.
MCL = Maximum Contaminant Level
RSL = USEPA Regional Screening level for tapwater (THQ = 0.1)
µg/L = micrograms per liter
mg/L = milligrams per liter
J = Estimated
NS = Not Sampled
NE = No Exceedances

Results that are both bolded and shaded exceed both the RSL and MCL.

In October/November 2017, wells BMW6, BMW18, BMW25, BMW26 and BMW81 were abandoned and replaced. The new wells are identified as BMW6R, BMW18R, BMW25R, BMW26R and BMW81R, respectively.

In addition, sixteen new wells were installed between October 2017 and May 2018. These wells are identified as BMW-82 through BMW-97.

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Semi-Annual Monitoring Report

Date: 31 October 2019
By: J. Gatherer

FIGURE A.7.3.4-6
Analytical Results Above the MCL/RSL November/ December 2018

FT. DETRICK
GIS File Path:
C:\GIS_Projects\Ft_Detrick\Maps\AreaB\SemiAnnualReports\2016\November 5-2_ResultsAboveMCL_AreaB_2016.mxd

Fort Detrick
Frederick, MD

Attachment 7.4.1
Sentinel Monitoring Program Tables and Figures
September 2014

(PIKA International, Inc./ARCADIS, 2016)

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Attachment 7.4.1
Tables

Table A.7.4.1-1
Monitoring Well Data Table
Area B Groundwater, Fort Detrick, Maryland
September October 2014

				Sample ID:	FTD72-BMW24D(093014)			FTD72-BMW77(092914)			FTD72-BMW70A(092914)			FTD72-FD01(092914)			FTD72-BMW59D(100114)		
				Sample Date:	9/30/2014			9/29/2014			9/29/2014			9/29/2014			10/1/2014		
Analysis Name	**Units**	**Regional Screening Levels (RSLs)**	**Maximum Contaminant Levels (MCLs)**		**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**
Acetone	µg/L	14000			N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	µg/L	0.46	5		N.D.			**0.3**	**J**		N.D.			N.D.			N.D.		
Bromodichloromethane	µg/L	0.13	80		N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	µg/L	3.3	80		N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	µg/L	7.5			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	µg/L	5600			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	µg/L	810			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	µg/L	0.46	5		N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	µg/L	78	100		N.D.			**0.4**	**J**		N.D.			N.D.			N.D.		
Chloroethane	µg/L	21000			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	µg/L	0.22	70*		**3.6**			**0.7**			N.D.			N.D.			**6.7**		
Chloromethane	µg/L	190			N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	µg/L	13000			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	µg/L	0.00033	0.2		N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	µg/L	0.87	80		N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	µg/L	0.0075	0.05		N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	µg/L	300	600		N.D.			**0.3**	**J**		N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	µg/L				N.D.			**0.4**	**J**		N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	µg/L	0.48	75		N.D.			**0.4**	**J**		N.D.			N.D.			N.D.		
Dichlorodifluoromethane	µg/L	200			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	µg/L	2.8			N.D.			**0.3**	**J**		N.D.			N.D.			N.D.		
1,2-Dichloroethane	µg/L	0.17	5		N.D.			**0.1**	**J**		N.D.			N.D.			**0.2**	**J**	
1,1-Dichloroethene	µg/L	280	7		**0.7**			**7.9**			N.D.			N.D.			**1.4**		
cis-1,2-Dichloroethene	µg/L	36	70		**0.4**	**J**		**2.2**			N.D.			N.D.			**0.7**		
trans-1,2-Dichloroethene	µg/L	360	100		N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	µg/L	0.44	5		N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	µg/L				N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	µg/L				N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	µg/L	1.5			N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	µg/L	55000			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	µg/L	38			N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	µg/L	450			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	µg/L	20000			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	µg/L	14			N.D.			N.D.			N.D.			N.D.			N.D.		
4-Methyl-2-Pentanone	µg/L	6300			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	µg/L				N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	µg/L	11	5		N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	µg/L	1200	100		N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	µg/L	0.076			N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	µg/L	11	5		**120**			**28**			N.D.			N.D.			**0.7**		
Toluene	µg/L	1100	1000		**0.2**	**J**		N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	µg/L	7			N.D.			**4.2**			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	µg/L	1.2	70		N.D.			**12**			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	µg/L	8000	200		**0.2**	**J**		**0.2**	**J**		N.D.			N.D.			**0.4**	**J**	
1,1,2-Trichloroethane	µg/L	0.28	5		N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	µg/L	0.49	5		**10**			**11**			N.D.			N.D.			**20**		
Trichlorofluoromethane	µg/L	5200			**3.8**			N.D.			N.D.			N.D.			**7.8**		
Vinyl Chloride	µg/L	0.019	2		N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	µg/L	190			**0.2**	**J**		N.D.			N.D.			N.D.			N.D.		
o-Xylene	µg/L	190			N.D.			N.D.			N.D.			N.D.			N.D.		

Notes:

* Maximum Contaminant Level Goal for Chloroform

Bold Contaminant detected above laboratory method detection limit

Bold Contaminant detected above screening criteria (i.e., MCL or Maximum Contaminant Level Goal for Chloroform)

Underlined Contaminant detected above Risk Screening Levels

µg/L micrograms per liter

J Estimated value – The result is > the Method Detection Limit and < the Limit of Quantitation

UJ Indicates the compound or element was analyzed for but not detected. The sample detection limit is an estimated value.

N.D. None detected

K Indicates the reported value may be biased high.

N.S. Not Sampled

Table A.7.4.1-1
Monitoring Well Data Table
Area B Groundwater, Fort Detrick, Maryland
September October 2014

				Sample ID:	FTD72-BMW18(092914)			FTD72-BMW66D(100214)			FTD72-BMW58D(093014			FTD72-BMW32D(100214)			FTD72-BMW69A(100114)		
				Sample Date:	9/29/2014			10/2/2014			9/30/2014			10/20/2014			10/1/2014		
Analysis Name	Units	Regional Screening Levels (RSLs)	Maximum Contaminant Levels (MCLs)		Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	µg/L	14000			N.S.			N.D.			N.D.			N.D.			N.D.		
Benzene	µg/L	0.46	5		N.S.			N.D.			N.D.			N.D.			N.D.		
Bromodichloromethane	µg/L	0.13	80		N.S.			N.D.			N.D.			N.D.			N.D.		
Bromoform	µg/L	3.3	80		N.S.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	µg/L	7.5			N.S.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	µg/L	5600			N.S.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	µg/L	810			N.S.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	µg/L	0.46	5		N.S.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	µg/L	78	100		N.S.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	µg/L	21000			N.S.			N.D.			N.D.			N.D.			N.D.		
Chloroform	µg/L	0.22	70*		N.S.			**2.5**			**14**			N.D.			N.D.		
Chloromethane	µg/L	190			N.S.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	µg/L	13000			N.S.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	µg/L	0.00033	0.2		N.S.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	µg/L	0.87	80		N.S.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	µg/L	0.0075	0.05		N.S.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	µg/L	300	600		N.S.			N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	µg/L				N.S.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	µg/L	0.48	75		N.S.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	µg/L	200			N.S.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	µg/L	2.8			N.S.			N.D.			**0.2**	**J**		N.D.			N.D.		
1,2-Dichloroethane	µg/L	0.17	5		N.S.			N.D.			**0.4**	**J**		N.D.			N.D.		
1,1-Dichloroethene	µg/L	280	7		N.S.			**0.9**			**4.2**			N.D.			N.D.		
cis-1,2-Dichloroethene	µg/L	36	70		N.S.			**0.9**			**2.6**			N.D.			N.D.		
trans-1,2-Dichloroethene	µg/L	360	100		N.S.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	µg/L	0.44	5		N.S.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	µg/L				N.S.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	µg/L				N.S.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	µg/L	1.5			N.S.			N.D.			N.D.			N.D.			N.D.		
Freon 113	µg/L	55000			N.S.			N.D.			**0.3**	**J**		N.D.			N.D.		
2-Hexanone	µg/L	38			N.S.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	µg/L	450			N.S.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	µg/L	20000			N.S.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	µg/L	14			N.S.			N.D.			N.D.			N.D.			N.D.		
4-Methyl-2-Pentanone	µg/L	6300			N.S.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	µg/L				N.S.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	µg/L	11	5		N.S.			N.D.			N.D.			N.D.			N.D.		
Styrene	µg/L	1200	100		N.S.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	µg/L	0.076			N.S.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	µg/L	11	5		N.S.			**0.7**			**1.4**			N.D.			N.D.		
Toluene	µg/L	1100	1000		N.S.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	µg/L	7			N.S.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	µg/L	1.2	70		N.S.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	µg/L	8000	200		N.S.			**0.3**	**J**		**0.8**			N.D.			N.D.		
1,1,2-Trichloroethane	µg/L	0.28	5		N.S.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	µg/L	0.49	5		N.S.			**13**			**44**			**0.1**	**J**		N.D.		
Trichlorofluoromethane	µg/L	5200			N.S.			**2.7**			**11**			N.D.			N.D.		
Vinyl Chloride	µg/L	0.019	2		N.S.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	µg/L	190			N.S.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	µg/L	190			N.S.			N.D.			N.D.			N.D.			N.D.		

Notes:

* Maximum Contaminant Level Goal for Chloroform

Bold Contaminant detected above laboratory method detection limit

Bold Contaminant detected above screening criteria (i.e., MCL or Maximum Contaminant Level Goal for Chloroform)

Underlined Contaminant detected above Risk Screening Levels

µg/L micrograms per liter

J Estimated value – The result is > the Method Detection Limit and < the Limit of Quantitation

UJ Indicates the compound or element was analyzed for but not detected. The sample detection limit is an estimated value.

N.D. None detected

K Indicates the reported value may be biased high.

N.S. Not Sampled

Table A.7.4.1-1
Monitoring Well Data Table
Area B Groundwater, Fort Detrick, Maryland
September October 2014

			Sample ID:	FTD72-BMW20D(093014)			FTD72-BMW71C(100214)			FTD72-BMW53F(100214)			FTD72-BMW56D(100314)			FTD72-BMW68D(100314)		
			Sample Date:	9/30/2014			10/2/2014			10/2/2014			10/3/2014			10/3/2014		
Analysis Name	**Units**	**Regional Screening Levels (RSLs)**	**Maximum Contaminant Levels (MCLs)**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**
Acetone	µg/L	14000		N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	µg/L	0.46	5	N.D.			N.D.			N.D.			**48**			**9.6**	**J**	
Bromodichloromethane	µg/L	0.13	80	N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	µg/L	3.3	80	N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	µg/L	7.5		N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	µg/L	5600		N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	µg/L	810		N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	µg/L	0.46	5	N.D.			N.D.			**0.1**	**J**		N.D.			N.D.		
Chlorobenzene	µg/L	78	100	N.D.			N.D.			N.D.			**4.9**	**J**		N.D.		
Chloroethane	µg/L	21000		N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	µg/L	0.22	70*	N.D.			**0.7**			**8.8**			**440**			**380**		
Chloromethane	µg/L	190		N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	µg/L	13000		N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	µg/L	0.00033	0.2	N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	µg/L	0.87	80	N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	µg/L	0.0075	0.05	N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	µg/L	300	600	N.D.			N.D.			N.D.			**3.0**	**J**		N.D.		
1,3-Dichlorobenzene	µg/L			N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	µg/L	0.48	75	N.D.			N.D.			N.D.			**3.3**	**J**		N.D.		
Dichlorodifluoromethane	µg/L	200		N.D.			N.D.			N.D.			**3.4**	**J**		**2.3**	**J**	
1,1-Dichloroethane	µg/L	2.8		N.D.			N.D.			N.D.			**11**			**5.6**	**J**	
1,2-Dichloroethane	µg/L	0.17	5	N.D.			N.D.			**0.3**	**J**		**23**			**22**		
1,1-Dichloroethene	µg/L	280	7	N.D.			**0.2**	**J**		**2.8**			**190**			**110**		
cis-1,2-Dichloroethene	µg/L	36	70	N.D.			N.D.			**1.2**			**480**			**150**		
trans-1,2-Dichloroethene	µg/L	360	100	N.D.			N.D.			N.D.			**1.3**	**J**		N.D.		
1,2-Dichloropropane	µg/L	0.44	5	N.D.			N.D.			N.D.			**2.0**	**J**		**2.3**	**J**	
cis-1,3-Dichloropropene	µg/L			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	µg/L			N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	µg/L	1.5		N.D.			**0.3**	**J**		N.D.			**19**	**J**		N.D.		
Freon 113	µg/L	55000		N.D.			N.D.			N.D.			**12**			**4.7**	**J**	
2-Hexanone	µg/L	38		N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	µg/L	450		N.D.			N.D.			N.D.			**1.2**	**J**		N.D.		
Methyl Acetate	µg/L	20000		N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	µg/L	14		N.D.			N.D.			N.D.			N.D.			N.D.		
4-Methyl-2-Pentanone	µg/L	6300		N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	µg/L			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	µg/L	11	5	N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	µg/L	1200	100	N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	µg/L	0.076		N.D.			N.D.			N.D.			**1.9**	**J**		N.D.		
Tetrachloroethene	µg/L	11	5	**0.2**	**J**		**0.2**	**J**		**0.8**			**120**			**52**		
Toluene	µg/L	1100	1000	N.D.			N.D.			N.D.			**1.5**	**J**		N.D.		
1,2,3-Trichlorobenzene	µg/L	7		N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	µg/L	1.2	70	N.D.			N.D.			N.D.			**110**			**5.5**	**J**	
1,1,1-Trichloroethane	µg/L	8000	200	N.D.			N.D.			**0.9**			**48**			**29**		
1,1,2-Trichloroethane	µg/L	0.28	5	N.D.			N.D.			N.D.			**3.3**	**J**		N.D.		
Trichloroethene	µg/L	0.49	5	N.D.			**1.5**			**29**			**3,500**			**2,200**		
Trichlorofluoromethane	µg/L	5200		N.D.			**1.2**			**11**			**160**			**170**		
Vinyl Chloride	µg/L	0.019	2	N.D.			N.D.			N.D.			**16**			**2.2**	**J**	
m+p-Xylene	µg/L	190		N.D.			**1.2**			N.D.			N.D.			N.D.		
o-Xylene	µg/L	190		N.D.			**0.3**	**J**		N.D.			**7.0**	**J**		N.D.		

Notes:

* Maximum Contaminant Level Goal for Chloroform

Bold Contaminant detected above laboratory method detection limit

Bold (shaded) Contaminant detected above screening criteria (i.e., MCL or Maximum Contaminant Level Goal for Chloroform)

Underlined Contaminant detected above Risk Screening Levels

µg/L micrograms per liter

J Estimated value – The result is > the Method Detection Limit and < the Limit of Quantitation

UJ Indicates the compound or element was analyzed for but not detected. The sample detection limit is an estimated value.

N.D. None detected

K Indicates the reported value may be biased high.

N.S. Not Sampled

Table A.7.4.1-1
Monitoring Well Data Table
Area B Groundwater, Fort Detrick, Maryland
September October 2014

			Sample ID:	FTD72-BMW67C(100214)			FTD72-IDW01(093014)			FTD72-IDW02(100214)			FTD72-IDW03(100214)		
			Sample Date:	10/2/2014			9/30/2014			10/2/2014			10/2/2014		
Analysis Name	**Units**	**Regional Screening Levels (RSLs)**	**Maximum Contaminant Levels (MCLs)**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**
Acetone	µg/L	14000		N.D.			N.D.			N.D.			N.D.		
Benzene	µg/L	0.46	5	**39**			N.D.			N.D.			N.D.		
Bromodichloromethane	µg/L	0.13	80	N.D.			N.D.			N.D.			N.D.		
Bromoform	µg/L	3.3	80	N.D.			N.D.			N.D.			N.D.		
Bromomethane	µg/L	7.5		N.D.			N.D.			N.D.			N.D.		
2-Butanone	µg/L	5600		N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	µg/L	810		N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	µg/L	0.46	5	N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	µg/L	78	100	N.D.			**0.1**	**J**		N.D.			**0.4**	**J**	
Chloroethane	µg/L	21000		N.D.			N.D.			N.D.			N.D.		
Chloroform	µg/L	0.22	70*	**1,200**			**3.2**			**2.4**			N.D.		
Chloromethane	µg/L	190		N.D.			N.D.			N.D.			N.D.		
Cyclohexane	µg/L	13000		N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	µg/L	0.00033	0.2	N.D.			N.D.			N.D			N.D.		
Dibromochloromethane	µg/L	0.87	80	N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	µg/L	0.0075	0.05	N.D.			N.D.			N.D			N.D.		
1,2-Dichlorobenzene	µg/L	300	600	N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	µg/L			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	µg/L	0.48	75	N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	µg/L	200		N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	µg/L	2.8		**18**	**J**		N.D.			N.D.			N.D.		
1,2-Dichloroethane	µg/L	0.17	5	**52**			**0.1**	**J**		N.D.			N.D.		
1,1-Dichloroethene	µg/L	280	7	**560**			**0.8**			**0.5**			N.D.		
cis-1,2-Dichloroethene	µg/L	36	70	**1,100**			**0.5**			**0.4**	**J**		N.D.		
trans-1,2-Dichloroethene	µg/L	360	100	N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	µg/L	0.44	5	N.D.			N.D.			N.D			N.D.		
cis-1,3-Dichloropropene	µg/L			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	µg/L			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	µg/L	1.5		**43**			**0.4**	**J**		**5.7**			**1.1**		
Freon 113	µg/L	55000		**42**			N.D.			N.D.			N.D.		
2-Hexanone	µg/L	38		N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	µg/L	450		N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	µg/L	20000		N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	µg/L	14		N.D.			N.D.			N.D.			N.D.		
4-Methyl-2-Pentanone	µg/L	6300		N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	µg/L			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	µg/L	11	5	N.D.			N.D.			N.D.			N.D.		
Styrene	µg/L	1200	100	N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	µg/L	0.076		**7.3**	**J**		N.D.			N.D.			N.D.		
Tetrachloroethene	µg/L	11	5	**120**			**30**			**0.3**	**J**		**0.8**		
Toluene	µg/L	1100	1000	**8.1**	**J**		**0.9**			N.D.			**4.0**		
1,2,3-Trichlorobenzene	µg/L	7		N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	µg/L	1.2	70	**87**			**0.2**	**J**		N.D.			N.D.		
1,1,1-Trichloroethane	µg/L	8000	200	**260**			**0.2**	**J**		**0.1**	**J**		N.D.		
1,1,2-Trichloroethane	µg/L	0.28	5	**9.4**	**J**		N.D.			N.D.			N.D.		
Trichloroethene	µg/L	0.49	5	**7,400**			**9.5**			**6.7**			**0.2**		
Trichlorofluoromethane	µg/L	5200		**800**			**2.1**			**2.2**			N.D.		
Vinyl Chloride	µg/L	0.019	2	N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	µg/L	190		**90**			**2.0**			**27**			**5.2**		
o-Xylene	µg/L	190		**85**			**0.7**			**12**			**1.7**		

Notes:

* Maximum Contaminant Level Goal for Chloroform

Bold Contaminant detected above laboratory method detection limit

Bold Contaminant detected above screening criteria (i.e., MCL or Maximum Contaminant Level Goal for Chloroform)

Underlined Contaminant detected above Risk Screening Levels

µg/L micrograms per liter

J Estimated value – The result is > the Method Detection Limit and < the Limit of Quantitation

UJ Indicates the compound or element was analyzed for but not detected. The sample detection limit is an estimated value.

N.D. None detected

K Indicates the reported value may be biased high.

N.S. Not Sampled

Table A.7.4.1-1
Monitoring Well Data Table
Area B Groundwater, Fort Detrick, Maryland
September October 2014

				Sample ID:	FTD72-IDW04(100314)			FTD72-2012IDWDRUM(100114)		
				Sample Date:	10/3/2014			10/1/2014		
Analysis Name	Units	Regional Screening Levels (RSLs)	Maximum Contaminant Levels (MCLs)	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	µg/L	14000		N.D.			N.D.		
Benzene	µg/L	0.46	5	**26**			N.D.		
Bromodichloromethane	µg/L	0.13	80	N.D.			N.D.		
Bromoform	µg/L	3.3	80	N.D.			N.D.		
Bromomethane	µg/L	7.5		N.D.			N.D.		
2-Butanone	µg/L	5600		N.D.			N.D.		
Carbon Disulfide	µg/L	810		N.D.			0.6	J	
Carbon Tetrachloride	µg/L	0.46	5	N.D.			N.D.		
Chlorobenzene	µg/L	78	100	N.D.			N.D.		
Chloroethane	µg/L	21000		N.D.			N.D.		
Chloroform	µg/L	0.22	70*	**370**			N.D.		
Chloromethane	µg/L	190		N.D.			N.D.		
Cyclohexane	µg/L	13000		N.D.			N.D.		
1,2-Dibromo-3-chloropropane	µg/L	0.00033	0.2	N.D.			N.D.		
Dibromochloromethane	µg/L	0.87	80	N.D.			N.D.		
1,2-Dibromoethane	µg/L	0.0075	0.05	N.D.			N.D.		
1,2-Dichlorobenzene	µg/L	300	600	N.D.			N.D.		
1,3-Dichlorobenzene	µg/L			N.D.			N.D.		
1,4-Dichlorobenzene	µg/L	0.48	75	N.D.			N.D.		
Dichlorodifluoromethane	µg/L	200		N.D.			N.D.		
1,1-Dichloroethane	µg/L	2.8		**8.9**	J		N.D.		
1,2-Dichloroethane	µg/L	0.17	5	**18**			N.D.		
1,1-Dichloroethene	µg/L	280	7	**150**			N.D.		
cis-1,2-Dichloroethene	µg/L	36	70	**370**			N.D.		
trans-1,2-Dichloroethene	µg/L	360	100	N.D.			N.D.		
1,2-Dichloropropane	µg/L	0.44	5	N.D.			N.D.		
cis-1,3-Dichloropropene	µg/L			N.D.			N.D.		
trans-1,3-Dichloropropene	µg/L			N.D.			N.D.		
Ethylbenzene	µg/L	1.5		**2.6**	J		N.D.		
Freon 113	µg/L	55000		**7.0**	J		N.D.		
2-Hexanone	µg/L	38		N.D.			N.D.		
Isopropylbenzene	µg/L	450		N.D.			N.D.		
Methyl Acetate	µg/L	20000		N.D.			N.D.		
Methyl Tertiary Butyl Ether	µg/L	14		N.D.			N.D.		
4-Methyl-2-Pentanone	µg/L	6300		N.D.			N.D.		
Methylcyclohexane	µg/L			N.D.			N.D.		
Methylene Chloride	µg/L	11	5	N.D.			N.D.		
Styrene	µg/L	1200	100	N.D.			N.D.		
1,1,2,2-Tetrachloroethane	µg/L	0.076		**1.6**	J		N.D.		
Tetrachloroethene	µg/L	11	5	**72**			N.D.		
Toluene	µg/L	1100	1000	N.D.			N.D.		
1,2,3-Trichlorobenzene	µg/L	7		N.D.			N.D.		
1,2,4-Trichlorobenzene	µg/L	1.2	70	**48**			N.D.		
1,1,1-Trichloroethane	µg/L	8000	200	**33**			N.D.		
1,1,2-Trichloroethane	µg/L	0.28	5	**2.8**	J		N.D.		
Trichloroethene	µg/L	0.49	5	**2,200**			N.D.		
Trichlorofluoromethane	µg/L	5200		**110**			N.D.		
Vinyl Chloride	µg/L	0.019	2	**9.0**	J		N.D.		
m+p-Xylene	µg/L	190		N.D.			N.D.		
o-Xylene	µg/L	190		N.D.			N.D.		

Notes:

* Maximum Contaminant Level Goal for Chloroform

Bold Contaminant detected above laboratory method detection limit

Bold Contaminant detected above screening criteria (i.e., MCL or Maximum Contaminant Level Goal for Chloroform)

Underlined Contaminant detected above Risk Screening Levels

µg/L micrograms per liter

J Estimated value – The result is > the Method Detection Limit and < the Limit of Quantitation

UJ Indicates the compound or element was analyzed for but not detected. The sample detection limit is an estimated value.

N.D. None detected

K Indicates the reported value may be biased high.

N.S. Not Sampled

Table A.7.4.1-2
Quarterly Groundwater Monitoring Well Water Levels
Area B Groundwater, Fort Detrick, Maryland
September and October 2014

Well ID	Zone	Ground Level Elevation (ft msl)	Surface Completion	Well Diameter (inches)	Construction Material	Date of Installation	Inner Casing Elevation (ft msl)	Screened Interval (ft amsl)	Sample Depth (ft amsl)	Sept & Oct 2014	
										Depth to Water (ft below measuring point)	Water Level Elevation (ft msl)
BMW18	Overburden	384	Stick-Up	4	PVC	1977	386.00	32.49 - 42.49	354.00	41.95	344.05
BMW20D	Shallow Bedrock	336.17	Stick-Up	4	PVC		368.31	218.17 - 198.17	208.17	18.58	349.73
BMW24D	Shallow Bedrock	365.47	Stick-Up	4	PVC	1990	368.16	201.22 - 191.02	196.12	19.71	348.45
BMW32D	Shallow Bedrock	356.21	Stick-Up	4	Unknown	1991	356.21	281.21 - 271.21	276.21	8.56	347.65
BMW53F	Deep Bedrock	349.1	Stick-Up	2	PVC		351.69	54.10 - 44.10	49.10	11.76	339.93
BMW56D	Shallow Bedrock	380.86	Stick-Up	4	PVC	1993	382.86	309.86 - 289.86	299.86	39.34	343.52
BMW58D	Shallow Bedrock	387.4	Stick-Up	4	PVC	1993	388.65	277.90 - 257.90	267.90	39.08	349.57
BMW59D	Shallow Bedrock	389.91	Stick-Up	4	PVC	1993	391.65	226.91 - 206.91	216.91	44.55	347.10
BMW66D	Shallow Bedrock	332.1	Stick-Up	4	PVC	2009	335.05	62.10 - 57.10	59.60	12.11	322.94
BMW67C	Deep Bedrock	394.6	Stick-Up	2	Stainless Steel		397.47	254.60 - 239.60	247.10	48.63	348.84
BMW68D	Deep Bedrock	371.7	Stick-Up	2	Stainless Steel		374.22	204.70 - 194.70	199.70	30.12	344.10
BMW69A	Shallow Bedrock	337.9	Stick-Up	2	Stainless Steel		340.51	315.90 - 305.90	310.90	5.21	335.30
BMW70A	Shallow Bedrock	327.5	Stick-Up	2	PVC	2010	330.06	296.50 - 291.50	294.00	5.60	324.46
BMW71C	Deep Bedrock	332.9	Stick-Up	2	PVC		335.32	110.90 - 100.90	105.90	16.56	318.76
BMW077	Shallow Bedrock	363.3	Stick-Up	2	PVC	2010	366.26	307.30 - 292.30	299.80	25.12	341.14

Notes:
All Elevations in feet relative to NAVD 88 (MSL)
MSL - Mean Sea Level

Table A.7.4.1-3
Spring Data Table
Area B Groundwater, Fort Detrick, Maryland
September 2014

Analysis Name	Units	Regional Screening Levels (RSLs)	Maximum Contaminant Levels (MCLs)	FTD72-RISP03(092914)		
				9/29/2014		
				Result	Data Qual	Val Qual
Acetone	µg/L	14000		N.D.		
Benzene	µg/L	0.46	5	N.D.		
Bromodichloromethane	µg/L	0.13	80	N.D.		
Bromoform	µg/L	3.3	80	N.D.		
Bromomethane	µg/L	7.5		N.D.		
2-Butanone	µg/L	5600		N.D.		
Carbon Disulfide	µg/L	810		N.D.		
Carbon Tetrachloride	µg/L	0.46	5	N.D.		
Chlorobenzene	µg/L	78	100	N.D.		
Chloroethane	µg/L	21000		N.D.		
Chloroform	µg/L	0.22	70*	**1.4**		
Chloromethane	µg/L	190		N.D.		
Cyclohexane	µg/L	13000		N.D.		
1,2-Dibromo-3-chloropropane	µg/L	0.00033	0.2	N.D.		
Dibromochloromethane	µg/L	0.87	80	N.D.		
1,2-Dibromoethane	µg/L	0.0075	0.05	N.D.		
1,2-Dichlorobenzene	µg/L	300	600	N.D.		
1,3-Dichlorobenzene	µg/L			N.D.		
1,4-Dichlorobenzene	µg/L	0.48	75	N.D.		
Dichlorodifluoromethane	µg/L	200		N.D.		
1,1-Dichloroethane	µg/L	2.8		N.D.		
1,2-Dichloroethane	µg/L	0.17	5	N.D.		
1,1-Dichloroethene	µg/L	280	7	**0.6**		
cis-1,2-Dichloroethene	µg/L	36	70	**0.6**		
trans-1,2-Dichloroethene	µg/L	360	100	N.D.		
1,2-Dichloropropane	µg/L	0.44	5	N.D.		
cis-1,3-Dichloropropene	µg/L			N.D.		
trans-1,3-Dichloropropene	µg/L			N.D.		
Ethylbenzene	µg/L	1.5		N.D.		
Freon 113	µg/L	55000		N.D.		
2-Hexanone	µg/L	38		N.D.		
Isopropylbenzene	µg/L	450		N.D.		
Methyl Acetate	µg/L	20000		N.D.		
Methyl Tertiary Butyl Ether	µg/L	14		N.D.		
4-Methyl-2-Pentanone	µg/L	6300		N.D.		
Methylcyclohexane	µg/L			N.D.		
Methylene Chloride	µg/L	11	5	N.D.		
Styrene	µg/L	1200	100	N.D.		
1,1,2,2-Tetrachloroethane	µg/L	0.076		N.D.		
Tetrachloroethene	µg/L	11	5	**0.5**		
Toluene	µg/L	1100	1000	N.D.		
1,2,3-Trichlorobenzene	µg/L	7		N.D.		
1,2,4-Trichlorobenzene	µg/L	1.2	70	N.D.		
1,1,1-Trichloroethane	µg/L	8000	200	**0.1**	**J**	
1,1,2-Trichloroethane	µg/L	0.28	5	N.D.		
Trichloroethene	µg/L	0.49	5	**7.4**		
Trichlorofluoromethane	µg/L	5200		**1.5**		
Vinyl Chloride	µg/L	0.019	2	N.D.		
m+p-Xylene	µg/L	190		N.D.		
o-Xylene	µg/L	190		N.D.		

Notes:

***** Maximum Contaminant Level Goal for Chloroform

Bold Contaminant detected above laboratory method detection limit

Bold Contaminant detected above screening criteria (i.e., MCL or Maximum Contaminant Level Goal for Chloroform)

Underlined Contaminant detected above USEPA Regional Screening Levels for tap water

µg/L micrograms per liter

J Estimated value – The result is ? the Method Detection Limit and < the Limit of Quantitation

N.D. None detected

Table A.7.4.1-4
Monitoring Well IDW Volumes
September - October 2014

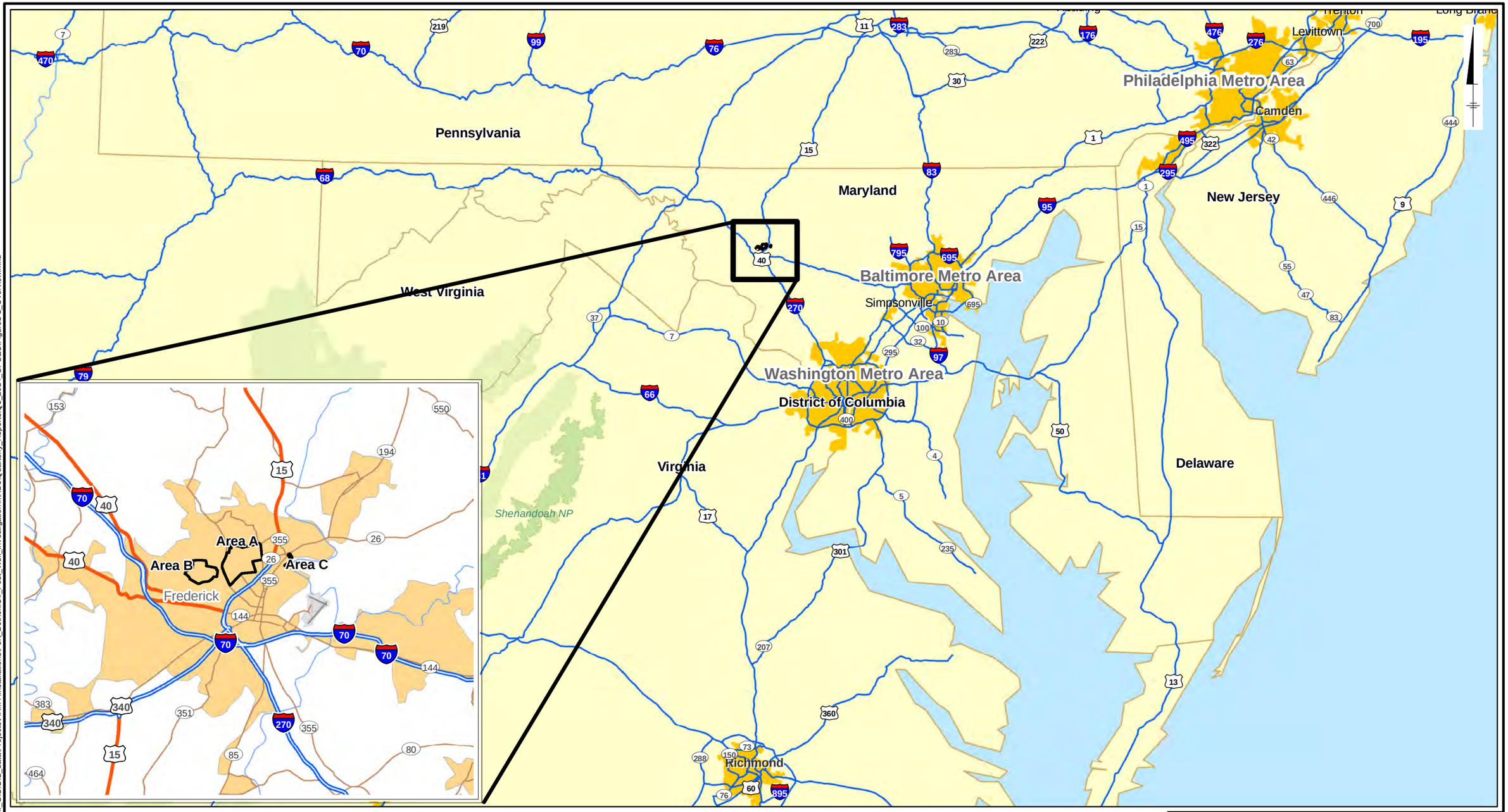
Date Purged to IDW Container	Container Number	Container Type and Capacity	Source	Approximate Volume from Source (gal)
9/30/2014	IDW-2	550 gal Poly Tote	BMW24D	130
9/21/2014	IDW-1	250 gal Poly Tote	BMW77	25
9/29/2014	IDW-1	250 gal Poly Tote	BMW70A	33
10/1/2014	IDW-2	550 gal Poly Tote	BMW59D	130
9/29/2014			BMW18	0
10/2/2014	IDW-2	550 gal Poly Tote	BMW66D	85
9/30/2014	IDW-1	250 gal Poly Tote	BMW58D	100
10/2/2014	IDW-3	550 gal Poly Tote	BMW32D	85
10/1/2014	IDW-2	550 gal Poly Tote	BMW69A	105
9/29/2014	IDW-1	250 gal Poly Tote	BMW20D	60
10/2/2014	IDW-2	550 gal Poly Tote	BMW71C	130
10/2/2014	IDW-3	550 gal Poly Tote	BMW53F	130
10/3/2014	IDW-4	55 gal Poly Drum	BMW56D	60
10/3/2014	IDW-4	55 gal Poly Drum	BMW68D	60
10/2/2014	IDW-4	55 gal Poly Drum	BMW67C	100

Notes:

All containers were labeled with container ID and source materials and staged on Area B.

gal = gallon

Attachment 7.4.1
Figures



Legend

Fort Detrick Boundary

NOTES:

Base map data was obtained from ESRI StreetMap USA 2005.

Quarterly Report
(September 2014)
Off-Post Private Well Investigation and Associated Activities,
Supplemental Public Outreach and Monitoring Well Sampling
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

Overview of Fort Detrick Area B

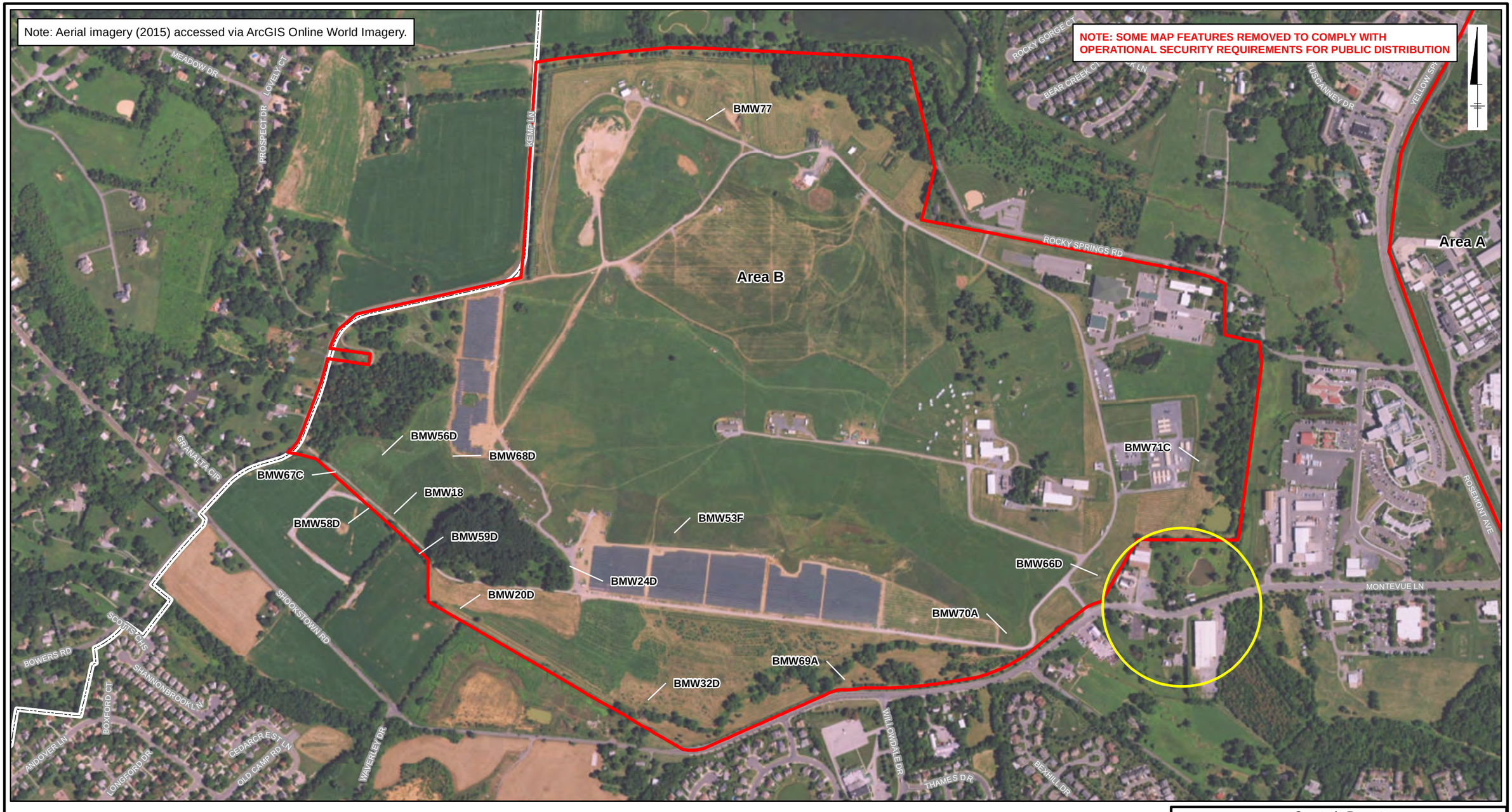
PIKA INTERNATIONAL, INC. ARCADIS

FIGURE A.7.4.1-1

\\arcadis-us.com\office\data\WhitePlains-NY\WHI_GIS\GIS_data\Projects\ARMY\Installations\Fort_Detrick\Off_Post_Well_Investigation\MXDs\Quarterly_Reports\Q3_2014_OPSEC\Figure1-1_Overview.mxd

Note: Aerial imagery (2015) accessed via ArcGIS Online World Imagery.

NOTE: SOME MAP FEATURES REMOVED TO COMPLY WITH OPERATIONAL SECURITY REQUIREMENTS FOR PUBLIC DISTRIBUTION



Legend

- Fort Detrick Boundary
- Frederick City Boundary
- Spring Location

BMSW56D Monitoring Point ID

Quarterly Report
(September 2014)
Off-Post Private Well Investigation and Associated Activities, Supplemental Public Outreach and Monitoring Well Sampling
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

Monitoring Wells, Private Wells, and Spring in the Study Area

PIKA INTERNATIONAL, INC. ARCADIS

FIGURE
A.7.4.1-2

Note: Aerial imagery (2015) accessed via ArcGIS Online World Imagery.

NOTE: SOME MAP FEATURES REMOVED TO COMPLY WITH OPERATIONAL SECURITY REQUIREMENTS FOR PUBLIC DISTRIBUTION

BMW77
341.14 ft

BMW56D
343.52 ft

BMW68D
344.10 ft

BMW71C
318.76 ft

BMW67C
348.84 ft

BMW18
344.05 ft

BMW58D
349.57 ft

BMW59D
347.10 ft

BMW53F
339.93 ft

BMW24D
348.45 ft

BMW66D
322.94 ft

BMW20D
349.73 ft

BMW70A
324.46 ft

BMW69A
335.30 ft

BMW32D
347.65 ft

Area A

Area B

ROCKY SPRINGS RD

MEADOW DR

PROSPECT DR

KEMP LN

ROCKY GORGE CT

BEAR CREEK CT

YELLOW SPR

ROSEMONT AVE

MONTEVUE LN

GRANALTA CIR

SHOOKSTOWN RD

SCOTTS CHS

BOWERS RD

SHANNONBROOK LN

BOXFORD CT

ANDOVER LN

LONGFORD DR

CEDARCREST LN

OLD CAMP RD

WAVERLEY DR

LAKE COVENTRY CT

WILLOWDALE DR

THAMES DR

BEXHILL DR

520

540

560

480

460

440

420

400

380

360

340

320

Legend

- Fort Detrick Boundary
- Frederick City Boundary
- 20-foot Topographic Contour
- Spring Location

BMW67C Monitoring Point ID
348.84 ft Groundwater Elevation (Sept. - Oct. 2014) (ft msl)

Quarterly Report
(September 2014)
Off-Post Private Well Investigation and Associated Activities,
Supplemental Public Outreach and Monitoring Well Sampling
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

Monitoring Well Water Levels

PIKA INTERNATIONAL, INC. ARCADIS

FIGURE
A.7.4.1-3

Note: Aerial imagery (2015) accessed via ArcGIS Online World Imagery.

These were no exceedences of MCLs in the private wells in Sept. - Oct. 2014

NOTE: SOME MAP FEATURES REMOVED TO COMPLY WITH OPERATIONAL SECURITY REQUIREMENTS FOR PUBLIC DISTRIBUTION

N

BMW77

Analyte	MCL (µg/L)	Result (µg/L)
1,1-dichloroethene	7	7.9
Tetrachloroethene	5	28
Trichloroethene	5	11

BMW56D

Analyte	MCL (µg/L)	Result (µg/L)
Benzene	5	48
Chloroform	70[1]	440
1,2-dichloroethane	5	23
1,1-dichloroethene	7	190
cis-1,2-dichloroethene	70	480
Tetrachloroethene	5	120
1,2,4-trichlorobenzene	70	110
Trichloroethene	5	3,500
Vinyl Chloride	2	16

BMW68D

Analyte	MCL (µg/L)	Result (µg/L)
Benzene	5	9.6
Chloroform	70[1]	380
1,2-dichloroethane	5	22
1,1-dichloroethene	7	110
cis-1,2-dichloroethene	70	150
Tetrachloroethene	5	52
Trichloroethene	5	2,200
Vinyl Chloride	2	2.2

BMW67C

Analyte	MCL (µg/L)	Result (µg/L)
Benzene	5	39
Chloroform	70[1]	1,200
1,2-dichloroethane	5	52
1,1-dichloroethene	7	560
cis-1,2-dichloroethene	70	1,100
Tetrachloroethene	5	120
1,2,4-trichlorobenzene	70	87
1,1,1-trichloroethane	200	260
1,1,2-trichloroethane	5	9.4
Trichloroethene	5	7,400

BMW24D

Analyte	MCL (µg/L)	Result (µg/L)
Tetrachloroethene	5	120
Trichloroethene	5	10

Robinson Spring

Analyte	MCL (µg/L)	Result (µg/L)
Trichloroethene	5	7.4

BMW66D

Analyte	MCL (µg/L)	Result (µg/L)
Trichloroethene	5	13

BMW58D

Analyte	MCL (µg/L)	Result (µg/L)
Trichloroethene	5	44

BMW53F

Analyte	MCL (µg/L)	Result (µg/L)
Trichloroethene	5	29

BMW71C had no MCL exceedances

BMW18 was not sampled - well was dry

BMW59D

Analyte	MCL (µg/L)	Result (µg/L)
Trichloroethene	5	20

BMW69A had no MCL exceedances

BMW20 had no MCL exceedances

BMW20D had no MCL exceedances

BMW32D had no MCL exceedances

BMW70A had no MCL exceedances

Area A

Area B

ROCKY SPRINGS RD

KEMP LN

MEADOW DR

LOVELY CT

PROSPECT DR

YALE CT

OLD RECENER RD

DOWN HILL RUN

SHOOKSTOWN RD

BROOKSIDE DR

TUSCANNEY DR

YELLOW SPRINGS

ROSEMONT AVE

MONTEVUE LN

BOWERS RD

ROCK CREEK DR

ANDOVER LN

LONGFORD DR

WAVERLEY DR

WILLOWDALE DR

THAMES DR

BEXHILL DR

Legend

- Fort Detrick Boundary
- Frederick City Boundary
- Spring Location

BMW56D Monitoring Point ID

Notes:
1. No MCL exists for Chloroform; thus, the MCL goal is presented.
2. µg/L - micrograms per liter
3. MCL - Maximum Contaminant Level

Quarterly Report
(September 2014)
Off-Post Private Well Investigation and Associated Activities,
Supplemental Public Outreach and Monitoring Well Sampling
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

Monitoring Well and Spring Results Above MCL

PIKA INTERNATIONAL, INC. ARCADIS

FIGURE
A.7.4.1-4

Attachment 7.4.2
Sentinel Monitoring Program Tables and Figures
December 2014

(PIKA International, Inc./ARCADIS, 2016)

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Attachment 7.4.2
Tables

Table A.7.4.2-1
Monitoring Well Data Table
Area B Groundwater, Fort Detrick, Maryland
December 2014

Sample ID:				FTD72-BMW24D(120914)			FTD72-DUP01(120914) Parent ID: FTD72-BMW24D(120914)			FTD72-BMW77(120814)			FTD72-BMW70A(120914)			FTD72-BMW59D(120914)			FTD72-BMW18			FTD72-BMW66D(120814)		
Sample Date:				12/9/2014			12/9/2014			12/8/2014			12/9/2014			12/9/2014			Not Sampled			12/8/2014		
Analysis Name	**Units**	**Regional Screening Levels (RSLs)**	**Maximum Contaminant Levels (MCLs)**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**
Acetone	µg/L	14000	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Benzene	µg/L	0.46	5	N.D.	--	--	N.D.	--	--	**0.2**	**J**	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Bromodichloromethane	µg/L	0.13	80	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Bromoform	µg/L	3.3	80	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Bromomethane	µg/L	7.5	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
2-Butanone	µg/L	5600	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Carbon Disulfide	µg/L	810	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Carbon Tetrachloride	µg/L	0.46	5	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Chlorobenzene	µg/L	78	100	N.D.	--	--	N.D.	--	--	**0.2**	**J**	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Chloroethane	µg/L	21000	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Chloroform	µg/L	0.22	70*	**2.9**	--	--	**14**	--	--	**0.5**	--	--	N.D.	--	--	**6.3**	--	--	N.S.	--	--	**2.5**	--	--
Chloromethane	µg/L	190	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Cyclohexane	µg/L	13000	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
1,2-Dibromo-3-chloropropane	µg/L	0.00033	0.2	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Dibromochloromethane	µg/L	0.87	80	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
1,2-Dibromoethane	µg/L	0.0075	0.05	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
1,2-Dichlorobenzene	µg/L	300	600	N.D.	--	--	N.D.	--	--	**0.1**	**J**	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
1,3-Dichlorobenzene	µg/L		--	N.D.	--	--	N.D.	--	--	**0.2**	**J**	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
1,4-Dichlorobenzene	µg/L	0.48	75	N.D.	--	--	N.D.	--	--	**0.2**	**J**	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Dichlorodifluoromethane	µg/L	200	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
1,1-Dichloroethane	µg/L	2.8	--	N.D.	--	--	**0.1**	**J**	--	**0.2**	**J**	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
1,2-Dichloroethane	µg/L	0.17	5	N.D.	--	--	**0.3**	**J**	--	N.D.	--	--	N.D.	--	--	**0.2**	**J**	--	N.S.	--	--	N.D.	--	--
1,1-Dichloroethene	µg/L	280	7	**0.60**	--	--	**3.6**	--	--	**4.1**	--	--	N.D.	--	--	**1.4**	--	--	N.S.	--	--	**0.9**	--	--
cis-1,2-Dichloroethene	µg/L	36	70	**0.4**	**J**	--	**2.5**	--	--	**1.2**	--	--	N.D.	--	--	**0.8**	--	--	N.S.	--	--	**1**	--	--
trans-1,2-Dichloroethene	µg/L	360	100	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
1,2-Dichloropropane	µg/L	0.44	5	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
cis-1,3-Dichloropropene	µg/L		--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
trans-1,3-Dichloropropene	µg/L		--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Ethylbenzene	µg/L	1.5	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Freon 113	µg/L	55000	--	N.D.	--	--	**0.3**	**J**	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
2-Hexanone	µg/L	38	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Isopropylbenzene	µg/L	450	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Methyl Acetate	µg/L	20000	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Methyl Tertiary Butyl Ether	µg/L	14	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
4-Methyl-2-Pentanone	µg/L	6300	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Methylcyclohexane	µg/L		--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Methylene Chloride	µg/L	11	5	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Styrene	µg/L	1200	100	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
1,1,2,2-Tetrachloroethane	µg/L	0.076	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Tetrachloroethene	µg/L	11	5	**230**	--	--	**1.4**	--	--	**20**	--	--	N.D.	--	--	**0.7**	--	--	N.S.	--	--	**0.7**	--	--
Toluene	µg/L	1100	1000	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
1,2,3-Trichlorobenzene	µg/L	7	--	N.D.	--	--	N.D.	--	--	**2.1**	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
1,2,4-Trichlorobenzene	µg/L	1.2	70	N.D.	--	--	N.D.	--	--	**5.4**	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
1,1,1-Trichloroethane	µg/L	8000	200	**0.2**	--	--	**0.9**	--	--	N.D.	--	--	N.D.	--	--	**0.4**	**J**	--	N.S.	--	--	**0.3**	**J**	--
1,1,2-Trichloroethane	µg/L	0.28	5	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
Trichloroethene	µg/L	0.49	5	**9.1**	--	--	**41**	--	--	**6**	--	--	N.D.	--	--	**20**	--	--	N.S.	--	--	**13**	--	--
Trichlorofluoromethane	µg/L	5200	--	**3.5**	--	--	**13**	--	--	N.D.	--	--	N.D.	--	--	**7.7**	--	--	N.S.	--	--	**2.7**	--	--
Vinyl Chloride	µg/L	0.019	2	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--
m+p-Xylene	µg/L	190	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**0.1**	**J**	--	N.S.	--	--	N.D.	--	--
o-Xylene	µg/L	190	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.S.	--	--	N.D.	--	--

Notes:

* Maximum Contaminant Level Goal for Chloroform

Bold Contaminant detected above laboratory method detection limit

Bold (shaded) Contaminant detected above screening criteria (i.e., MCL or Maximum Contaminant Level Goal for Chloroform)

Underlined Contaminant detected above Risk Screening Levels

µg/L micrograms per liter

J estimated value

N.D. None detected

Table A.7.4.2-1
Monitoring Well Data Table
Area B Groundwater, Fort Detrick, Maryland
December 2014

Sample ID:				FTD72-BMW58D(120914)			FTD72-BMW32D(121014)			FTD72-BMW69A(121014)			FTD72-BMW20D(121014)			FTD72-BMW71C(121114)			FTD72-BMW53F(121014)			FTD72-BMW56D(121114)		
Sample Date:				12/9/2014			12/10/2014			12/10/2014			12/10/2014			12/11/2014			12/10/2014			12/11/2014		
Analysis Name	**Units**	**Regional Screening Levels (RSLs)**	**Maximum Contaminant Levels (MCLs)**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**
Acetone	µg/L	14000	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Benzene	µg/L	0.46	5	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**2.4**	--	--
Bromodichloromethane	µg/L	0.13	80	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Bromoform	µg/L	3.3	80	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Bromomethane	µg/L	7.5	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
2-Butanone	µg/L	5600	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Carbon Disulfide	µg/L	810	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Carbon Tetrachloride	µg/L	0.46	5	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Chlorobenzene	µg/L	78	100	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**0.3**	**J**	--
Chloroethane	µg/L	21000	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Chloroform	µg/L	0.22	70*	**14**	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**0.7**	--	--	**8.6**	--	--	**25**	--	--
Chloromethane	µg/L	190	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Cyclohexane	µg/L	13000	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,2-Dibromo-3-chloropropane	µg/L	0.00033	0.2	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Dibromochloromethane	µg/L	0.87	80	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,2-Dibromoethane	µg/L	0.0075	0.05	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,2-Dichlorobenzene	µg/L	300	600	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,3-Dichlorobenzene	µg/L		--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,4-Dichlorobenzene	µg/L	0.48	75	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Dichlorodifluoromethane	µg/L	200	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**0.2**	**J**	--
1,1-Dichloroethane	µg/L	2.8	--	**0.1**	**J**	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**0.7**	**J**	--
1,2-Dichloroethane	µg/L	0.17	5	**0.3**	**J**	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**0.3**	**J**	--	**1.5**	--	--
1,1-Dichloroethene	µg/L	280	7	**3.6**	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**0.2**	**J**	--	**2.6**	--	--	**10**	--	--
cis-1,2-Dichloroethene	µg/L	36	70	**2.5**	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**1.2**	--	--	**38**	--	--
trans-1,2-Dichloroethene	µg/L	360	100	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,2-Dichloropropane	µg/L	0.44	5	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
cis-1,3-Dichloropropene	µg/L		--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
trans-1,3-Dichloropropene	µg/L		--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Ethylbenzene	µg/L	1.5	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**0.1**	**J**	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Freon 113	µg/L	55000	--	**0.3**	**J**	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**0.7**	**J**	--
2-Hexanone	µg/L	38	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Isopropylbenzene	µg/L	450	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Methyl Acetate	µg/L	20000	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Methyl Tertiary Butyl Ether	µg/L	14	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
4-Methyl-2-Pentanone	µg/L	6300	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Methylcyclohexane	µg/L		--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Methylene Chloride	µg/L	11	5	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Styrene	µg/L	1200	100	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,1,2,2-Tetrachloroethane	µg/L	0.076	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Tetrachloroethene	µg/L	11	5	**1.4**	--	--	N.D.	--	--	N.D.	--	--	**0.2**	**J**	--	**0.2**	**J**	--	**0.8**	--	--	**9.7**	--	--
Toluene	µg/L	1100	1000	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,2,3-Trichlorobenzene	µg/L	7	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,2,4-Trichlorobenzene	µg/L	1.2	70	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**2**	--	--
1,1,1-Trichloroethane	µg/L	8000	200	**0.9**	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**0.9**	--	--	**2.5**	--	--
1,1,2-Trichloroethane	µg/L	0.28	5	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Trichloroethene	µg/L	0.49	5	**41**	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**1.4**	--	--	**28**	--	--	**190**	--	--
Trichlorofluoromethane	µg/L	5200	--	**13**	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**1.3**	--	--	**11**	--	--	**10**	--	--
Vinyl Chloride	µg/L	0.019	2	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**0.7**	**J**	--
m+p-Xylene	µg/L	190	--	N.D.	--	--	N.D.	--	--	**0.20**	**J**	--	**0.5**	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
o-Xylene	µg/L	190	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**0.20**	**J**	--	N.D.	--	--	N.D.	--	--	N.D.	--	--

Notes:

* Maximum Contaminant Level Goal for Chloroform

Bold Contaminant detected above laboratory method detection limit

Bold (shaded) Contaminant detected above screening criteria (i.e., MCL or Maximum Contaminant Level Goal for Chloroform)

Underlined Contaminant detected above Risk Screening Levels

µg/L micrograms per liter

J estimated value

N.D. None detected

Table A.7.4.2-1
Monitoring Well Data Table
Area B Groundwater, Fort Detrick, Maryland
December 2014

Sample ID:				FTD72-BMW68D(121114)			FTD72-BMW67C(121114)			FTD72-IDW01(121014)			FTD72-IDW02(121114)			FTD72-IDW03(121114)		
Sample Date:				12/11/2014			12/11/2014			12/10/2014			12/11/2014			12/11/2014		
Analysis Name	Units	Regional Screening Levels (RSLs)	Maximum Contaminant Levels (MCLs)	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	µg/L	14000	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Benzene	µg/L	0.46	5	12	--	--	32	--	--	0.2	J	--	N.D.	--	--	4.7	--	--
Bromodichloromethane	µg/L	0.13	80	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Bromoform	µg/L	3.3	80	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Bromomethane	µg/L	7.5	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
2-Butanone	µg/L	5600	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Carbon Disulfide	µg/L	810	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Carbon Tetrachloride	µg/L	0.46	5	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	0.3	J	--
Chlorobenzene	µg/L	78	100	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	0.5	--	--
Chloroethane	µg/L	21000	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Chloroform	µg/L	0.22	70*	410	--	--	1,100	--	--	4.2	--	--	1.7	--	--	140	--	--
Chloromethane	µg/L	190	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Cyclohexane	µg/L	13000	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,2-Dibromo-3-chloropropane	µg/L	0.00033	0.2	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Dibromochloromethane	µg/L	0.87	80	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,2-Dibromoethane	µg/L	0.0075	0.05	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,2-Dichlorobenzene	µg/L	300	600	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	0.3	J	--
1,3-Dichlorobenzene	µg/L		--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,4-Dichlorobenzene	µg/L	0.48	75	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	0.3	J	--
Dichlorodifluoromethane	µg/L	200	--	3.2	J	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	1	--	--
1,1-Dichloroethane	µg/L	2.8	--	6.2	J	--	15	J	--	N.D.	--	--	N.D.	--	--	2.5	--	--
1,2-Dichloroethane	µg/L	0.17	5	20	--	--	36	--	--	0.1	J	--	N.D.	--	--	9.2	--	--
1,1-Dichloroethene	µg/L	280	7	130	--	--	550	--	--	1.1	--	--	0.5	J	--	32	--	--
cis-1,2-Dichloroethene	µg/L	36	70	160	--	--	910	--	--	0.7	--	--	0.2	J	--	54	--	--
trans-1,2-Dichloroethene	µg/L	360	100	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	0.2	J	--
1,2-Dichloropropane	µg/L	0.44	5	2.3	J	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	1	--	--
cis-1,3-Dichloropropene	µg/L		--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
trans-1,3-Dichloropropene	µg/L		--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Ethylbenzene	µg/L	1.5	--	N.D.	--	--	9.2	J	--	21	--	--	18	--	--	1.9	--	--
Freon 113	µg/L	55000	--	8.2	J	--	69	--	--	N.D.	--	--	N.D.	--	--	2.8	--	--
2-Hexanone	µg/L	38	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Isopropylbenzene	µg/L	450	--	N.D.	--	--	N.D.	--	--	0.2	J	--	0.1	J	--	N.D.	--	--
Methyl Acetate	µg/L	20000	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Methyl Tertiary Butyl Ether	µg/L	14	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
4-Methyl-2-Pentanone	µg/L	6300	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Methylcyclohexane	µg/L		--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Methylene Chloride	µg/L	11	5	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	0.5	J	--
Styrene	µg/L	1200	100	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,1,2,2-Tetrachloroethane	µg/L	0.076	--	N.D.	--	--	5.2	J	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Tetrachloroethene	µg/L	11	5	68	--	--	120	--	--	48	--	--	7.2	--	--	19	--	--
Toluene	µg/L	1100	1000	N.D.	--	--	N.D.	--	--	0.8	--	--	0.4	J	--	N.D.	--	--
1,2,3-Trichlorobenzene	µg/L	7	--	N.D.	--	--	N.D.	--	--	0.1	J	--	N.D.	--	--	N.D.	--	--
1,2,4-Trichlorobenzene	µg/L	1.2	70	14	--	--	55	--	--	0.3	J	--	N.D.	--	--	6.3	--	--
1,1,1-Trichloroethane	µg/L	8000	200	34	--	--	230	--	--	0.2	J	--	0.1	J	--	13	--	--
1,1,2-Trichloroethane	µg/L	0.28	5	N.D.	--	--	7.2	J	--	N.D.	--	--	N.D.	--	--	0.7	--	--
Trichloroethene	µg/L	0.49	5	2,500	--	--	6,100	--	--	13	--	--	6.3	--	--	720	--	--
Trichlorofluoromethane	µg/L	5200	--	260	--	--	1,100	--	--	3.4	--	--	1.7	--	--	61	--	--
Vinyl Chloride	µg/L	0.019	2	3	J	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	0.8	--	--
m+p-Xylene	µg/L	190	--	N.D.	--	--	6.9	J	--	110	--	--	74	--	--	12	--	--
o-Xylene	µg/L	190	--	N.D.	--	--	61	--	--	44	--	--	27	--	--	4.2	--	--

Notes:

* Maximum Contaminant Level Goal for Chloroform

Bold Contaminant detected above laboratory method detection limit

Bold Contaminant detected above screening criteria (i.e., MCL or Maximum Contaminant Level Goal for Chloroform)

Underlined Contaminant detected above Risk Screening Levels

µg/L micrograms per liter

J estimated value

N.D. None detected

Table A.7.4.2-2
Quarterly Groundwater Monitoring Well Water Levels
Area B Groundwater, Fort Detrick, Maryland
December 2014

Well ID	Zone	Ground Level Elevation (ft msl)	Surface Completion	Well Diameter (inches)	Construction Material	Date of Installation	Inner Casing Elevation (ft msl)	Screened Interval (ft amsl)	Sample Depth (ft amsl)	December 2014	
										Depth to Water (ft below measuring point)	Water Level Elevation (ft msl)
BMW18	Overburden	384	Stick-Up	4	PVC	1977	386.00	32.49 - 42.49	354.00	DRY	--
BMW20D	Shallow Bedrock	336.17	Stick-Up	4	PVC		368.31	218.17 - 198.17	208.17	16.17	352.14
BMW24D	Shallow Bedrock	365.47	Stick-Up	4	PVC	1990	368.16	201.22 - 191.02	196.12	18.57	349.59
BMW32D	Shallow Bedrock	356.21	Stick-Up	4	Unknown	1991	356.21	281.21 - 271.21	276.21	6.26	349.95
BMW53F	Deep Bedrock	349.1	Stick-Up	2	PVC		351.69	54.10 - 44.10	49.10	9.01	342.68
BMW56D	Shallow Bedrock	380.86	Stick-Up	4	PVC	1993	382.86	309.86 - 289.86	299.86	36.33	346.53
BMW58D	Shallow Bedrock	387.4	Stick-Up	4	PVC	1993	388.65	277.90 - 257.90	267.90	37.07	351.58
BMW59D	Shallow Bedrock	389.91	Stick-Up	4	PVC	1993	391.65	226.91 - 206.91	216.91	41.31	350.34
BMW66D	Shallow Bedrock	332.1	Stick-Up	4	PVC	2009	335.05	62.10 - 57.10	59.60	11.12	323.93
BMW67C	Deep Bedrock	394.6	Stick-Up	2	Stainless Steel		397.47	254.60 - 239.60	247.10	45.85	351.62
BMW68D	Deep Bedrock	371.7	Stick-Up	2	Stainless Steel		374.22	204.70 - 194.70	199.70	26.45	347.77
BMW69A	Shallow Bedrock	337.9	Stick-Up	2	Stainless Steel		340.51	315.90 - 305.90	310.90	4.65	335.86
BMW70A	Shallow Bedrock	327.5	Stick-Up	2	PVC	2010	330.06	296.50 - 291.50	294.00	3.27	326.79
BMW71C	Deep Bedrock	332.9	Stick-Up	2	PVC		335.32	110.90 - 100.90	105.90	16.20	319.12
BMW077	Shallow Bedrock	363.3	Stick-Up	2	PVC	2010	366.26	307.30 - 292.30	299.80	24.34	341.92

Notes:
All Elevations in feet relative to NAVD 88 (MSL)
MSL - Mean Sea Level

Table A.7.4.2-3
Spring Data Table
Area B Groundwater, Fort Detrick, Maryland
December 2014

Analysis Name	Units	Risk Screening Levels (RSLs)	Maximum Contaminant Levels (MCLs)	RobinsonSpring(120814)		
				12/8/2014		
				Result	Data Qual	Val Qual
Acetone	µg/L	14000		N.D.		
Benzene	µg/L	0.46	5	N.D.		
Bromodichloromethane	µg/L	0.13	80	N.D.		
Bromoform	µg/L	3.3	80	N.D.		
Bromomethane	µg/L	7.5		N.D.		
2-Butanone	µg/L	5600		N.D.		
Carbon Disulfide	µg/L	810		N.D.		
Carbon Tetrachloride	µg/L	0.46	5	N.D.		
Chlorobenzene	µg/L	78	100	N.D.		
Chloroethane	µg/L	21000		N.D.		
Chloroform	µg/L	0.22	70*	**1.5**		
Chloromethane	µg/L	190		N.D.		
Cyclohexane	µg/L	13000		N.D.		
1,2-Dibromo-3-chloropropane	µg/L	0.00033	0.2	N.D.		
Dibromochloromethane	µg/L	0.87	80	N.D.		
1,2-Dibromoethane	µg/L	0.0075	0.05	N.D.		
1,2-Dichlorobenzene	µg/L	300	600	N.D.		
1,3-Dichlorobenzene	µg/L			N.D.		
1,4-Dichlorobenzene	µg/L	0.48	75	N.D.		
Dichlorodifluoromethane	µg/L	200		N.D.		
1,1-Dichloroethane	µg/L	2.8		N.D.		
1,2-Dichloroethane	µg/L	0.17	5	N.D.		
1,1-Dichloroethene	µg/L	280	7	**0.6**		
cis-1,2-Dichloroethene	µg/L	36	70	**0.8**		
trans-1,2-Dichloroethene	µg/L	360	100	N.D.		
1,2-Dichloropropane	µg/L	0.44	5	N.D.		
cis-1,3-Dichloropropene	µg/L			N.D.		
trans-1,3-Dichloropropene	µg/L			N.D.		
Ethylbenzene	µg/L	1.5		N.D.		
Freon 113	µg/L	55000		N.D.		
2-Hexanone	µg/L	38		N.D.		
Isopropylbenzene	µg/L	450		N.D.		
Methyl Acetate	µg/L	20000		N.D.		
Methyl Tertiary Butyl Ether	µg/L	14		N.D.		
4-Methyl-2-Pentanone	µg/L	6300		N.D.		
Methylcyclohexane	µg/L			N.D.		
Methylene Chloride	µg/L	11	5	N.D.		
Styrene	µg/L	1200	100	N.D.		
1,1,2,2-Tetrachloroethane	µg/L	0.076		N.D.		
Tetrachloroethene	µg/L	11	5	**0.6**		
Toluene	µg/L	1100	1000	N.D.		
1,2,3-Trichlorobenzene	µg/L	7		N.D.		
1,2,4-Trichlorobenzene	µg/L	1.2	70	N.D.		
1,1,1-Trichloroethane	µg/L	8000	200	**0.1**	**J**	
1,1,2-Trichloroethane	µg/L	0.28	5	N.D.		
Trichloroethene	µg/L	0.49	5	**8.7**		
Trichlorofluoromethane	µg/L	5200		**1.7**		
Vinyl Chloride	µg/L	0.019	2	N.D.		
m+p-Xylene	µg/L	190		N.D.		
o-Xylene	µg/L	190		N.D.		

Notes:

***** Maximum Contaminant Level Goal for Chloroform

Bold Contaminant detected above laboratory method detection limit

Bold Contaminant detected above screening criteria (i.e., MCL or Maximum Contaminant Level Goal for Chloroform)

Underlined Contaminant detected above Risk Screening Levels

µg/L micrograms per liter

J estimated value

N.D. None detected

Table A.7.4.2-4
Monitoring Well Investigation Derived Waste Volumes
Area B Groundwater, Fort Detrick, Maryland
December 2014

Area B Groundwater Source	Date	Total Volume from Source (gal)	Storage Container ID*	Container Capacity	Source Volume in Container (gal)	Composite Sample ID	Sample Date and Time	Storage Location
BMW77	12/8/2014	47.78	1	550 gal	47.78	FTD72-IDW01	12/10/2014 @ 1700	Area B: Staging Area
BMW66D	12/8/2014	79.36			79.36			
BMW24D	12/9/2014	152.68			152.68			
BMW58D	12/9/2014	132.20			132.20			
BMW59D	12/9/2014	145.42			87.98			
			2	550 gal	57.44	FTD72-IDW02	12/11/2014 @ 1000	
BMW70A	12/10/2014	36.63			36.63			
BMW20D	12/10/2014	61.69			61.69			
BMW69A	12/10/2014	68.76			68.76			
BMW53F	12/10/2014	95.22			95.22			
BMW32D	12/10/2014	86.40			86.40			
BMW71C	12/11/2014	40.89			40.89			
BMW68D	12/11/2014	68.00	3-A	55 gal	48.00	FTD72-IDW03	12/11/2014 @ 1400	Area B: East side of gravel road adjacent to BMW67C **
			3-B	55 gal	20.00			
BMW56D	12/11/2014	89.28			28.00			
			3-C	55 gal	48.00			
			3-D	55 gal	13.28			
BMW67C	12/11/2014	132.20			35.20			
			3-E	55 gal	12.80			
					35.20			
			3-F	55 gal	49.00			

Notes:

-- *Container IDs 1 and 2 are open top polyethylene tanks with a 550 gallon capacity; Containers 3-A through 3-F are 55 Gallon open top polyethylene drums with a 55 gallon capacity

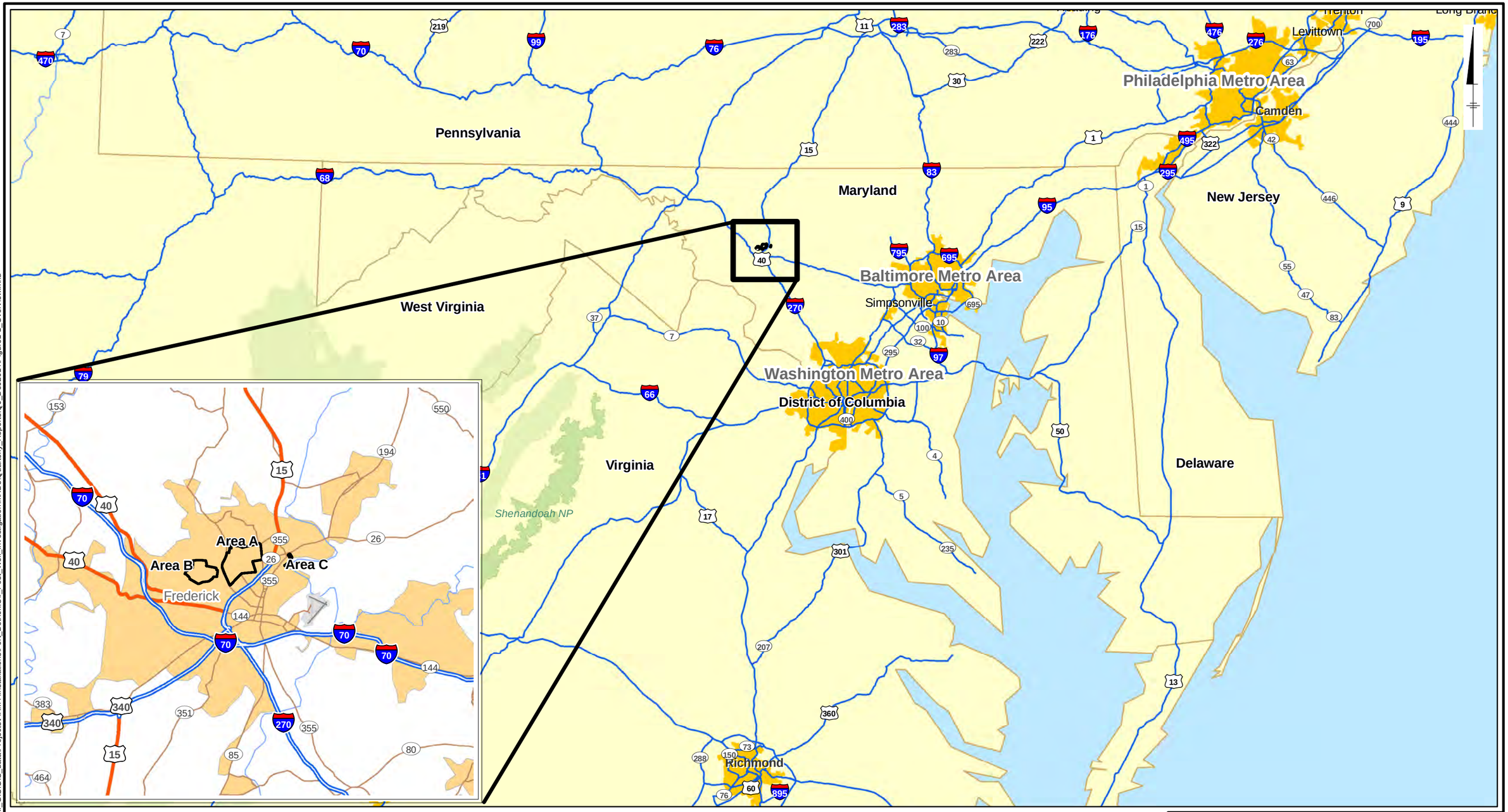
-- * *Storage location approved by FTD Envrionmental and FTD Hazardous Waste Management on 12/11/2014. Drums were relocated to appropriate storage facility by FTD Hazardous Waste Management on 12/12/2014.

-- All IDW drums pending analysis were filled leaving appropriate headspace to protect against freezing. Drums were labeled and secured pending further analysis and disposal.

-- BWM18 was dry; therefore, no IDW was recorded during this event

-- gal = gallon

Attachment 7.4.2
Figures



Legend

Fort Detrick Boundary

NOTES:

Base map data was obtained from ESRI StreetMap USA 2005.

Quarterly Report
(December 2014)
Off-Post Private Well Investigation and Associated Activities,
Supplemental Public Outreach and Monitoring Well Sampling
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

Overview of Fort Detrick Area B

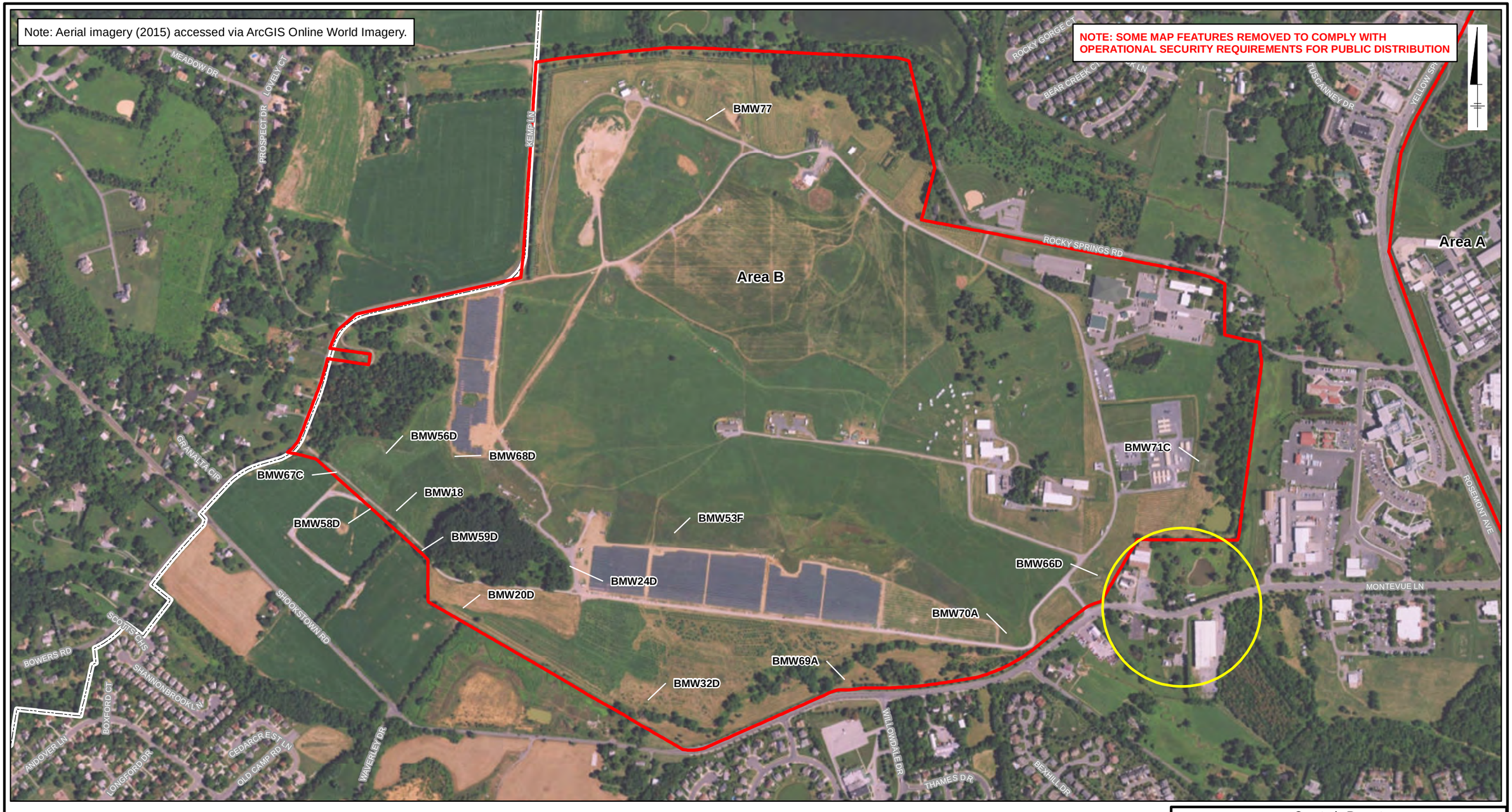
PIKA INTERNATIONAL, INC. ARCADIS

FIGURE
A.7.4.2-1

\\arcadis-us.com\office\data\WhitePlains-NY\WHI_GIS\GIS_data\Projects\ARMY\Installations\Fort_Detrick\Off_Post_Well_Investigation\MXDs\Quarterly_Reports\Q9_Dec2014\Figure1-1_Overview.mxd

Note: Aerial imagery (2015) accessed via ArcGIS Online World Imagery.

NOTE: SOME MAP FEATURES REMOVED TO COMPLY WITH OPERATIONAL SECURITY REQUIREMENTS FOR PUBLIC DISTRIBUTION



Legend

- Fort Detrick Boundary
- Frederick City Boundary
- Spring Location

BMSW56D Monitoring Point ID

Quarterly Report
(December 2014)
Off-Post Private Well Investigation and Associated Activities, Supplemental Public Outreach and Monitoring Well Sampling
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

Monitoring Wells, Private Wells, and Spring in the Study Area

PIKA INTERNATIONAL, INC. ARCADIS

FIGURE
A.7.4.2-2

Note: Aerial imagery (2015) accessed via ArcGIS Online World Imagery.

NOTE: SOME MAP FEATURES REMOVED TO COMPLY WITH OPERATIONAL SECURITY REQUIREMENTS FOR PUBLIC DISTRIBUTION

BMW77
341.92 ft

BMW56D
346.53 ft

BMW68D
347.77 ft

BMW71C
319.12 ft

BMW67C
351.62 ft

BMW18
(Dry)

BMW58D
351.58 ft

BMW59D
350.34 ft

BMW53F
342.68 ft

BMW24D
349.59 ft

BMW66D
323.93 ft

BMW20D
352.14 ft

BMW70A
326.79 ft

BMW69A
335.86 ft

BMW32D
349.95 ft

Area A

Area B

MEADOW DR
PROSPECT DR
KEMP LN
ROCKY SPRINGS RD
YELLOW SPR
ROSEMONT AVE
MONTEVUE LN
GRANALTA CIR
SHOOKSTOWN RD
SCOTTS CHS
BOWERS RD
SHANNONBROOK LN
BOXFORD CT
ANDOVER LN
LONGFORD DR
CEDARCREST LN
OLD CAMP RD
WAVERLEY DR
LAKE COVENTRY CT
WILLOWDALE DR
THAMES DR
BEXHILL DR

520
540
560
480
460
440
420
400
380
360
340
320

Legend

- Fort Detrick Boundary
- Frederick City Boundary
- 20-foot Topographic Contour
- Spring Location

BMW67C Monitoring Point ID
351.62 ft Groundwater Elevation (Dec. 2014) (ft msl)

Quarterly Report
(December 2014)
Off-Post Private Well Investigation and Associated Activities,
Supplemental Public Outreach and Monitoring Well Sampling
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

Monitoring Well Water Levels

PIKA INTERNATIONAL, INC. ARCADIS

FIGURE
A.7.4.2-3

Note: Aerial imagery (2015) accessed via ArcGIS Online World Imagery.

These were no exceedences of MCLs in the private wells in December 2014.

NOTE: SOME MAP FEATURES REMOVED TO COMPLY WITH OPERATIONAL SECURITY REQUIREMENTS FOR PUBLIC DISTRIBUTION

N

BMW77

Analyte	MCL (µg/L)	Result (µg/L)
Tetrachloroethene	5	20
Trichloroethene	5	6

BMW56D

Analyte	MCL (µg/L)	Result (µg/L)
1,1-dichloroethene	7	10
Tetrachloroethene	5	9.7
Trichloroethene	5	190

BMW68D

Analyte	MCL (µg/L)	Result (µg/L)
Benzene	5	12
Chloroform	70[1]	410
1,2-dichloroethane	5	20
1,1-dichloroethene	7	130
cis-1,2-dichloroethene	70	160
Tetrachloroethene	5	68
Trichloroethene	5	2,500
Vinyl Chloride	2	3

BMW67C

Analyte	MCL (µg/L)	Result (µg/L)
Benzene	5	32
Chloroform	70[1]	1,100
1,2-dichloroethane	5	36
1,1-dichloroethene	7	550
cis-1,2-dichloroethene	70	910
Tetrachloroethene	5	120
1,1,1-trichloroethane	200	230
1,1,2-trichloroethane	5	7.2
Trichloroethene	5	6,100

BMW24D

Analyte	MCL (µg/L)	Result (µg/L)
Tetrachloroethene	5	230
Trichloroethene	5	9.1

Robinson Spring

Analyte	MCL (µg/L)	Result (µg/L)
Trichloroethene	5	8.7

BMW66D

Analyte	MCL (µg/L)	Result (µg/L)
Trichloroethene	5	13

BMW58D

Analyte	MCL (µg/L)	Result (µg/L)
Trichloroethene	5	41

BMW53F

Analyte	MCL (µg/L)	Result (µg/L)
Trichloroethene	5	28

BMW59D

Analyte	MCL (µg/L)	Result (µg/L)
Trichloroethene	5	20

BMW71C had no MCL exceedances

BMW18 was not sampled - well was dry

BMW69A had no MCL exceedances

BMW70A had no MCL exceedances

BMW20 had no MCL exceedances

BMW20D had no MCL exceedances

BMW32D had no MCL exceedances

Area A

Area B

ROCKY SPRINGS RD

KEMP LN

OLD RECEIVER RD

MEADOW DR

LOVELY CT

PROSPECT DR

YALE CT

DOWN HILL RUN

SHOOKSTOWN RD

BROOKSIDE DR

ROCKY GORGE CT

EAGLE ROCK LN

BEAR CREEK CT

CARROLL CREEK VIEW CT

TUSCANNEY DR

YELLOW SPRING

ROSEMONT AVE

MONTEVUE LN

BOWERS RD

ROCK CREEK DR

ANDOVER LN

LONGFORD DR

WAVERLEY DR

WILLOWDALE DR

THAMES DR

BEXHILL DR

Legend

- Fort Detrick Boundary
- Frederick City Boundary
- Spring Location

BMW56D Monitoring Point ID

Notes:
1. No MCL exists for Chloroform; thus, the MCL goal is presented.
2. µg/L - micrograms per liter
3. MCL - Maximum Contaminant Level

Quarterly Report
(December 2014)
Off-Post Private Well Investigation and Associated Activities,
Supplemental Public Outreach and Monitoring Well Sampling
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

Monitoring Well and Spring Results Above MCL

PIKA INTERNATIONAL, INC. ARCADIS

FIGURE
A.7.4.2-4

Attachment 7.4.3
Sentinel Monitoring Program Tables and Figures
March/April 2015

(ARCADIS/Malcolm Pirnie, 2016)

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Attachment 7.4.3
Tables

Table A.7.4.3-1
Monitoring Well Data
Area B Groundwater, Fort Detrick, Maryland
March/April 2015

				Sample ID:	FTD72-BMW24D(040615)			FTD72-BMW77(030315)			FTD72-BMW70A(040715)			FTD72-BMW59D(040615)			FTD72-BMW66D(040715)			FTD72-BMW58D(040715)			FTD72-BMW32D(040815)			FTD72-BMW69A(040815)			FTD72-BMW20D(040615)			FTD72-DUP01(040615) Parent ID: FTD72-BMW20D(040615)		
				Sample Date:	4/6/2015			3/3/2015			4/7/2015			4/6/2015			4/7/2015			4/7/2015			4/8/2015			4/8/2015			4/6/2015			7/6/2015		
Analysis Name	Units	Risk Screening Levels (RSLs)	Maximum Contaminant Levels (MCLs)		Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l	14000	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Benzene	ug/l	0.46	5.00		N.D.	--	--	0.2	J	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	0.20	J	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Bromodichloromethane	ug/l	0.13	80.00		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Bromoform	ug/l	3.3	80.00		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Bromomethane	ug/l	7.5	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
2-Butanone	ug/l	5600	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Carbon Disulfide	ug/l	810	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Carbon Tetrachloride	ug/l	0.46	5.00		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Chlorobenzene	ug/l	78	100.00		N.D.	--	--	0.3	J	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Chloroethane	ug/l	21000	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Chloroform	ug/l	0.22	70*		3.3	--	--	0.9	--	--	N.D.	--	--	6.1	--	--	2.4	--	--	28	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	14	--	--
Chloromethane	ug/l	190	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Cyclohexane	ug/l	13000	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,2-Dibromo-3-chloropropane	ug/l	0.00033	0.20		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Dibromochloromethane	ug/l	0.87	80.00		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	UJ	N.D.	--	UJ	N.D.	--	--	N.D.	--	--
1,2-Dibromoethane	ug/l	0.0075	0.05		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,2-Dichlorobenzene	ug/l	300	600.00		N.D.	--	--	0.2	J	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,3-Dichlorobenzene	ug/l		--		N.D.	--	--	0.3	J	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,4-Dichlorobenzene	ug/l	0.48	75.00		N.D.	--	--	0.3	J	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Dichlorodifluoromethane	ug/l	200	--		N.D.	--	UJ	N.D.	--	--	N.D.	--	UJ	N.D.	--	UJ	N.D.	--	UJ	0.10	--	J	N.D.	--	UJ	N.D.	--	UJ	N.D.	--	UJ	N.D.	--	UJ
1,1-Dichloroethane	ug/l	2.8	--		N.D.	--	--	0.3	J	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	0.4	J	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	0.1	J	--
1,2-Dichloroethane	ug/l	0.17	5.00		N.D.	--	--	0.1	J	--	N.D.	--	--	0.2	J	--	N.D.	--	--	0.8		--	N.D.	--	--	N.D.	--	--	N.D.	--	--	0.3	J	--
1,1-Dichloroethene	ug/l	280	7.00		0.8	--	--	6.1	--	--	N.D.	--	--	1.4	--	--	0.9	--	--	10	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	3.6	--	--
cis-1,2-Dichloroethene	ug/l	36	70.00		0.5	--	--	1.7	--	--	N.D.	--	--	0.9	--	--	1.2	--	--	7.6	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	2.5	--	--
trans-1,2-Dichloroethene	ug/l	360	100.00		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,2-Dichloropropane	ug/l	0.44	5.00		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
cis-1,3-Dichloropropene	ug/l		--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
trans-1,3-Dichloropropene	ug/l		--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Ethylbenzene	ug/l	1.5	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	0.1	J	--	N.D.	--	--
Freon 113	ug/l	55000	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	0.8	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	0.3	J	--
2-Hexanone	ug/l	38	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Isopropylbenzene	ug/l	450	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Methyl Acetate	ug/l	20000	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Methyl Tertiary Butyl Ether	ug/l	14	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
4-Methyl-2-Pentanone	ug/l	6300	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Methylcyclohexane	ug/l		--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Methylene Chloride	ug/l	11	5.00		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Styrene	ug/l	1200	100.00		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,1,2,2-Tetrachloroethane	ug/l	0.076	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Tetrachloroethene	ug/l	11	5.00		300	--	--	21	--	--	N.D.	--	--	0.7	--	--	0.7	--	--	3.2	--	--	N.D.	--	--	N.D.	--	--	0.2	J	--	1.4	--	--
Toluene	ug/l	1100	1000.00		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,2,3-Trichlorobenzene	ug/l	7	--		N.D.	--	--	3.3	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,2,4-Trichlorobenzene	ug/l	1.2	70.00		N.D.	--	--	8.3	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,1,1-Trichloroethane	ug/l	8000	200.00		0.2	J	--	0.1	J	--	N.D.	--	--	0.4	J	--	0.2	J	--	2.3	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	0.9	--	--
1,1,2-Trichloroethane	ug/l	0.28	5.00		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	0.10	J	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Trichloroethene	ug/l	0.49	5.00		11	--	--	8.9	--	--	N.D.	--	--	19	--	--	12	--	--	110	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	41	--	--
Trichlorofluoromethane	ug/l	5200	--		3.8	--	--	N.D.	--	--	N.D.	--	--	7.0	--	--	2.5	--	--	22	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	13	--	--
Vinyl Chloride	ug/l	0.019	2.00		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
m+p-Xylene	ug/l	190	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	0.30	J	--	N.D.	--	--	0.10	J	--	N.D.	--	--	0.7	--	--	N.D.	--	--
o-Xylene	ug/l	190	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	0.10	J	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	0.20	J	--	N.D.	--	--

Notes:

* Maximum Contaminant Level Goal for Chloroform

Bold Contaminant detected above laboratory method detection limit

Bold Contaminant detected above screening criteria (i.e., MCL or Maximum Contaminant Level Goal for Chloroform)

Underlined Contaminant detected above Risk Screening Levels

J Estimated value – The result is ? the Method Detection Limit and < the Limit of Quantitation

UJ Indicates the compound or element was analyzed for but not detected. The sample detection limit is an estimated value.

N.D. None detected

K Indicates the reported value may be biased high.

N.S. Not Sampled

Table A.7.4.3-1
Monitoring Well Data
Area B Groundwater, Fort Detrick, Maryland
March/April 2015

				Sample ID:	FTD72-BMW71C(040815)			FTD72-BMW53F(040915)			FTD72-BMW56D(040915)			FTD72-BMW67B(040915)			FTD72-BMW68D(041015)			FTD72-BMW67C(041015)			FTD72-IDW01(041015)			FTD72-IDW02(041015)			FTD72-IDW03(041015)		
				Sample Date:	4/8/2015			4/9/2015			4/9/2015			4/9/2015			4/10/2015			4/10/2015			4/10/2015			4/10/2015			4/10/2015		
Analysis Name	**Units**	**Risk Screening Levels (RSLs)**	**Maximum Contaminant Levels (MCLs)**		**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**	**Result**	**Lab Qualifier**	**Val Qualifier**
Acetone	ug/l	14000	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Benzene	ug/l	0.46	5.00		N.D.	--	--	N.D.	--	--	**29**	--	--	**3.3**	**J**	--	**12**	--	--	**16**	**J**	--	**0.2**	**J**	--	N.D.	--	--	N.D.	--	--
Bromodichloromethane	ug/l	0.13	80.00		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Bromoform	ug/l	3.3	80.00		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Bromomethane	ug/l	7.5	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
2-Butanone	ug/l	5600	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**2.1**	**J**	--	N.D.	--	--
Carbon Disulfide	ug/l	810	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Carbon Tetrachloride	ug/l	0.46	5.00		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	UJ	N.D.	--	--	N.D.	--	--	N.D.	--	--
Chlorobenzene	ug/l	78	100.00		N.D.	--	--	N.D.	--	--	**3.5**	**J**	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Chloroethane	ug/l	21000	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Chloroform	ug/l	0.22	70*		**0.7**	--	--	**8.6**	--	--	**150**	--	--	**470**	--	--	**400**	--	--	**960**	--	--	**1.0**	--	--	**5.3**	--	--	**1.7**	--	--
Chloromethane	ug/l	190	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Cyclohexane	ug/l	13000	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,2-Dibromo-3-chloropropane	ug/l	0.00033	0.20		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Dibromochloromethane	ug/l	0.87	80.00		N.D.	--	UJ	N.D.	--	--	N.D.	--	UJ	N.D.	--	UJ	N.D.	--	UJ	N.D.	--	UJ	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,2-Dibromoethane	ug/l	0.0075	0.05		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,2-Dichlorobenzene	ug/l	300	600.00		N.D.	--	--	N.D.	--	--	**1.90**	**J**	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,3-Dichlorobenzene	ug/l		--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,4-Dichlorobenzene	ug/l	0.48	75.00		N.D.	--	--	N.D.	--	--	**2.30**	**J**	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Dichlorodifluoromethane	ug/l	200	--		N.D.	--	UJ	N.D.	--	--	N.D.	--	UJ	N.D.	--	UJ	N.D.	--	UJ	N.D.	--	UJ	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,1-Dichloroethane	ug/l	2.8	--		N.D.	--	--	N.D.	--	--	**5.2**	--	--	**2.9**	**J**	--	**6.2**	**J**	--	**8.8**	**J**	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,2-Dichloroethane	ug/l	0.17	5.00		N.D.	--	--	**0.3**	**J**	--	**12**	--	--	**10**	--	--	**24**	--	--	**22**	**J**	--	N.D.	--	--	**0.2**	**J**	--	N.D.	--	--
1,1-Dichloroethene	ug/l	280	7.00		**0.2**	**J**	--	**2.7**	--	--	**72**	--	--	**93**	--	--	**94**	--	--	**290**	--	--	**0.3**	**J**	--	**1.1**	--	--	**0.4**	**J**	--
cis-1,2-Dichloroethene	ug/l	36	70.00		**0.10**	**J**	--	**1.3**	--	--	**300**	--	--	**150**	--	--	**160**	--	--	**470**	--	--	**0.3**	**J**	--	**1.1**	--	--	**0.3**	**J**	--
trans-1,2-Dichloroethene	ug/l	360	100.00		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,2-Dichloropropane	ug/l	0.44	5.00		N.D.	--	--	N.D.	--	--	**1.50**	**J**	--	N.D.	--	--	**2.8**	**J**	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
cis-1,3-Dichloropropene	ug/l		--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
trans-1,3-Dichloropropene	ug/l		--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Ethylbenzene	ug/l	1.5	--		**0.50**	**J**	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**0.6**	--	--	**11**	--	--	**3.6**	--	--
Freon 113	ug/l	55000	--		N.D.	--	--	**0.20**	**J**	--	**5**	**J**	--	**13**	--	--	**4.6**	**J**	--	**35**	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
2-Hexanone	ug/l	38	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Isopropylbenzene	ug/l	450	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Methyl Acetate	ug/l	20000	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Methyl Tertiary Butyl Ether	ug/l	14	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
4-Methyl-2-Pentanone	ug/l	6300	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Methylcyclohexane	ug/l		--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Methylene Chloride	ug/l	11	5.00		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Styrene	ug/l	1200	100.00		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,1,2,2-Tetrachloroethane	ug/l	0.076	--		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**N.D.**	**J**	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Tetrachloroethene	ug/l	11	5.00		**0.2**	**J**	--	**0.8**	--	--	**83**	--	--	**39**	--	--	**56**	--	--	**78**	--	--	**1.2**	--	--	**37**	--	--	**0.4**	**J**	--
Toluene	ug/l	1100	1000.00		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**0.5**	--	--	N.D.	--	--	N.D.	--	--
1,2,3-Trichlorobenzene	ug/l	7	--		N.D.	--	--	N.D.	--	--	**48**	--	--	**7.80**	**J**	--	**10**	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,2,4-Trichlorobenzene	ug/l	1.2	70.00		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**31**	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
1,1,1-Trichloroethane	ug/l	8000	200.00		N.D.	--	--	**0.9**	--	--	**15**	--	--	**36**	--	--	**28**	--	--	**100**	--	--	N.D.	--	--	**0.3**	**J**	--	**0.2**	**J**	--
1,1,2-Trichloroethane	ug/l	0.28	5.00		N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
Trichloroethene	ug/l	0.49	5.00		**1.6**	--	--	**33**	--	--	**1,300**	--	--	**1,600**	--	--	**2,100**	--	--	**3,600**	--	--	**2.1**	--	--	**18**	--	--	**7.0**	--	--
Trichlorofluoromethane	ug/l	5200	--		**1.3**	--	--	**11**	--	--	**62**	--	--	**410**	--	--	**150**	--	--	**860**	--	--	N.D.	--	--	**3.3**	--	--	**1.5**	--	--
Vinyl Chloride	ug/l	0.019	2.00		N.D.	--	--	N.D.	--	--	**12**	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--
m+p-Xylene	ug/l	190	--		**2.2**	--	--	**0.20**	**J**	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	N.D.	--	--	**5.1**	--	--	**0.3**	**J**	--	**8.2**	--	--
o-Xylene	ug/l	190	--		**0.8**	--	--	N.D.	--	--	**1.50**	**J**	--	N.D.	--	--	N.D.	--	--	**5.6**	**J**	--	**3.2**	--	--	**28**	--	--	N.D.	--	--

Notes:

* Maximum Contaminant Level Goal for Chloroform

Bold Contaminant detected above laboratory method detection limit

Bold Contaminant detected above screening criteria (i.e., MCL or Maximum Contaminant Level Goal for Chloroform)

Underlined Contaminant detected above Risk Screening Levels

J Estimated value – The result is ? the Method Detection Limit and < the Limit of Quantitation

UJ Indicates the compound or element was analyzed for but not detected. The sample detection limit is an estimated value.

N.D. None detected

K Indicates the reported value may be biased high.

N.S. Not Sampled

Table A.7.4.3-2
Spring Data
Area B Groundwater, Fort Detrick, Maryland
March 2015

Analysis Name	Units	Risk Screening Levels (RSLs)	Maximum Contaminant Levels (MCLs)	FTD72-RISP03(030215)		
				03/02/2015		
				Result	Data Qual	Val Qual
Acetone	ug/l	14000		N.D.		
Benzene	ug/l	0.46	5	N.D.		
Bromodichloromethane	ug/l	0.13	80	N.D.		
Bromoform	ug/l	3.3	80	N.D.		
Bromomethane	ug/l	7.5		N.D.		
2-Butanone	ug/l	5600		N.D.		
Carbon Disulfide	ug/l	810		N.D.		
Carbon Tetrachloride	ug/l	0.46	5	N.D.		
Chlorobenzene	ug/l	78	100	N.D.		
Chloroethane	ug/l	21000		N.D.		
Chloroform	ug/l	0.22	70*	**1.5**		
Chloromethane	ug/l	190		N.D.		
Cyclohexane	ug/l	13000		N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.00033	0.2	N.D.		
Dibromochloromethane	ug/l	0.87	80	N.D.		
1,2-Dibromoethane	ug/l	0.0075	0.05	N.D.		
1,2-Dichlorobenzene	ug/l	300	600	N.D.		
1,3-Dichlorobenzene	ug/l			N.D.		
1,4-Dichlorobenzene	ug/l	0.48	75	N.D.		
Dichlorodifluoromethane	ug/l	200		N.D.		
1,1-Dichloroethane	ug/l	2.8		N.D.		
1,2-Dichloroethane	ug/l	0.17	5	N.D.		
1,1-Dichloroethene	ug/l	280		**0.6**	**J**	
cis-1,2-Dichloroethene	ug/l	36	70	**0.7**		
trans-1,2-Dichloroethene	ug/l	360	100	N.D.		
1,2-Dichloropropane	ug/l	0.44	5	N.D.		
cis-1,3-Dichloropropene	ug/l			N.D.		
trans-1,3-Dichloropropene	ug/l			N.D.		
Ethylbenzene	ug/l	1.5		N.D.		
Freon 113	ug/l	55000		N.D.		
2-Hexanone	ug/l	38		N.D.		
Isopropylbenzene	ug/l	450		N.D.		
Methyl Acetate	ug/l	20000		N.D.		
Methyl Tertiary Butyl Ether	ug/l	14		N.D.		
4-Methyl-2-Pentanone	ug/l	6300		N.D.		
Methylcyclohexane	ug/l			N.D.		
Methylene Chloride	ug/l	11	5	N.D.		
Styrene	ug/l	1200	100	N.D.		
1,1,2,2-Tetrachloroethane	ug/l	0.076		N.D.		
Tetrachloroethene	ug/l	11	5	**0.6**		
Toluene	ug/l	1100	1000	N.D.		
1,2,3-Trichlorobenzene	ug/l	7		N.D.		
1,2,4-Trichlorobenzene	ug/l	1.2	70	N.D.		
1,1,1-Trichloroethane	ug/l	8000	200	**0.1**	**J**	
1,1,2-Trichloroethane	ug/l	0.28	5	N.D.		
Trichloroethene	ug/l	0.49	5	**8.5**		
Trichlorofluoromethane	ug/l	5200		**1.5**		
Vinyl Chloride	ug/l	0.019	2	N.D.		
m+p-Xylene	ug/l	190		N.D.		
o-Xylene	ug/l	190		N.D.		

Notes:

***** Maximum Contaminant Level Goal for Chloroform

Bold Contaminant detected above laboratory method detection limit

Bold Contaminant detected above screening criteria (i.e., MCL or Maximum Contaminant Level Goal for Chloroform)

Underlined Contaminant detected above Risk Screening Levels

J Estimated value – The result is ? the Method Detection Limit and < the Limit of Quantitation

UJ Indicates the compound or element was analyzed for but not detected. The sample detection limit is an estimated value.

N.D. None detected

K Indicates the reported value may be biased high.

N.S. Not Sampled

Table A.7.4.3-3
Hazardous IDW Data
Area B Groundwater, Fort Detrick, Maryland
March 2015

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-IDW04(041015)		
			Result	Lab Qualifier	Val Qualifier
Benzene	mg/l	0.005	N.D.	--	--
2-Butanone	mg/l	--	N.D.	--	--
Carbon Tetrachloride	mg/l	0.005	N.D.	--	--
Chlorobenzene	mg/l	0.10	N.D.	--	--
Chloroform	mg/l	0.07*	0.25	--	--
1,2-Dichloroethane	mg/l	0.005	0.015	**J**	--
1,1-Dichloroethene	mg/l	--	0.075	--	--
Tetrachloroethene	mg/l	0.005	0.044	--	--
Trichloroethene	mg/l	0.005	1.3	--	--
Vinyl Chloride	mg/l	0.00	N.D.	--	--
1,4-Dichlorobenzene	mg/l	0.075	N.D.	--	--
2,4-Dinitrotoluene	mg/l	--	N.D.	--	--
Hexachlorobenzene	mg/l	0.001	N.D.	--	--
Hexachlorobutadiene	mg/l	--	N.D.	--	--
Hexachloroethane	mg/l	--	N.D.	--	--
2-Methylphenol	mg/l	--	N.D.	--	--
4-Methylphenol	mg/l	--	N.D.	--	--
Nitrobenzene	mg/l	--	N.D.	--	--
Pentachlorophenol	mg/l	0.001	N.D.	--	--
Pyridine	mg/l	--	N.D.	--	--
2,4,5-Trichlorophenol	mg/l	--	N.D.	--	--
2,4,6-Trichlorophenol	mg/l	--	N.D.	--	--
2,4-D	mg/l	--	N.D.	--	--
2,4,5-TP	mg/l	--	N.D.	--	--
Gamma BHC - Lindane	mg/l	--	N.D.	--	--
Chlordane	mg/l	--	N.D.	--	--
Endrin	mg/l	0.002	N.D.	--	--
Heptachlor	mg/l	0.0004	N.D.	--	--
Heptachlor Epoxide	mg/l	0.0002	N.D.	--	--
Methoxychlor	mg/l	0.04	N.D.	--	--
Toxaphene	mg/l	0.003	N.D.	--	--
Arsenic	mg/l	0.010	N.D.	--	--
Barium	mg/l	2.00	0.0210	--	--
Cadmium	mg/l	0.01	N.D.	--	--
Chromium	mg/l	0.10	0.0034	**J**	--
Lead	mg/l	0.015	N.D.	--	--
Selenium	mg/l	0.05	N.D.	--	--
Silver	mg/l	0.10	N.D.	--	--
Mercury	mg/l	0.002	N.D.	--	--

Notes:

J Estimated value – The result is ? the Method Detection Limit and < the Limit of Quantitation

Table A.7.4.3-4
Quarterly Groundwater Monitoring Well Water Levels
Area B Groundwater, Fort Detrick, Maryland
March/April 2015

Well ID	Zone	Ground Level Elevation (ft amsl)	Inner Casing Elevation (ft amsl)	Surface Completion	Well Diameter (inches)	Construction Material	Date of Installation	Screen Length (ft)	Screened Interval (ft amsl)	Sample Depth (ft amsl)	March/April 2015	
											Depth to Water (ft below bTOC)	Water Level Elevation (ft amsl)
BMW18	Overburden	384	386.00	Stick-Up	4	PVC	1977	10.00	359 - 349	354.00	DRY	--
BMW20D	Shallow Bedrock	336.17	368.31	Stick-Up	4	PVC	1998	20.00	218.17 - 198.17	208.17	16.52	351.79
BMW24D	Shallow Bedrock	365.47	368.16	Stick-Up	4	PVC	1990	10.20	201.22 - 191.02	196.12	19.86	348.30
BMW32D	Shallow Bedrock	356.21	356.21	Stick-Up	4	Unknown	1991	10.00	281.21 - 271.21	276.21	7.09	349.12
BMW53F	Deep Bedrock	349.1	351.69	Stick-Up	2	PVC	2011	10.00	54.1 - 44.1	49.10	9.62	342.07
BMW56D	Shallow Bedrock	380.86	382.86	Stick-Up	4	PVC	1993	20.00	309.86 - 289.86	299.86	36.41	346.45
BMW58D	Shallow Bedrock	387.4	388.65	Stick-Up	4	PVC	1993	20.00	277.9 - 257.9	267.90	36.16	352.49
BMW59D	Shallow Bedrock	389.91	391.65	Stick-Up	4	PVC	1993	20.00	226.91 - 206.91	216.91	41.21	350.44
BMW66D	Shallow Bedrock	332.1	335.05	Stick-Up	4	PVC	2009	5.00	62.1 - 57.1	59.60	11.39	323.66
BMW67C	Deep Bedrock	394.6	397.47	Stick-Up	2	Stainless Steel	2012	15.00	254.6 - 239.6	247.10	45.70	351.77
BMW67B*	Deep Bedrock	392.4	394.89	Stick-Up	2	Stainless Steel	2011	15.00	259.4 - 244.4	251.90	46.09	348.80
BMW68D	Deep Bedrock	371.7	374.22	Stick-Up	2	Stainless Steel	2012	10.00	204.7 - 194.7	199.70	27.32	346.90
BMW69A	Shallow Bedrock	337.9	340.51	Stick-Up	2	Stainless Steel	2012	10.00	315.9 - 305.9	310.90	4.94	335.57
BMW70A	Shallow Bedrock	327.5	330.06	Stick-Up	2	PVC	2010	5.00	296.5 - 291.5	294.00	4.93	325.13
BMW71C	Deep Bedrock	332.9	335.32	Stick-Up	2	PVC	2011	10.00	110.9 - 100.9	105.90	15.41	319.91
BMW77	Shallow Bedrock	363.3	366.26	Stick-Up	2	PVC	2011	15.00	307.3 - 292.3	299.80	29.13	337.13

Notes:
All Elevations in feet relative to NAVD 88 (MSL)
AMSL - Mean Sea Level
bTOC - Below top of casing (inner)
*BMW67B to be sampled if BMW18 is dry

Table A.7.4.3-4
Quarterly Groundwater Monitoring Well Water Levels
Area B Groundwater, Fort Detrick, Maryland
March/April 2015

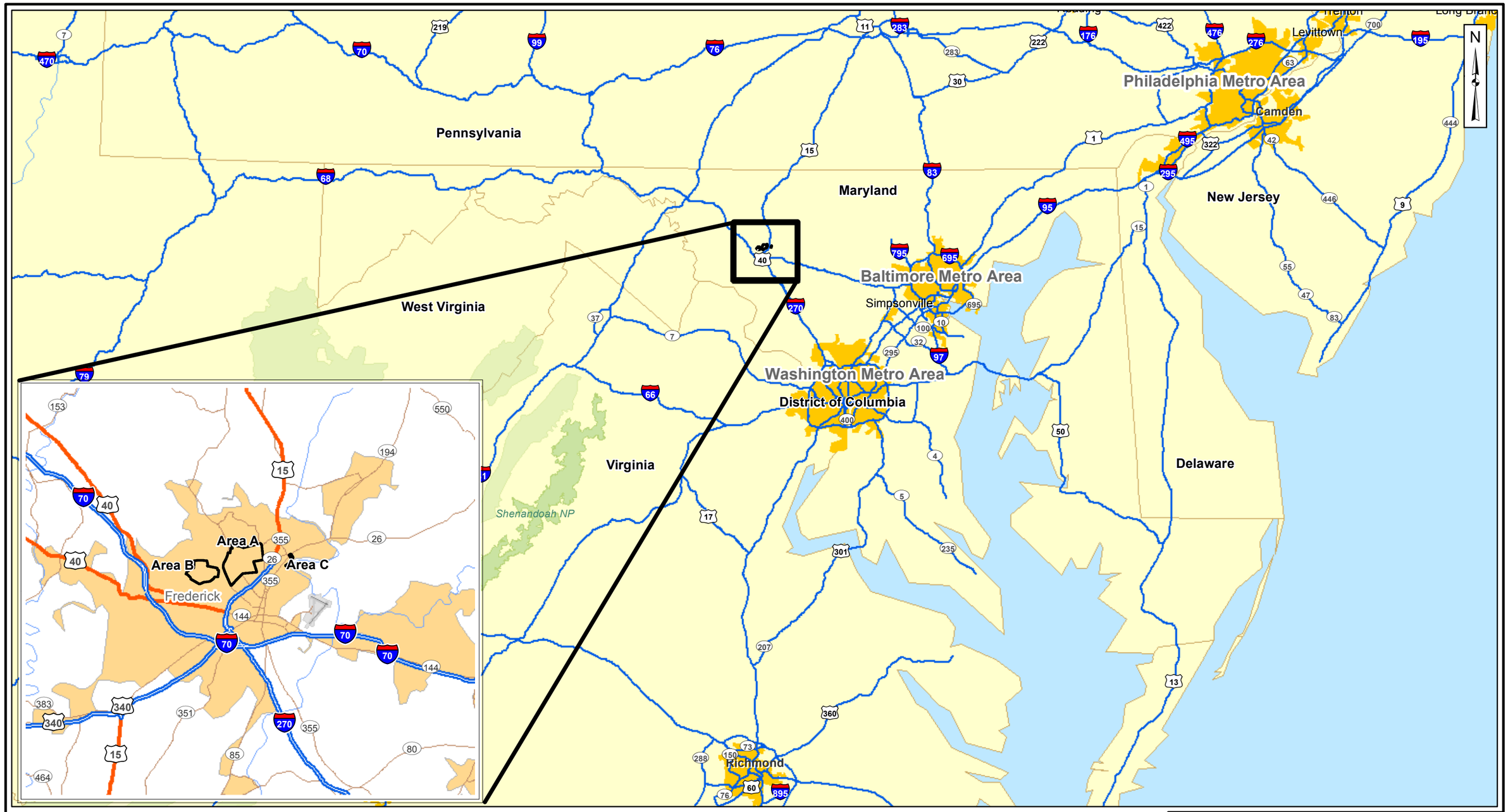
Well ID	Zone	Ground Level Elevation (ft amsl)	Inner Casing Elevation (ft amsl)	Surface Completion	Well Diameter (inches)	Construction Material	Date of Installation	Screen Length (ft)	Screened Interval (ft amsl)	Sample Depth (ft amsl)	March/April 2015	
											Depth to Water (ft below bTOC)	Water Level Elevation (ft amsl)
BMW18	Overburden	384	386.00	Stick-Up	4	PVC	1977	10.00	359 - 349	354.00	DRY	--
BMW20D	Shallow Bedrock	336.17	368.31	Stick-Up	4	PVC	1998	20.00	218.17 - 198.17	208.17	16.52	351.79
BMW24D	Shallow Bedrock	365.47	368.16	Stick-Up	4	PVC	1990	10.20	201.22 - 191.02	196.12	19.86	348.30
BMW32D	Shallow Bedrock	356.21	356.21	Stick-Up	4	Unknown	1991	10.00	281.21 - 271.21	276.21	7.09	349.12
BMW53F	Deep Bedrock	349.1	351.69	Stick-Up	2	PVC	2011	10.00	54.1 - 44.1	49.10	9.62	342.07
BMW56D	Shallow Bedrock	380.86	382.86	Stick-Up	4	PVC	1993	20.00	309.86 - 289.86	299.86	36.41	346.45
BMW58D	Shallow Bedrock	387.4	388.65	Stick-Up	4	PVC	1993	20.00	277.9 - 257.9	267.90	36.16	352.49
BMW59D	Shallow Bedrock	389.91	391.65	Stick-Up	4	PVC	1993	20.00	226.91 - 206.91	216.91	41.21	350.44
BMW66D	Shallow Bedrock	332.1	335.05	Stick-Up	4	PVC	2009	5.00	62.1 - 57.1	59.60	11.39	323.66
BMW67C	Deep Bedrock	394.6	397.47	Stick-Up	2	Stainless Steel	2012	15.00	254.6 - 239.6	247.10	45.70	351.77
BMW67B*	Deep Bedrock	392.4	394.89	Stick-Up	2	Stainless Steel	2011	15.00	259.4 - 244.4	251.90	46.09	348.80
BMW68D	Deep Bedrock	371.7	374.22	Stick-Up	2	Stainless Steel	2012	10.00	204.7 - 194.7	199.70	27.32	346.90
BMW69A	Shallow Bedrock	337.9	340.51	Stick-Up	2	Stainless Steel	2012	10.00	315.9 - 305.9	310.90	4.94	335.57
BMW70A	Shallow Bedrock	327.5	330.06	Stick-Up	2	PVC	2010	5.00	296.5 - 291.5	294.00	4.93	325.13
BMW71C	Deep Bedrock	332.9	335.32	Stick-Up	2	PVC	2011	10.00	110.9 - 100.9	105.90	15.41	319.91
BMW77	Shallow Bedrock	363.3	366.26	Stick-Up	2	PVC	2011	15.00	307.3 - 292.3	299.80	29.13	337.13

Notes:
All Elevations in feet relative to NAVD 88 (MSL)
AMSL - Mean Sea Level
bTOC - Below top of casing (inner)
*BMW67B to be sampled if BMW18 is dry

Table A.7.4.3-5
Monitoring Well Investigation Derived Waste Volumes
March - April 2015

Area B Groundwater Source	Date	Total Volume from Source (gal)	Storage Location	Storage Container / Volume (gal)	Composite Sample ID
BMW-56D	4/9/2015	98.60	Area B 90-Day Storage Area	55 gal open top Poly Drum	FTD72-IDW04
BMW-67B	4/9/2015	56.52	Area B 90-Day Storage Area	55 gal open top Poly Drum	FTD72-IDW04
BMW-67C	4/10/2015	103.20	Area B 90-Day Storage Area	55 gal open top Poly Drum	FTD72-IDW04
BMW-68D	4/10/2015	38.00	Area B 90-Day Storage Area	55 gal open top Poly Drum	FTD72-IDW04
BMW-77	3/3/2015	63.60	Area B Staging Area	250 gal open top Poly Tote	FTD72-IDW01
CNTY-1D	3/3/2015	44.00	Area B Staging Area	250 gal open top Poly Tote	FTD72-IDW01
BMW-20D	4/6/2015	55.00	Area B Staging Area	550 gal open top Poly Tank	FTD72-IDW01
BMW-59D	4/6/2015	166.50	Area B Staging Area	550 gal open top Poly Tank	FTD72-IDW02
BMW-24D	4/7/2015	160.00	Area B Staging Area	550 gal open top Poly Tank	FTD72-IDW02
BMW-58D	4/7/2015	105.60	Area B Staging Area	550 gal open top Poly Tank	FTD72-IDW02
BMW-66D	4/7/2015	89.60	Area B Staging Area	550 gal open top Poly Tank	FTD72-IDW02
BMW-70A	4/7/2015	23.15	Area B Staging Area	550 gal open top Poly Tank	FTD72-IDW02
BMW-71C	4/8/2015	110.00	Area B Staging Area	550 gal open top Poly Tank	FTD72-IDW03
BMW-69A	4/8/2015	92.61	Area B Staging Area	550 gal open top Poly Tank	FTD72-IDW03
BMW-32D	4/8/2015	110.00	Area B Staging Area	550 gal open top Poly Tank	FTD72-IDW03
BMW-53F	4/9/2015	88.00	Area B Staging Area	550 gal open top Poly Tank	FTD72-IDW03

Attachment 7.4.3
Figures



Legend

Fort Detrick Boundary

NOTES:

Base map data was obtained from ESRI StreetMap USA 2005.

Quarterly Groundwater Monitoring Report
(March/April 2015)
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

Overview of Fort Detrick Area B

ARCADIS

FIGURE
A.7.4.3-1

Note: Aerial imagery (2015) accessed via ArcGIS Online World Imagery.

NOTE: SOME MAP FEATURES REMOVED TO COMPLY WITH OPERATIONAL SECURITY REQUIREMENTS FOR PUBLIC DISTRIBUTION

N

Area A

Area B

BMW77

BMW56D

BMW68D

BMW67C

BMW18

BMW67B

BMW58D

BMW59D

BMW53F

BMW24D

BMW20D

BMW71C

BMW66D

BMW70A

BMW69A

BMW32D

MEADOW DR

LOVELY CT

PROSPECT DR

KEMP LN

ROCKY GORGE CT

BEAR CREEK CT

TUSCANNEY DR

YELLOW SPR

ROCKY SPRINGS RD

ROSEMONT AVE

MONTEVUE LN

GRANALTA CIR

SHOOKSTOWN RD

SCOTTS CHS

BOWERS RD

SHANNONBROOK LN

BOXFORD CT

ANDOVER LN

LONGFORD DR

CEDARCREST LN

OLD CAMP RD

WAVERLEY DR

WILLOWDALE DR

THAMES D R

BEXHILL DR

Legend

- Fort Detrick Boundary
- Frederick City Boundary
- Spring Location

BMSW56D Monitoring Point ID

Quarterly Groundwater Monitoring Report
(March/April 2015)
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

Monitoring Wells and Spring in the Study Area

ARCADIS

FIGURE
A.7.4.3-2

Note: Aerial imagery (2015) accessed via ArcGIS Online World Imagery.

NOTE: SOME MAP FEATURES REMOVED TO COMPLY WITH OPERATIONAL SECURITY REQUIREMENTS FOR PUBLIC DISTRIBUTION

N

BMW77
337.13 ft

Area A

Area B

BMW56D
346.45 ft

BMW68D
346.90 ft

BMW71C
319.91 ft

BMW67C
351.77 ft

BMW67B
348.80 ft

BMW18
(Dry)

BMW58D
352.49 ft

BMW59D
350.44 ft

BMW53F
342.07 ft

BMW66D
323.66 ft

BMW24D
348.30 ft

BMW20D
351.79 ft

BMW70A
325.13 ft

BMW69A
335.57 ft

BMW32D
349.12 ft

MEADOW DR
PROSPECT DR
KEMP LN
ROCKY SPRINGS RD
BEAR CREEK CT
YELLOW SPR
ROSEMONT AVE
MONTEVUE LN
GRANALTA CIR
SHOOKSTOWN RD
SCOTTS CHS
BOWERS RD
SHANNONBROOK LN
BOXFORD CT
ANDOVER LN
LONGFORD DR
CEDARCREST LN
OLD CAMP RD
WAVERLEY DR
LAKE COVENTRY CT
WILLOWDALE DR
THAMES D R
BEXHILL DR

520 540 560 480 460 440 420 400 380 360 340 320

Legend

- Fort Detrick Boundary
- Frederick City Boundary
- 20-foot Topographic Contour
- Spring Location

BMW67C Monitoring Point ID
351.77 ft Groundwater Elevation (Mar. 2015) (ft msl)

Quarterly Groundwater Monitoring Report
(March/April 2015)
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

Monitoring Well Water Levels

ARCADIS

FIGURE
A.7.4.3-3

Note: Aerial imagery (2015) accessed via ArcGIS Online World Imagery.

NOTE: SOME MAP FEATURES REMOVED TO COMPLY WITH OPERATIONAL SECURITY REQUIREMENTS FOR PUBLIC DISTRIBUTION

N

Area A

Area B

BMW56D		
Analyte	MCL (µg/L)	Result (µg/L)
Benzene	5	29
Chloroform	70[1]	150
1,2-dichloroethane	5	12
1,1-dichloroethene	7	72
cis-1,2-dichloroethene	70	300
Tetrachloroethene	5	83
Trichloroethene	5	1,300
Vinyl Chloride	2	12

BMW68D		
Analyte	MCL (µg/L)	Result (µg/L)
Benzene	5	12
Chloroform	70[1]	400
1,2-dichloroethane	5	24
1,1-dichloroethene	7	94
cis-1,2-dichloroethene	70	160
Tetrachloroethene	5	56
Trichloroethene	5	2,100

BMW77		
Analyte	MCL (µg/L)	Result (µg/L)
Tetrachloroethene	5	21
Trichloroethene	5	8.9

BMW67C		
Analyte	MCL (µg/L)	Result (µg/L)
Benzene	5	16
Chloroform	70[1]	960
1,2-dichloroethane	5	22
1,1-dichloroethene	7	290
cis-1,2-dichloroethene	70	470
Tetrachloroethene	5	78
Trichloroethene	5	3,600

BMW67B		
Analyte	MCL (µg/L)	Result (µg/L)
Chloroform	70[1]	470
1,2-dichloroethane	5	10
1,1-dichloroethene	7	93
cis-1,2-dichloroethene	70	150
Tetrachloroethene	5	39
Trichloroethene	5	1,600

BMW24D		
Analyte	MCL (µg/L)	Result (µg/L)
Tetrachloroethene	5	300
Trichloroethene	5	11

Robinson Spring		
Analyte	MCL (µg/L)	Result (µg/L)
Trichloroethene	5	8.5

BMW66D		
Analyte	MCL (µg/L)	Result (µg/L)
Trichloroethene	5	12

BMW71C had no MCL exceedances

BMW58D		
Analyte	MCL (µg/L)	Result (µg/L)
1,1-dichloroethene	7	10
Trichloroethene	5	110

BMW53F		
Analyte	MCL (µg/L)	Result (µg/L)
Trichloroethene	5	33

BMW18 was not sampled - well was dry

BMW69A had no MCL exceedances

BMW59D		
Analyte	MCL (µg/L)	Result (µg/L)
Trichloroethene	5	19

BMW70A had no MCL exceedances

BMW20 had no MCL exceedances

BMW20D had no MCL exceedances

BMW32D had no MCL exceedances

YALE CT
OLD RECEIVER RD
DOWN HILL RUN
SHOOKSTOWN RD
BROOKSIDE DR
PROSPECT DR
LOVELY CT
KEMP LN
ROCKY SPRINGS RD
TWIN
EAGLE ROCK LN
ROCKY GORGE CT
BEAR CREEK CT
CARROLL CREEK VIEW CT
TUSCANNEY DR
YELLOW SPRING
ROSEMONT AVE
MONTEVUE LN
BOWERS RD
ROCK CREEK DR
ANDOVER LN
LONGFORD DR
WAVERLEY DR
WILLOWDALE DR
THAMES DR
BEXHILL DR

Legend

- Fort Detrick Boundary
- Frederick City Boundary
- Spring Location

BMW56D Monitoring Point ID

Notes:
1. No MCL exists for Chloroform; thus, the MCL goal is presented.
2. µg/L - micrograms per liter
3. MCL - Maximum Contaminant Level

Quarterly Groundwater Monitoring Report
(March/April 2015)
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

Monitoring Well and Spring Results Above MCL

ARCADIS

FIGURE
A.7.4.3-4

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Attachment 7.4.4
Sentinel Monitoring Program Tables and Figures
June 2015
(ARCADIS, 2016)

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ARCADIS

Draft Fort Detrick Area B Quarterly Groundwater Monitoring Report

Second Quarter 2015

Attachment 7.4.4
Tables

Table A.7.4.4-1
Well Construction and Groundwater Elevation

Fort Detrick (Area B), Maryland
June 2015

Well ID	Zone	Ground Level Elevation[1] (ft amsl)	Total Depth[1] (ft amsl)	Screened Interval[1] (ft amsl)	Sample Depth (ft below bTOC)	8 June 2015	
						Depth to Water (ft below bTOC)	Water Level Elevation[1] (ft amsl)
BMW18	Overburden	384	349.50	359 - 349	354.00	39.51	346.49
BMW20[2,3]	Overburden	367	331.20	341.20 - 331.20	336.20	14.24	354.46
BMW20D	Shallow Bedrock	336.17	189.66	218.17 - 198.17	208.17	16.28	352.03
BMW24D	Shallow Bedrock	365.47	187.25	201.22 - 191.02	196.12	18.85	349.31
BMW32D	Shallow Bedrock	356.21	268.80	281.21 - 271.21	276.21	7.04	349.17
BMW53F	Deep Bedrock	349.1	41.47	54.1 - 44.1	49.10	9.63	342.06
BMW56D	Shallow Bedrock	380.86	282.58	309.86 - 289.86	299.86	36.16	346.70
BMW58D	Shallow Bedrock	387.4	256.91	277.9 - 257.9	267.90	36.18	352.47
BMW59D	Shallow Bedrock	389.91	204.26	226.91 - 206.91	216.91	41.02	350.63
BMW66D	Shallow Bedrock	332.1	53.65	62.1 - 57.1	59.60	10.26	324.79
BMW67C	Deep Bedrock	394.6	235.63	254.6 - 239.6	247.10	45.32	352.15
BMW68D	Deep Bedrock	371.7	191.99	204.7 - 194.7	199.70	27.44	346.78
BMW69A[3]	Shallow Bedrock	337.9	303.13	315.9 - 305.9	310.90	5.02	335.49
BMW70A	Shallow Bedrock	327.5	288.41	296.5 - 291.5	294.00	4.86	325.20
BMW71C	Deep Bedrock	332.9	98.30	110.9 - 100.9	105.90	16.35	318.97
BMW77	Shallow Bedrock	363.3	289.79	307.3 - 292.3	299.80	23.58	342.68

Notes:

1. All elevations presented in feet relative to the North American Vertical Datum 1988.
2. BMW18 is sampled in lieu of BMW18 when BMW18 does not produce enough groundwater to collect a representative sample.
3. Groundwater elevations at BMW69A and BMW20 were not collected during the synoptic gauging event conducted on 6/8/2015; rather, BMW69A was gauged on 6/10/2015 due to access issues crossing the stream and BMW20 was gauged on 6/9/2015 as the replacement for BMW18.

ft amsl - feet above mean sea level
bTOC - Below top of casing (inner)

Table A.7.4.4-2
Groundwater Analytical Results

Fort Detrick (Area B), Maryland
June 2015

			Location ID	**BMW-20**	**BMW-20D**	**BMW-24D**	**BMW-32D**	**BMW-53F**	**BMW-56D**	**BMW-58D**	**BMW-59D (DUP001)**
			Date	6/9/2015	6/9/2015	6/11/2015	6/9/2015	6/10/2015	6/11/2015	6/11/2015	6/8/2015
			Sample ID	FTD72-BMW20(060915)	FTD72-BMW20d(060815)	FTD72-BMW24d(061115)	FTD72-BMW32d(060915)	FTD72-BMW53f(061015)	FTD72-BMW56d(061115)	FTD72-BMW58d(061115)	FTD72-BMW59d(060815)
Analyte	**Units**	**MCL**									
Acetone	µg/L	--	--	--	--	--	--	--	--	--	-- (--)
Benzene	µg/L	5	--	--	--	--	--	--	**55**	0.1 J	-- (--)
Bromodichloromethane	µg/L	80	--	--	--	--	--	--	--	--	-- (--)
Bromoform	µg/L	80	--	--	--	--	--	--	--	--	-- (--)
Bromomethane	µg/L	--	--	--	--	--	--	--	--	--	-- (--)
2-Butanone	µg/L	--	--	--	--	--	--	--	--	--	-- (--)
Carbon Disulfide	µg/L	--	--	--	--	--	--	--	--	--	-- (--)
Carbon Tetrachloride	µg/L	5	--	--	--	--	--	0.1 J	--	--	-- (--)
Chlorobenzene	µg/L	100	--	--	--	--	--	--	5.7	--	-- (--)
Chloroethane	µg/L	--	--	--	3.0	--	--	--	--	--	-- (--)
Chloroform	µg/L	70[1]	--	--	--	--	--	8.6	**300**	23	6.0 (6.1)
Chloromethane	µg/L	--	--	--	--	--	--	--	--	--	-- (--)
Cyclohexane	µg/L	--	--	--	--	--	--	--	1.0 J	--	-- (--)
1,2-Dibromo-3-chloropropane	µg/L	0.20	--	--	--	--	--	--	--	--	-- (--)
Dibromochloromethane	µg/L	80	--	--	--	--	--	--	--	--	-- (--)
1,2-Dibromoethane	µg/L	0.05	--	--	--	--	--	--	--	--	-- (--)
1,2-Dichlorobenzene	µg/L	600	--	--	--	--	--	--	3.0 J	--	-- (--)
1,3-Dichlorobenzene	µg/L	--	--	--	--	--	--	--	--	--	-- (--)
1,4-Dichlorobenzene	µg/L	75	--	--	--	--	--	--	3.9 J	--	-- (--)
Dichlorodifluoromethane	µg/L	--	--	--	--	--	--	--	3.9 J	0.1 J	-- (--)
1,1-Dichloroethane	µg/L	--	--	--	--	--	--	--	8.6	0.3 J	-- (--)
1,2-Dichloroethane	µg/L	5	--	--	0.6	--	--	0.3 J	**18**	0.6	0.2 J (0.2 J)
1,1-Dichloroethene	µg/L	--	--	--	0.3 J	--	--	2.8	150	7.0	1.4 (1.3)
cis-1,2-Dichloroethene	µg/L	70	--	--	--	--	--	1.1	**470**	4.8	0.7 (0.8)
trans-1,2-Dichloroethene	µg/L	100	--	--	--	--	--	--	1.8 J	--	-- (--)
1,2-Dichloropropane	µg/L	5	--	--	--	--	--	--	2.3 J	--	-- (--)
cis-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--	--	--	-- (--)
trans-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--	--	--	-- (--)
Ethylbenzene	µg/L	--	--	0.3 J	--	--	0.9	--	5.8	--	-- (--)
Freon 113	µg/L	--	--	--	--	--	--	--	11	0.4 J	-- (--)
2-Hexanone	µg/L	--	--	--	--	--	--	--	--	--	-- (--)
Isopropylbenzene	µg/L	--	--	--	--	--	--	--	--	--	-- (--)
Methyl Acetate	µg/L	--	--	--	--	--	--	--	--	--	-- (--)
Methyl Tertiary Butyl Ether	µg/L	--	--	--	--	--	--	--	--	--	-- (--)
4-Methyl-2-Pentanone	µg/L	--	--	--	--	--	--	--	--	--	-- (--)
Methylcyclohexane	µg/L	--	--	--	--	--	--	--	--	--	-- (--)
Methylene Chloride	µg/L	5	--	--	--	--	--	--	--	--	-- (--)
Styrene	µg/L	100	--	--	--	--	--	--	--	--	-- (--)
1,1,2,2-Tetrachloroethane	µg/L	--	--	--	150	--	--	--	1.6 J	--	-- (--)
Tetrachloroethene	µg/L	5	--	0.1 J	--	--	0.8	--	**130**	2.3	0.6 (0.6)
Toluene	µg/L	1000	--	0.2 J	--	--	--	--	--	--	-- (--)
1,2,3-Trichlorobenzene	µg/L	--	--	--	--	--	--	--	1.1 J	--	-- (--)
1,2,4-Trichlorobenzene	µg/L	70	--	--	0.2 J	--	--	--	**97**	--	-- (--)
1,1,1-Trichloroethane	µg/L	200	--	--	--	--	--	0.9	35	1.5	0.3 J (0.3 J)
1,1,2-Trichloroethane	µg/L	5	--	--	**8.4**	--	--	2.2 J	--	--	-- (--)
Trichloroethene	µg/L	5	--	--	3.7	--	**30**	**2,600**	**79**	**18 (19)**
Trichlorofluoromethane	µg/L	--	--	--	--	--	--	11	150	19	7.0 (7.3)
Vinyl Chloride	µg/L	2	--	--	--	--	--	--	**22**	--	-- (--)
m+p-Xylene	µg/L	--	--	1.2	--	4.4	--	--	--	--	-- (--)
o-Xylene	µg/L	--	--	0.4 J		1.4	--	2.1 J	--	--	-- (--)

Notes:
1. No MCL exists for chlorform; thus, the MCL Goal is presented.
2. Duplicate sample results are presented in parenthesis adjacent to the parent sample results.
3. Results exceeding the MCL are highlighted in gray and presented in boldfaced font.
-- Indicates that an analyte wasanalyzed for but was either not detected or was below laboratory reporting limits.

µg/L - microgram per liter
MCL - Maximum Contaminant Level
Laboratory Data Qualifiers:
J - Estimated Value

Table A.7.4.4-2
Groundwater Analytical Results

Fort Detrick (Area B), Maryland
June 2015

	Location ID		**BMW-66D**	**BMW-67C**	**BMW-68D**	**BMW-69A**	**BMW-70A**	**BMW-71C**	**BMW-77**
	Date		6/10/2015	6/11/2014	6/11/2015	6/10/2015	6/10/2015	6/9/2015	6/10/2015
	Sample ID		FTD72-BMW66d(061015)	FTD72-BMW67c(061115)	FTD72-BMW68d(061115)	FTD72-BMW69a(061015)	FTD72-BMW70a(061015)	FTD72-BMW71c(060915)	FTD72-BMW77(061015)
Analyte	**Units**	**MCL**							
Acetone	µg/L	--	--	--	--	--	--	--	--
Benzene	µg/L	5	--	**46**	**8.1**	--	--	--	0.2 J
Bromodichloromethane	µg/L	80	--	--	--	--	--	--	--
Bromoform	µg/L	80	--	--	--	--	--	--	--
Bromomethane	µg/L	--	--	--	--	--	--	--	--
2-Butanone	µg/L	--	--	--	--	--	--	--	--
Carbon Disulfide	µg/L	--	--	--	--	--	--	--	--
Carbon Tetrachloride	µg/L	5	--	--	--	--	--	--	--
Chlorobenzene	µg/L	100	--	--	1.4 J	--	--	--	0.3 J
Chloroethane	µg/L	--	--	--	--	--	--	--	--
Chloroform	µg/L	70[1]	2.4	**1,200**	**450**	--	--	0.7	0.7
Chloromethane	µg/L	--	--	--	--	--	--	--	--
Cyclohexane	µg/L	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	µg/L	0.20	--	--	--	--	--	--	--
Dibromochloromethane	µg/L	80	--	--	--	--	--	--	--
1,2-Dibromoethane	µg/L	0.05	--	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	600	--	--	--	--	--	--	0.2 J
1,3-Dichlorobenzene	µg/L	--	--	--	--	--	--	--	0.3 J
1,4-Dichlorobenzene	µg/L	75	--	--	--	--	--	--	0.3 J
Dichlorodifluoromethane	µg/L	--	--	--	3.9 J	--	--	--	--
1,1-Dichloroethane	µg/L	--	--	22 J	6.2	--	--	--	0.3 J
1,2-Dichloroethane	µg/L	5	--	**52**	**21**	--	--	--	0.1 J
1,1-Dichloroethene	µg/L	--	0.9	760	130	--	--	0.2 J	6.9
cis-1,2-Dichloroethene	µg/L	70	0.9	**1,000**	**180**	--	--	--	1.9
trans-1,2-Dichloroethene	µg/L	100	--	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	5	--	--	2.5 J	--	--	--	--
cis-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--	--
Ethylbenzene	µg/L	--	--	37	--	--	--	0.3 J	--
Freon 113	µg/L	--	--	88	8.0	--	--	--	--
2-Hexanone	µg/L	--	--	--	--	--	--	--	--
Isopropylbenzene	µg/L	--	--	--	--	--	--	--	--
Methyl Acetate	µg/L	--	--	--	--	--	--	--	--
Methyl Tertiary Butyl Ether	µg/L	--	--	--	--	--	--	--	--
4-Methyl-2-Pentanone	µg/L	--	--	--	--	--	--	--	--
Methylcyclohexane	µg/L	--	--	--	--	--	--	--	--
Methylene Chloride	µg/L	5	--	--	--	--	--	--	--
Styrene	µg/L	100	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	--	--	7.8 J	--	--	--	--	--
Tetrachloroethene	µg/L	5	0.7	**150**	**71**	--	--	0.2 J	**24**
Toluene	µg/L	1000	--	6.3 J	--	--	--	--	--
1,2,3-Trichlorobenzene	µg/L	--	--	--	--	--	--	--	3.2
1,2,4-Trichlorobenzene	µg/L	70	--	**110**	14	--	--	--	8.6
1,1,1-Trichloroethane	µg/L	200	0.2 J	**300**	35	--	--	--	0.1 J
1,1,2-Trichloroethane	µg/L	5	--	**10 J**	1.6 J	--	--	--	--
Trichloroethene	µg/L	5	**12**	**8,800**	**2,500**	--	--	1.3	**9.5**
Trichlorofluoromethane	µg/L	--	2.6	1,300	300	--	--	1.3	--
Vinyl Chloride	µg/L	2	--	--	**2.6 J**	--	--	--	--
m+p-Xylene	µg/L	--	0.1 J	36	--	--	--	2.0	--
o-Xylene	µg/L	--	--	100	--	--	--	0.6	--

Notes:
1. No MCL exists for chlorform; thus, the MCL Goal is presented.
2. Duplicate sample results are presented in parenthesis adjacent to the parent sample results.
3. Results exceeding the MCL are highlighted in gray and presented in boldfaced font.
-- Indicates that an analyte wasanalyzed for but was either not detected or was below laboratory reporting limits.

µg/L - microgram per liter
MCL - Maximum Contaminant Level
Laboratory Data Qualifiers:
J - Estimated Value

Table A.7.4.4-3
Robinson Spring Analytical Results

Fort Detrick (Area B), Maryland
June 2015

		Location ID	**Robinson Spring**
		Date	6/8/2015
		Sample ID	RobinsonSpring(060815)
Analyte	**Units**	**MCL**	
Acetone	µg/L	--	--
Benzene	µg/L	5	--
Bromodichloromethane	µg/L	80	--
Bromoform	µg/L	80	--
Bromomethane	µg/L	--	--
2-Butanone	µg/L	--	--
Carbon Disulfide	µg/L	--	--
Carbon Tetrachloride	µg/L	5	--
Chlorobenzene	µg/L	100	--
Chloroethane	µg/L	--	--
Chloroform	µg/L	70[1]	1.3
Chloromethane	µg/L	--	--
Cyclohexane	µg/L	--	--
1,2-Dibromo-3-chloropropane	µg/L	0.20	--
Dibromochloromethane	µg/L	80	--
1,2-Dibromoethane	µg/L	0.05	--
1,2-Dichlorobenzene	µg/L	600	--
1,3-Dichlorobenzene	µg/L	--	--
1,4-Dichlorobenzene	µg/L	75	--
Dichlorodifluoromethane	µg/L	--	--
1,1-Dichloroethane	µg/L	--	--
1,2-Dichloroethane	µg/L	5	--
1,1-Dichloroethene	µg/L	--	0.6
cis-1,2-Dichloroethene	µg/L	70	0.7
trans-1,2-Dichloroethene	µg/L	100	--
1,2-Dichloropropane	µg/L	5	--
cis-1,3-Dichloropropene	µg/L	--	--
trans-1,3-Dichloropropene	µg/L	--	--
Ethylbenzene	µg/L	--	--
Freon 113	µg/L	--	--
2-Hexanone	µg/L	--	--
Isopropylbenzene	µg/L	--	--
Methyl Acetate	µg/L	--	--
Methyl Tertiary Butyl Ether	µg/L	--	--
4-Methyl-2-Pentanone	µg/L	--	--
Methylcyclohexane	µg/L	--	--
Methylene Chloride	µg/L	5	--
Styrene	µg/L	100	--
1,1,2,2-Tetrachloroethane	µg/L	--	--
Tetrachloroethene	µg/L	5	0.6
Toluene	µg/L	1000	--
1,2,3-Trichlorobenzene	µg/L	--	--
1,2,4-Trichlorobenzene	µg/L	70	--
1,1,1-Trichloroethane	µg/L	200	0.1 J
1,1,2-Trichloroethane	µg/L	5	--
Trichloroethene	µg/L	5	**7.6**
Trichlorofluoromethane	µg/L	--	1.4
Vinyl Chloride	µg/L	2	--
m+p-Xylene	µg/L	--	--
o-Xylene	µg/L	--	--

Notes:
1. No MCL exists for chlorform; thus, the MCL Goal is presented.
2. Results exceeding the MCL are highlighted in gray and presented in boldfaced font.
µg/L - microgram per liter
-- Indicates that an analyte was analyzed for but was either not detected or was below laboratory reporting limits.
MCL - Maximum Contaminant Level
Laboratory Data Qualifiers:
J - Estimated Value

Table A.7.4.4-4
Monitoring Event Investigation Derived Waste Volumes and Analytical Identification

Fort Detrick (Area B), Maryland
June 2015

Area B Groundwater Source	Date	Total Volume Removed (gal)	Associated IDW Analytical ID
BMW20	6/9/2015	50	FTD72-IDW01
BMW20D	6/8/2015	100	FTD72-IDW01
BMW24D	6/11/2015	119	FTD72-IDW02
BMW32D	6/9/2015	115	FTD72-IDW01
BMW53F	6/10/2015	67	FTD72-IDW02
BMW56D	6/11/2015	70	Analyzed 1Q 2015
BMW58D	6/11/2015	90	FTD72-IDW02
BMW59D	6/8/2015	130	FTD72-IDW01
BMW66D	6/10/2015	56	FTD72-IDW02
BMW67C	6/11/2015	100	Analyzed 1Q 2015
BMW68D	6/11/2015	40	Analyzed 1Q 2015
BMW69A	6/10/2015	55	FTD72-IDW02
BMW70A	6/10/2015	58	FTD72-IDW02
BMW71C	6/9/2015	45	FTD72-IDW01
BMW77	6/10/2015	35	FTD72-IDW02

Notes:
IDW - Investigation Derived Waste
1Q 2015 - First Quarter 2015

Table A.7.4.4-5
Investigation Derived Waste Analytical Results

Fort Detrick (Area B), Maryland
June 2015

			Location ID	**IDW-01**	**IDW-02**
			Date	6/11/2015	6/11/2015
			Sample ID	FTD72-IDW01(061115)	FTD72-IDW02(061115)
Analyte	**Units**	**MCL**			
Acetone	µg/L	--		--	3.4 J
Benzene	µg/L	5		--	0.3 J
Bromodichloromethane	µg/L	80		--	--
Bromoform	µg/L	80		--	--
Bromomethane	µg/L	--		--	--
2-Butanone	µg/L	--		--	--
Carbon Disulfide	µg/L	--		--	--
Carbon Tetrachloride	µg/L	5		--	--
Chlorobenzene	µg/L	100		--	--
Chloroethane	µg/L	--		--	--
Chloroform	µg/L	70[1]		1.2	1.7
Chloromethane	µg/L	--		--	--
Cyclohexane	µg/L	--		--	--
1,2-Dibromo-3-chloropropane	µg/L	0.20		--	--
Dibromochloromethane	µg/L	80		--	--
1,2-Dibromoethane	µg/L	0.05		--	--
1,2-Dichlorobenzene	µg/L	600		--	--
1,3-Dichlorobenzene	µg/L	--		--	--
1,4-Dichlorobenzene	µg/L	75		--	--
Dichlorodifluoromethane	µg/L	--		--	--
1,1-Dichloroethane	µg/L	--		--	--
1,2-Dichloroethane	µg/L	5		--	--
1,1-Dichloroethene	µg/L	--		0.2 J	0.8
cis-1,2-Dichloroethene	µg/L	70		0.2 J	0.4 J
trans-1,2-Dichloroethene	µg/L	100		--	--
1,2-Dichloropropane	µg/L	5		--	--
cis-1,3-Dichloropropene	µg/L	--		--	--
trans-1,3-Dichloropropene	µg/L	--		--	--
Ethylbenzene	µg/L	--		7.0	2.7
Freon 113	µg/L	--		--	--
2-Hexanone	µg/L	--		--	--
Isopropylbenzene	µg/L	--		--	--
Methyl Acetate	µg/L	--		--	--
Methyl Tertiary Butyl Ether	µg/L	--		--	--
4-Methyl-2-Pentanone	µg/L	--		--	--
Methylcyclohexane	µg/L	--		--	--
Methylene Chloride	µg/L	5		--	--
Styrene	µg/L	100		--	--
1,1,2,2-Tetrachloroethane	µg/L	--		--	--
Tetrachloroethene	µg/L	5		0.8	**23**
Toluene	µg/L	1000		0.2 J	--
1,2,3-Trichlorobenzene	µg/L	--		--	0.1 J
1,2,4-Trichlorobenzene	µg/L	70		--	0.3 J
1,1,1-Trichloroethane	µg/L	200		--	0.2 J
1,1,2-Trichloroethane	µg/L	5		--	--
Trichloroethene	µg/L	5		2.6	**6.5**
Trichlorofluoromethane	µg/L	--		0.9	1.7
Vinyl Chloride	µg/L	2		--	--
m+p-Xylene	µg/L	--		41	15
o-Xylene	µg/L	--		19	6.4

Notes:

1. No MCL exists for chlorform; thus, the MCL Goal is presented.

2. Results exceeding the MCL are highlighted in gray and presented in boldfaced font.

-- Indicates that an analyte was analyzed and detected below laboratory reporting limits.

µg/L - microgram per liter

MCL - Maximum Contaminant Level

Laboratory Data Qualifiers:

J - Estimated Value

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Draft Fort Detrick Area B Quarterly Groundwater Monitoring Report

Second Quarter 2015

Attachment 7.4.4
Figures

Pennsylvania
Maryland
West Virginia
Virginia
Delaware
New Jersey
Philadelphia Metro Area
Camden
Levittown
Baltimore Metro Area
Simpsonville
Washington Metro Area
District of Columbia
Richmond
Shenandoah NP
Area A
Area B
Area C
Frederick
0 1.25 2.5 5 Miles
0 20 40 Miles
N

Legend

Fort Detrick Boundary

NOTES:

Base map data was obtained from ESRI StreetMap USA 2005.

Quarterly Groundwater Monitoring Report
(June 2015)
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

Site Location

ARCADIS

FIGURE
A.7.4.4-1

Note: Aerial imagery (2015) accessed via ArcGIS Online World Imagery.

NOTE: SOME MAP FEATURES REMOVED TO COMPLY WITH OPERATIONAL SECURITY REQUIREMENTS FOR PUBLIC DISTRIBUTION

N

Area A

Area B

BMW77

BMW56D

BMW68D

BMW67C

BMW18

BMW58D

BMW59D

BMW53F

BMW24D

BMW20D

BMW20

BMW71C

BMW66D

BMW70A

BMW69A

BMW32D

MEADOW DR

LOVELY CT

PROSPECT DR

KEMP LN

ROCKY SPRINGS RD

BEAR CREEK CT

TUSCANNEY DR

YELLOW SPRING

ROSEMONT AVE

MONTEVUE LN

GRANALTA CIR

SHOOKSTOWN RD

SCOTTS CHS

BOWERS RD

SHANNONBROOK LN

BOXFORD CT

ANDOVER LN

LONGFORD DR

CEDARCREST LN

OLD CAMP RD

WAVERLEY DR

WILLOWDALE DR

THAMES DR

BEXHILL DR

Legend

- Fort Detrick Boundary
- Frederick City Boundary
- Spring Location
- **BMSW56D** Monitoring Point ID

Quarterly Groundwater Monitoring Report
(June 2015)
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

Area B Monitoring Network

ARCADIS

FIGURE
A.7.4.4-2

Note: Aerial imagery (2015) accessed via ArcGIS Online World Imagery.

NOTE: SOME MAP FEATURES REMOVED TO COMPLY WITH OPERATIONAL SECURITY REQUIREMENTS FOR PUBLIC DISTRIBUTION

N

Area A

Area B

BMW77 (342.68)

BMW56D (346.70)

BMW68D (346.78)

BMW67C (352.15)

BMW18 (346.49)

BMW58D (352.47)

BMW59D (350.63)

BMW53F (342.06)

BMW24D (349.31)

BMW20 (354.46)

BMW20D (352.03)

BMW32D (349.17)

BMW69A (335.57)

BMW70A (325.20)

BMW71C (318.97)

BMW66D (342.79)

345 340 330 320 325 335 355 350 340

MEADOW DR
LOVELY CT
PROSPECT DR
KEMP LN
ROCKY GORGE CT
BEAR CREEK CT
ROCKY SPRINGS RD
YELLOW SPRING DR
ROSEMONT AVE
MONTEVUE LN
GRANALTA CIR
SHOOKSTOWN RD
SCOTTS CHS
BOWERS RD
SHANNONBROOK LN
BOXFORD CT
ANDOVER LN
LONGFORD DR
CEDARCREST LN
OLD CAMP RD
WAVERLEY DR
LAKE COVENTRY CT
WILLOWDALE DR
THAMES DR
BEXHILL DR

Legend

- Fort Detrick Boundary
- Frederick City Boundary
- Groundwater Elevation Contour (ft) (dashed where inferred)
- Spring Location

BMW67C Well ID
(352.15) Groundwater Elevation (June 2015) (feet above mean sea level)

Quarterly Groundwater Monitoring Report
(June 2015)
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

June 2015 Groundwater Elevations

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FIGURE
A.7.4.4-3

Note: Aerial imagery (2015) accessed via ArcGIS Online World Imagery.

NOTE: SOME MAP FEATURES REMOVED TO COMPLY WITH OPERATIONAL SECURITY REQUIREMENTS FOR PUBLIC DISTRIBUTION

N

Area A

Area B

BMW77		
Analyte	MCL (µg/L)	Result (µg/L)
PCE	5	24
TCE	5	9.5

BMW68D		
Analyte	MCL (µg/L)	Result (µg/L)
Benzene	5	8.1
Chloroform	70	450
1,2-DCA	5	21
cis-1,2-DCE	70	180
PCE	5	71
TCE	5	2500
Vinyl Chloride	2	2.6 J

BMW56D		
Analyte	MCL (µg/L)	Result (µg/L)
Benzene	5	55
Chloroform	70	300
1,2-DCA	5	18
cis-1,2-DCE	70	470
PCE	5	130
1,2,4-TCB	70	97
TCE	5	2600
Vinyl Chloride	2	22

Robinson Spring		
Analyte	MCL (µg/L)	Result (µg/L)
TCE	5	7.6

BMW67C		
Analyte	MCL (µg/L)	Result (µg/L)
Benzene	5	46
Chloroform	70	1200
1,2-DCA	5	52
cis-1,2-DCE	70	1000
PCE	5	150
1,2,4-TCB	70	110
1,1,1-TCA	200	300
1,1,2-TCA	5	10 J
TCE	5	8800

BMW24D		
Analyte	MCL (µg/L)	Result (µg/L)
1,1,2-TCA	5	8.4

BMW66D		
Analyte	MCL (µg/L)	Result (µg/L)
TCE	5	12

BMW71C had no MCL exceedances

BMW58D		
Analyte	MCL (µg/L)	Result (µg/L)
TCE	5	79

BMW53F		
Analyte	MCL (µg/L)	Result (µg/L)
TCE	5	30

BMW18 was not sampled

BMW69A had no MCL exceedances

BMW59D		
Analyte	MCL (µg/L)	Result (µg/L)
TCE	5	18

BMW70A had no MCL exceedances

BMW20 had no MCL exceedances

BMW20D had no MCL exceedances

BMW32D had no MCL exceedances

YALE CT
MEADOW DR
LOVELY CT
PROSPECT DR
OLD RECEIVER RD
DOWN HILL RUN
SHOOKSTOWN RD
BROOKSIDE DR
OVERBROOK CIR
KEMP LN
ROCKY SPRINGS RD
TWIN SPRINGS CT
EAGLE ROCK LN
ROCKY GORGE CT
BEAR CREEK CT
CARROLL CREEK VIEW CT
TUSCANNEY DR
YELLOW SPRING
ROSEMONT AVE
MONTEVUE LN
BOWERS RD
ROCK CREEK DR
ANDOVER LN
BOXFORD CT
LONGFORD DR
WAVERLEY DR
WILLOWDALE DR
THAMES DR
BEXHILL DR

Legend

- Fort Detrick Boundary
- Frederick City Boundary
- Spring
- Spring Location

BMW56D Monitoring Point ID

Notes:
1. µg/L - micrograms per liter
2. MCL - Maximum Contaminant Limit

Quarterly Groundwater Monitoring Report
(June 2015)
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

Analytical Results Above the MCL

ARCADIS

FIGURE
A.7.4.4-4

Attachment 7.4.5
Sentinel Monitoring Program Tables and Figures
September 2015
(ARCADIS, 2016)

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Attachment 7.4.5
TABLES

Table A.7.4.5-1
Well Construction Details and Groundwater Elevations
Fort Detrick (Area B)
Frederick, Maryland

Well ID	Zone	Ground Elevation[1] (ft amsl)	Total Depth[1] (ft amsl)	Screened Interval (ft amsl)	Sample Depth (ft amsl)	Depth to Water (ft bTOC)	Water Level Elevation[1] (ft amsl)
BMW20[2]	Overburden	367	331.2	341.20 - 331.20	336.20	19.57	349.13
BMW20D	Shallow Bedrock	336.17	189.66	218.17 - 198.17	208.17	20.19	348.12
BMW24D	Shallow Bedrock	365.47	187.25	201.22 - 191.02	196.12	21.75	346.41
BMW32D	Shallow Bedrock	356.21	268.8	281.21 - 271.21	276.21	9.32	346.89
BMW53F	Deep Bedrock	349.1	41.47	54.1 - 44.1	49.10	12.5	339.19
BMW56D	Shallow Bedrock	380.86	282.58	309.86 - 289.86	299.86	40.27	342.59
BMW58D	Shallow Bedrock	387.4	256.91	277.9 - 257.9	267.90	40.43	348.22
BMW59D	Shallow Bedrock	389.91	204.26	226.91 - 206.91	216.91	44.77	346.88
BMW66D	Shallow Bedrock	332.1	53.65	62.1 - 57.1	59.60	12.48	322.57
BMW67C	Deep Bedrock	394.6	235.63	254.6 - 239.6	247.10	49.74	347.73
BMW68D	Deep Bedrock	371.7	191.99	204.7 - 194.7	199.70	30.96	343.26
BMW69A	Shallow Bedrock	337.9	303.13	315.9 - 305.9	310.90	5.27	335.24
BMW70A	Shallow Bedrock	327.5	288.41	296.5 - 291.5	294.00	6.38	323.68
BMW71C	Deep Bedrock	332.9	98.3	110.9 - 100.9	105.90	16.72	318.6
BMW77	Shallow Bedrock	363.3	289.79	307.3 - 292.3	299.80	25.67	340.59

Notes:
1. All elevations presented in feet relative to the North American Vertical Datum 1988.
2. BMW20 is sampled in lieu of BMW18.
amsl - above mean sea level
bTOC - below top of casing (inner)
ft - feet

Table A.7.4.5-2
Groundwater Analytical Results
Fort Detrick (Area B)
Frederick, Maryland

			Location ID	BMW20	BMW20D	BMW24D	BMW32D	BMW53F	BMW56D	BMW58D	BMW59D
			Date	9/16/2015	9/16/2015	9/16/2015	9/15/2015	9/17/2015	9/18/2015	9/16/2015	9/16/2015
			Sample ID	FTD72-BMW20(091615)	FTD72-BMW20d(091615)	FTD72-BMW24d(091615)	FTD72-BMW32d(091515)	FTD72-BMW53f(091715)	FTD72-BMW56d(091815)	FTD72-BMW58d(091615)	FTD72-BMW59d(091615)
Analyte	**Units**	**RSL**	**MCL**								
Acetone	µg/L	14000	--	--	--	-- (--)	--	--	--	--	--
Benzene	µg/L	0.46	5	--	--	-- (--)	--	--	**60**	**0.1 J**	--
Bromodichloromethane	µg/L	0.13	80	--	--	-- (--)	--	--	--	--	--
Bromoform	µg/L	3.3	80	--	--	-- (--)	--	--	--	--	--
Bromomethane	µg/L	7.5	--	--	--	-- (--)	--	--	--	--	--
2-Butanone	µg/L	5600	--	--	--	-- (--)	--	--	--	--	--
Carbon Disulfide	µg/L	810	--	--	--	-- (--)	--	--	--	--	--
Carbon Tetrachloride	µg/L	0.46	5	--	--	-- (--)	--	--	--	--	--
Chlorobenzene	µg/L	78	100	--	--	-- (--)	--	--	6.3	--	--
Chloroethane	µg/L	21000	--	--	--	-- (--)	--	--	--	--	--
Chloroform	µg/L	0.22	70[1]	--	--	**2.3 (2.4)**	--	**7.6**	**380**	**21**	**5.0**
Chloromethane	µg/L	190	--	--	--	-- (--)	--	--	--	--	--
Cyclohexane	µg/L	13000	--	--	--	-- (--)	--	--	--	--	--
1,2-Dibromo-3-chloropropane	µg/L	0.00033	0.20	--	--	-- (--)	--	--	--	--	--
Dibromochloromethane	µg/L	0.87	80	--	--	-- (--)	--	--	--	--	--
1,2-Dibromoethane	µg/L	0.0075	0.05	--	--	-- (--)	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	300	600	--	--	-- (--)	--	--	3.5 J	--	--
1,3-Dichlorobenzene	µg/L		--	--	--	-- (--)	--	--	--	--	--
1,4-Dichlorobenzene	µg/L	0.48	75	--	--	-- (--)	--	--	**4.3 J**	--	--
Dichlorodifluoromethane	µg/L	200	--	--	--	-- (--)	--	--	4.1 J	0.1 J	--
1,1-Dichloroethane	µg/L	2.8	--	--	--	-- (--)	--	--	**8.7**	0.3 J	--
1,2-Dichloroethane	µg/L	0.17	5	--	--	**0.5 J (0.5 J)**	--	**0.3 J**	**20**	**0.6**	0.1 J
1,1-Dichloroethene	µg/L	280	7	--	--	0.3 J (0.3 J)	--	2.4	**180**	**7.7**	1.1
cis-1,2-Dichloroethene	µg/L	36	70	--	--	-- (--)	--	0.9	**530**	5.2	0.5
trans-1,2-Dichloroethene	µg/L	360	100	--	--	-- (--)	--	--	1.5 J	--	--
1,2-Dichloropropane	µg/L	0.44	5	--	--	-- (--)	--	--	**2.3 J**	--	--
cis-1,3-Dichloropropene	µg/L		--	--	--	-- (--)	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L		--	--	--	-- (--)	--	--	--	--	--
Ethylbenzene	µg/L	1.5	--	--	--	-- (--)	0.6	--	**13**	--	--
Freon 113	µg/L	55000	--	--	--	-- (--)	--	0.2 J	15	0.6	--
2-Hexanone	µg/L	38	--	--	--	-- (--)	--	--	--	--	--
Isopropylbenzene	µg/L	450	--	--	--	-- (--)	--	--	1.1 J	--	--
Methyl Acetate	µg/L	20000	--	--	--	-- (--)	--	--	--	--	--
Methyl Tertiary Butyl Ether	µg/L	14	--	--	--	-- (--)	--	--	--	--	--
4-Methyl-2-Pentanone	µg/L	6300	--	--	--	-- (--)	--	--	--	--	--
Methylcyclohexane	µg/L		--	--	--	-- (--)	--	--	--	--	--
Methylene Chloride	µg/L	11	5	--	--	-- (--)	--	--	--	--	--
Styrene	µg/L	1200	100	--	--	-- (--)	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	0.076	--	--	--	-- (--)	--	--	**2.1 J**	--	--
Tetrachloroethene	µg/L	11	5	--	0.1 J	**380 (360)**	--	0.7	**130**	2.4	0.5 J
Toluene	µg/L	1100	1000	--	0.1 J	-- (--)	--	--	1.1 J	--	--
1,2,3-Trichlorobenzene	µg/L	7	--	--	--	-- (--)	--	--	--	--	--
1,2,4-Trichlorobenzene	µg/L	1.2	70	--	--	-- (--)	--	--	**120**	--	--
1,1,1-Trichloroethane	µg/L	8000	200	--	--	0.1 J (0.1 J)	--	0.7	41	1.5	0.3 J
1,1,2-Trichloroethane	µg/L	0.28	5	--	--	-- (--)	--	--	**2.9 J**	--	--
Trichloroethene	µg/L	0.49	5	--	--	**7.0 (6.9)**	--	**27**	**3,100**	**82**	**16**
Trichlorofluoromethane	µg/L	5200	--	--	--	**2.9 (3.0)**	--	9.7	180	20	6.2
Vinyl Chloride	µg/L	0.019	2	--	--	-- (--)	--	--	**22**	--	--
m+p-Xylene	µg/L	190	--	--	0.4 J	-- (--)	2.3	--	--	--	--
o-Xylene	µg/L	190	--	--	0.1 J	-- (--)	0.7	--	1.8 J	--	--

Notes:

1. No MCL exists for chlorform; thus, the MCL Goal is presented.
2. Duplicate sample results are presented in parenthesis adjacent to the parent sample results.

-- Indicates that an analyte was analyzed for but was either not detected or was below laboratory reporting limits.

Bold Contaminant detected above screening criteria (i.e., MCL or Maximum Contaminant Level Goal for Chloroform)

Underlined Contaminant detected above Risk Screening Levels

µg/L microgram per liter
MCL Maximum Contaminant Level
RSL Risk Screening Level

Laboratory Data Qualifiers:

J Estimated Value

Table A.7.4.5-2
Groundwater Analytical Results
Fort Detrick (Area B)
Frederick, Maryland

			Location ID	BMW66D	BMW67C	BMW68D	BMW69A	BMW70A	BMW71C	BMW77
			Date	9/17/2015	9/18/2015	9/17/2015	9/15/2015	9/17/2015	9/15/2015	9/15/2015
			Sample ID	FTD72-BMW66d(091715)	FTD72-BMW67c(091815)	FTD72-BMW68d(091715)	FTD72-BMW69a(091515)	FTD72-BMW70a(091715)	FTD72-BMW71c(091515)	FTD72-BMW77(091515)
Analyte	**Units**	**RSL**	**MCL**							
Acetone	µg/L	14000	--	--	--	--	--	--	--	--
Benzene	µg/L	0.46	5	--	**48**	**8.4**	--	--	--	0.2 J
Bromodichloromethane	µg/L	0.13	80	--	--	--	--	--	--	--
Bromoform	µg/L	3.3	80	--	--	--	--	--	--	--
Bromomethane	µg/L	7.5	--	--	--	--	--	--	--	--
2-Butanone	µg/L	5600	--	--	--	--	--	--	--	--
Carbon Disulfide	µg/L	810	--	--	--	--	--	--	--	--
Carbon Tetrachloride	µg/L	0.46	5	--	--	--	--	--	--	--
Chlorobenzene	µg/L	78	100	--	--	1.3 J	--	--	--	0.3 J
Chloroethane	µg/L	21000	--	--	--	--	--	--	--	--
Chloroform	µg/L	0.22	70[1]	**2.3**	**1,100**	**410**	--	--	**0.6**	**0.8**
Chloromethane	µg/L	190	--	--	--	--	--	--	--	--
Cyclohexane	µg/L	13000	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	µg/L	0.00033	0.20	--	--	--	--	--	--	--
Dibromochloromethane	µg/L	0.87	80	--	--	--	--	--	--	--
1,2-Dibromoethane	µg/L	0.0075	0.05	--	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	300	600	--	--	--	--	--	--	0.2 J
1,3-Dichlorobenzene	µg/L		--	--	--	--	--	--	--	0.3 J
1,4-Dichlorobenzene	µg/L	0.48	75	--	--	--	--	--	--	0.3 J
Dichlorodifluoromethane	µg/L	200	--	--	--	3.6 J	--	--	--	--
1,1-Dichloroethane	µg/L	2.8	--	--	**23 J**	**5.7**	--	--	--	0.3 J
1,2-Dichloroethane	µg/L	0.17	5	--	**56**	**20**	--	--	--	0.1 J
1,1-Dichloroethene	µg/L	280	7	0.8	**770**	**130**	--	--	0.2 J	**7.0**
cis-1,2-Dichloroethene	µg/L	36	70	0.8	**980**	**160**	--	--	--	1.7
trans-1,2-Dichloroethene	µg/L	360	100	--	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	0.44	5	--	--	2.4 J	--	--	--	--
cis-1,3-Dichloropropene	µg/L		--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L		--	--	--	--	--	--	--	--
Ethylbenzene	µg/L	1.5	--	--	**43**	1.2 J	--	--	--	--
Freon 113	µg/L	55000	--	--	100	10	--	--	--	--
2-Hexanone	µg/L	38	--	--	--	--	--	--	--	--
Isopropylbenzene	µg/L	450	--	--	--	--	--	--	--	--
Methyl Acetate	µg/L	20000	--	--	--	--	--	--	--	--
Methyl Tertiary Butyl Ether	µg/L	14	--	--	--	--	--	--	--	--
4-Methyl-2-Pentanone	µg/L	6300	--	--	--	--	--	--	--	--
Methylcyclohexane	µg/L		--	--	--	--	--	--	--	--
Methylene Chloride	µg/L	11	5	--	--	--	--	--	--	--
Styrene	µg/L	1200	100	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	0.076	--	--	**9.4 J**	--	--	--	--	--
Tetrachloroethene	µg/L	11	5	0.6	**150**	**62**	--	--	0.2 J	**20**
Toluene	µg/L	1100	1000	--	7.4 J	--	--	--	--	--
1,2,3-Trichlorobenzene	µg/L	7	--	--	--	--	--	--	--	2.9
1,2,4-Trichlorobenzene	µg/L	1.2	70	--	**97**	**10**	--	--	--	**7.7**
1,1,1-Trichloroethane	µg/L	8000	200	0.2 J	**290**	33	--	--	--	0.1 J
1,1,2-Trichloroethane	µg/L	0.28	5	--	**12 J**	**2.0 J**	--	--	--	--
Trichloroethene	µg/L	0.49	5	**12**	**9,200**	**2,200**	--	--	**1.2**	**9.1**
Trichlorofluoromethane	µg/L	5200	--	2.4	1,200	260	--	--	1.1	--
Vinyl Chloride	µg/L	0.019	2	--	--	**2.6 J**	--	--	--	--
m+p-Xylene	µg/L	190	--	--	46	6.4	--	--	0.5 J	--
o-Xylene	µg/L	190	--	--	85	2.3 J	--	--	0.2 J	--

Notes:

1. No MCL exists for chlorform; thus, the MCL Goa
2. Duplicate sample results are presented in parenth results.

-- Indicates that an analyte was analyzed for but was e laboratory reporting limits.

Bold Contaminant detected above screening criteria (i.e., Level Goal for Chloroform)

Underlined Contaminant detected above Risk Screening Levels

µg/L microgram per liter

MCL Maximum Contaminant Level

RSL Risk Screening Level

Laboratory Data Qualifiers:

J Estimated Value

Table A.7.4.5-3
Robinson Spring Analytical Results
Fort Detrick (Area B)
Frederick, Maryland

			Location ID	Robinson Spring
			Date	9/14/2015
			Sample ID	RobinsonSpring(091415)
Analyte	Units	RSL	MCL	
Acetone	µg/L	14000	--	--
Benzene	µg/L	0.46	5	--
Bromodichloromethane	µg/L	0.13	80	--
Bromoform	µg/L	3.3	80	--
Bromomethane	µg/L	7.5	--	--
2-Butanone	µg/L	5600	--	--
Carbon Disulfide	µg/L	810	--	--
Carbon Tetrachloride	µg/L	0.46	5	--
Chlorobenzene	µg/L	78	100	--
Chloroethane	µg/L	21000	--	--
Chloroform	µg/L	0.22	70[1]	1.3
Chloromethane	µg/L	190	--	--
Cyclohexane	µg/L	13000	--	--
1,2-Dibromo-3-chloropropane	µg/L	0.00033	0.20	--
Dibromochloromethane	µg/L	0.87	80	--
1,2-Dibromoethane	µg/L	0.0075	0.05	--
1,2-Dichlorobenzene	µg/L	300	600	--
1,3-Dichlorobenzene	µg/L		--	--
1,4-Dichlorobenzene	µg/L	0.48	75	--
Dichlorodifluoromethane	µg/L	200	--	--
1,1-Dichloroethane	µg/L	2.8	--	--
1,2-Dichloroethane	µg/L	0.17	5	--
1,1-Dichloroethene	µg/L	280	7	0.5 J
cis-1,2-Dichloroethene	µg/L	36	70	0.6
trans-1,2-Dichloroethene	µg/L	360	100	--
1,2-Dichloropropane	µg/L	0.44	5	--
cis-1,3-Dichloropropene	µg/L		--	--
trans-1,3-Dichloropropene	µg/L		--	--
Ethylbenzene	µg/L	1.5	--	--
Freon 113	µg/L	55000	--	--
2-Hexanone	µg/L	38	--	--
Isopropylbenzene	µg/L	450	--	--
Methyl Acetate	µg/L	20000	--	--
Methyl Tertiary Butyl Ether	µg/L	14	--	--
4-Methyl-2-Pentanone	µg/L	6300	--	--
Methylcyclohexane	µg/L		--	--
Methylene Chloride	µg/L	11	5	--
Styrene	µg/L	1200	100	--
1,1,2,2-Tetrachloroethane	µg/L	0.076	--	--
Tetrachloroethene	µg/L	11	5	0.5 J
Toluene	µg/L	1100	1000	--
1,2,3-Trichlorobenzene	µg/L	7	--	--
1,2,4-Trichlorobenzene	µg/L	1.2	70	--
1,1,1-Trichloroethane	µg/L	8000	200	0.1 J
1,1,2-Trichloroethane	µg/L	0.28	5	--
Trichloroethene	µg/L	0.49	5	**6.9**
Trichlorofluoromethane	µg/L	5200	--	1.2
Vinyl Chloride	µg/L	0.019	2	--
m+p-Xylene	µg/L	190	--	--
o-Xylene	µg/L	190	--	--

Notes:

1. No MCL exists for chlorform; thus, the MCL Goal is presented.

2. Results exceeding the MCL are highlighted in gray and presented in boldfaced font.

3. Results exceeding the RSL are underlined

µg/L - microgram per liter

-- Indicates that an analyte was analyzed for but was either not detected or was below laboratory reporting limits.

MCL - Maximum Contaminant Level

RSL - Risk Screening Level

Laboratory Data Qualifiers:

J - Estimated Value

Table A.7.4.5-4
Investigation Derived Waste Volumes and Analytical Identification
Fort Detrick (Area B)
Frederick, Maryland

Area B Groundwater Source	Date	Total Volume Removed (gallons)	Associated IDW Analytical ID
BMW20	9/16/2015	40	FTD72-IDW01
BMW20D	9/15/2015	110	FTD72-IDW01
BMW24D	9/16/2015	120	FTD72-IDW02
BMW32D	9/15/2015	100	FTD72-IDW01
BMW53F	9/17/2015	100	FTD72-IDW01
BMW56D	9/18/2015	70	Analyzed 1Q 2015
BMW58D	9/16/2015	112	FTD72-IDW02
BMW59D	9/16/2015	125	FTD72-IDW02
BMW66D	9/17/2015	64	FTD72-IDW02
BMW67C	9/18/2015	95	Analyzed 1Q 2015
BMW68D	9/17/2015	60	Analyzed 1Q 2015
BMW69A	9/15/2015	23	FTD72-IDW01
BMW70A	9/17/2015	50	FTD72-IDW02
BMW71C	9/15/2015	48	FTD72-IDW01
BMW77	9/15/2015	43	FTD72-IDW01

Notes:
IDW - Investigation Derived Waste
1Q 2015 First Quarter 2015

Table A.7.4.5-5
Investigation Derived Waste Analytical Results
Fort Detrick (Area B)
Frederick, Maryland

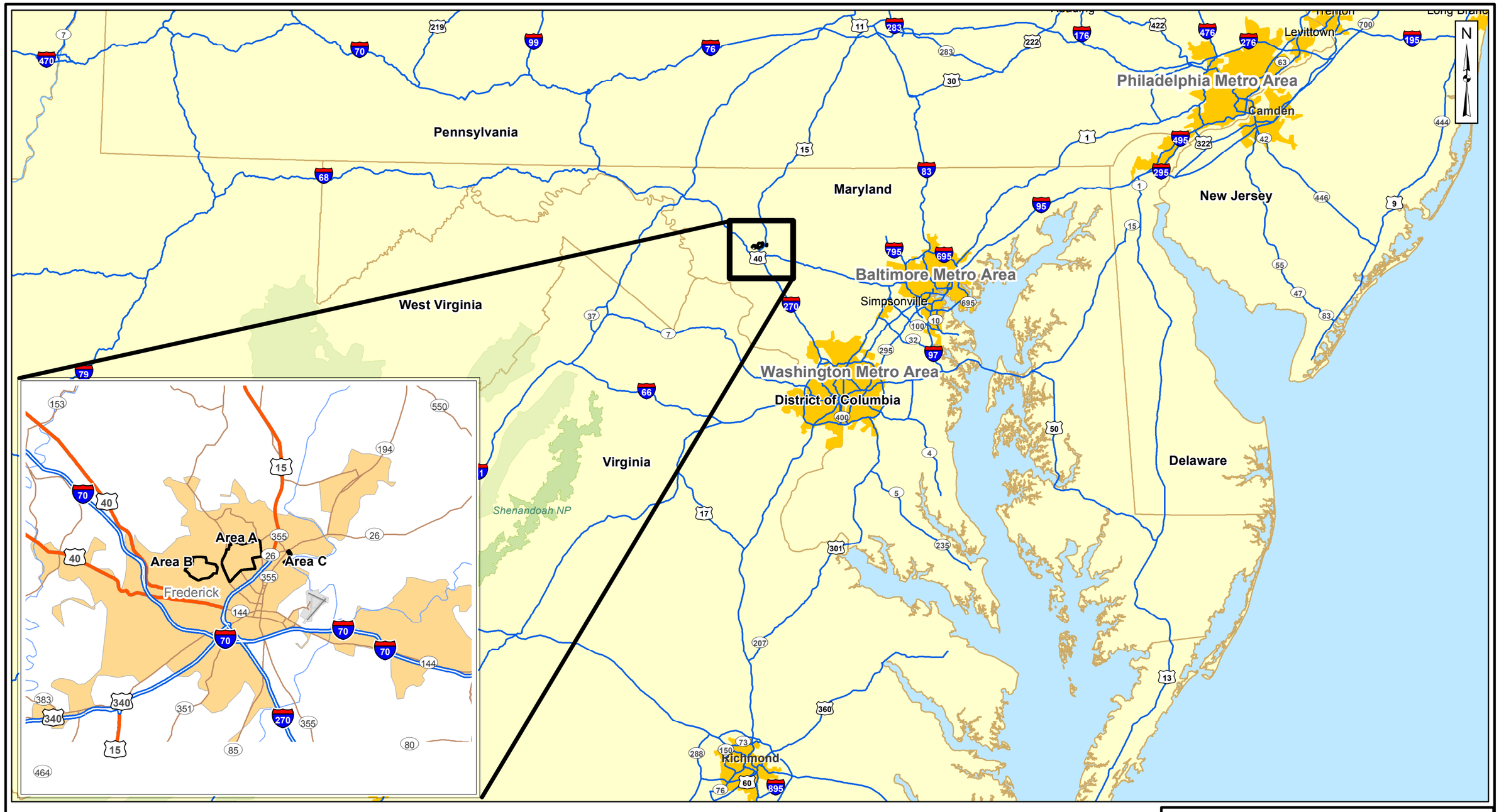
		Location ID	IDW-01	IDW-02
		Date	9/18/2015	9/18/2015
		Sample ID	FTD72-IDW01(091815)	FTD72-IDW02(091815)
Analyte	**Units**	**MCL**		
Acetone	µg/L	--	--	--
Benzene	µg/L	5	0.1 J	--
Bromodichloromethane	µg/L	80	--	--
Bromoform	µg/L	80	--	--
Bromomethane	µg/L	--	--	--
2-Butanone	µg/L	--	--	--
Carbon Disulfide	µg/L	--	--	--
Carbon Tetrachloride	µg/L	5	--	--
Chlorobenzene	µg/L	100	--	--
Chloroethane	µg/L	--	--	--
Chloroform	µg/L	70[1]	1.5	4.7
Chloromethane	µg/L	--	--	--
Cyclohexane	µg/L	--	--	--
1,2-Dibromo-3-chloropropane	µg/L	0.20	--	--
Dibromochloromethane	µg/L	80	--	--
1,2-Dibromoethane	µg/L	0.05	--	--
1,2-Dichlorobenzene	µg/L	600	--	--
1,3-Dichlorobenzene	µg/L	--	--	--
1,4-Dichlorobenzene	µg/L	75	--	--
Dichlorodifluoromethane	µg/L	--	--	--
1,1-Dichloroethane	µg/L	--	--	--
1,2-Dichloroethane	µg/L	5	--	0.2 J
1,1-Dichloroethene	µg/L	--	0.6	1
cis-1,2-Dichloroethene	µg/L	70	0.3 J	0.8
trans-1,2-Dichloroethene	µg/L	100	--	--
1,2-Dichloropropane	µg/L	5	--	--
cis-1,3-Dichloropropene	µg/L	--	--	--
trans-1,3-Dichloropropene	µg/L	--	--	--
Ethylbenzene	µg/L	--	9.4	9.9
Freon 113	µg/L	--	--	--
2-Hexanone	µg/L	--	--	--
Isopropylbenzene	µg/L	--	--	--
Methyl Acetate	µg/L	--	--	--
Methyl Tertiary Butyl Ether	µg/L	--	--	--
4-Methyl-2-Pentanone	µg/L	--	--	--
Methylcyclohexane	µg/L	--	--	--
Methylene Chloride	µg/L	5	--	--
Styrene	µg/L	100	--	--
1,1,2,2-Tetrachloroethane	µg/L	--	--	--
Tetrachloroethene	µg/L	5	**43**	**27**
Toluene	µg/L	1000	--	--
1,2,3-Trichlorobenzene	µg/L	--	--	--
1,2,4-Trichlorobenzene	µg/L	70	0.1 J	--
1,1,1-Trichloroethane	µg/L	200	0.1 J	0.2 J
1,1,2-Trichloroethane	µg/L	5	--	--
Trichloroethene	µg/L	5	**5.7**	**16**
Trichlorofluoromethane	µg/L	--	1.4	3.0
Vinyl Chloride	µg/L	2	--	--
m+p-Xylene	µg/L	--	39	35
o-Xylene	µg/L	--	17	25

Notes:
1. No MCL exists for chlorform; thus, the MCL Goal is presented.
2. Results exceeding the MCL are highlighted in gray and presented in boldfaced font.

µg/L - microgram per liter
-- Indicates that an analyte was analyzed and detected below laboratory reporting limits.
MCL - Maximum Contaminant Level

Laboratory Data Qualifiers:
J - Estimated Value

Attachment 7.4.5
FIGURES



Legend

Fort Detrick Boundary

NOTES:

Base map data was obtained from ESRI StreetMap USA 2005.

Quarterly Groundwater Monitoring Report
(September 2015)
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

Site Location

ARCADIS

FIGURE
A.7.4.5-1

Note: Aerial imagery (2015) accessed via ArcGIS Online World Imagery.

NOTE: SOME MAP FEATURES REMOVED TO COMPLY WITH OPERATIONAL SECURITY REQUIREMENTS FOR PUBLIC DISTRIBUTION

N

Area A

Area B

BMW77

BMW56D

BMW68D

BMW67C

BMW18

BMW58D

BMW59D

BMW53F

BMW24D

BMW20D

BMW20

BMW71C

BMW66D

BMW70A

BMW69A

BMW32D

MEADOW DR

LOVELY CT

PROSPECT DR

KEMP LN

ROCKY SPRINGS RD

BEAR CREEK CT

TUSCANNEY DR

YELLOW SPRING

ROSEMONT AVE

MONTEVUE LN

GRANALTA CIR

SHOOKSTOWN RD

SCOTTSDALE

BOWERS RD

SHANNONBROOK LN

BOXFORD CT

ANDOVER LN

LONGFORD DR

CEDARCREST LN

OLD CAMP RD

WAVERLEY DR

WILLOWDALE DR

THAMES DR

BEXHILL DR

Legend

- Fort Detrick Boundary
- Frederick City Boundary
- Spring Location

BMSW56D Monitoring Point ID

Quarterly Groundwater Monitoring Report
(September 2015)
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

Area B Monitoring Network

ARCADIS

FIGURE
A.7.4.5-2

Note: Aerial imagery (2015) accessed via ArcGIS Online World Imagery.

NOTE: SOME MAP FEATURES REMOVED TO COMPLY WITH OPERATIONAL SECURITY REQUIREMENTS FOR PUBLIC DISTRIBUTION

N

BMW77 (340.59)

BMW56D (342.59)

BMW68D (343.26)

BMW67C (347.73)

BMW58D (348.22)

BMW59D (346.88)

BMW53F (339.19)

BMW24D (346.41)

BMW20 (349.13)

BMW20D (348.12)

BMW71C (318.60)

BMW66D (322.57)

BMW70A (323.68)

BMW69A (335.24)

BMW32D (346.89)

Area A

Area B

330

345

325

320

335

340

350

MEADOW DR

LOVELY CT

PROSPECT DR

KEMP LN

ROCKY SPRINGS RD

ROCKY GORGE CT

BEAR CREEK CT

YELLOW SPRINGS DR

ROSEMONT AVE

MONTEVUE LN

GRANALTA CIR

SHOOKSTOWN RD

SCOTTS CHS

BOWERS RD

SHANNONBROOK LN

BOXFORD CT

ANDOVER LN

LONGFORD DR

CEDARCREST LN

OLD CAMP RD

WAVERLEY DR

LAKE COVENTRY CT

WILLOWDALE DR

THAMES DR

BEXHILL DR

Legend

- Fort Detrick Boundary
- Frederick City Boundary
- Groundwater Elevation Contour (ft) (dashed where inferred)
- Generalized Direction of Groundwater Flow
- Spring Location

BMW67C Well ID
(347.73) Groundwater Elevation (Sept. 2015) (feet above mean sea level)

Quarterly Groundwater Monitoring Report
(September 2015)
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

September 2015 Groundwater Elevations

ARCADIS

FIGURE
A.7.4.5-3

Note: Aerial imagery (2015) accessed via ArcGIS Online World Imagery.

NOTE: SOME MAP FEATURES REMOVED TO COMPLY WITH OPERATIONAL SECURITY REQUIREMENTS FOR PUBLIC DISTRIBUTION

N

BMW77

Analyte	MCL (µg/L)	Result (µg/L)
1,1-dichloroethene	7	7
Tetrachloroethene	5	20
Trichloroethene	5	9.1

BMW56D

Analyte	MCL (µg/L)	Result (µg/L)
Benzene	5	60
Chloroform	70[1]	380
1,2-dichloroethane	5	20
1,1-dichloroethene	7	180
cis-1,2-dichloroethene	70	530
Tetrachloroethene	5	130
1,2,4-trichlorobenzene	70	120
Trichloroethene	5	3,100
Vinyl Chloride	2	22

BMW68D

Analyte	MCL (µg/L)	Result (µg/L)
Benzene	5	8.4
Chloroform	70[1]	410
1,2-dichloroethane	5	20
1,1-dichloroethene	7	130
cis-1,2-dichloroethene	70	160
Tetrachloroethene	5	62
Trichloroethene	5	2,200
Vinyl Chloride	2	2.6 J

BMW67C

Analyte	MCL (µg/L)	Result (µg/L)
Benzene	5	48
Chloroform	70[1]	1,100
1,2-dichloroethane	5	56
1,1-dichloroethene	7	770
cis-1,2-dichloroethene	70	980
Tetrachloroethene	5	150
1,2,4-trichlorobenzene	70	97
1,1,1-trichloroethane	200	290
1,1,2-trichloroethane	5	12 J
Trichloroethene	5	9,200

BMW24D

Analyte	MCL (µg/L)	Result (µg/L)
Tetrachloroethene	5	380
Trichloroethene	5	7

Robinson Spring

Analyte	MCL (µg/L)	Result (µg/L)
Trichloroethene	5	6.9

BMW66D

Analyte	MCL (µg/L)	Result (µg/L)
Trichloroethene	5	12

BMW58D

Analyte	MCL (µg/L)	Result (µg/L)
1,1-dichloroethene	7	7.7
Trichloroethene	5	82

BMW53F

Analyte	MCL (µg/L)	Result (µg/L)
Trichloroethene	5	27

BMW71C had no MCL exceedances

BMW18 was not sampled

BMW69A had no MCL exceedances

BMW70A had no MCL exceedances

BMW59D

Analyte	MCL (µg/L)	Result (µg/L)
Trichloroethene	5	16

BMW20 had no MCL exceedances

BMW20D had no MCL exceedances

BMW32D had no MCL exceedances

Area A

Area B

YALE CT
MEADOW DR
LOVELY CT
PROSPECT DR
OLD RECEIVER RD
DOWN HILL RUN
SHOOKSTOWN RD
BROOKSIDE DR
KEMP LN
ROCKY SPRINGS RD
TWIN
EAGLE ROCK LN
ROCKY GORGE CT
BEAR CREEK CT
CARROLL CREEK VIEW CT
TUSCANNEY DR
YELLOW SPRING
ROSEMONT AVE
MONTEVUE LN
BOWERS RD
ROCK CREEK DR
ANDOVER LN
LONGFORD DR
WAVERLEY DR
WILLOWDALE DR
THAMES DR
BEXHILL DR

Legend

- Fort Detrick Boundary
- Frederick City Boundary
- Spring Location

BMW56D Monitoring Point ID

Notes:
1. No MCL exists for Chloroform; thus, the MCL goal is presented.
2. µg/L - micrograms per liter
3. MCL - Maximum Contaminant Level

Quarterly Groundwater Monitoring Report
(September 2015)
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

Analytical Results Above the MCL

ARCADIS

FIGURE
A.7.4.5-4

Attachment 7.4.6
Sentinel Monitoring Program Tables and Figures
2017 (Annual)

(Watermark ECC LCC, 2018)

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Attachment 7.4.6
TABLES

Table A.7.4.6-1
Well Construction Details and
Groundwater Elevations – June 2017
Area B Landfills, Fort Detrick, Maryland

Monitoring Well	Zone	Ground Elevation[(1)] (ft msl)	TOC Elevation[(1)] (ft msl)	Total Depth[(1)] (ft msl)	Screened Interval[(1)] (ft msl)	Depth to Groundwater (ft BTOC)	Groundwater Elevation[(1)] (ft msl)
BMW20	Overburden	367.00	368.70	331.20	321.20 - 331.20	14.38	354.32
BMW20D	Shallow Bedrock	366.17	368.31	189.66	218.17 - 198.17	15.57	352.74
BMW24D	Shallow Bedrock	365.47	368.16	187.25	201.22 - 191.02	18.41	349.75
BMW32D	Shallow Bedrock	356.21	356.21	268.80	281.21 - 271.21	6.57	349.64
BMW53F	Deep Bedrock	349.10	351.69	41.47	54.10 - 44.10	9.81	341.88
BMW56D	Shallow Bedrock	380.86	382.86	282.58	309.86 - 289.86	36.23	346.63
BMW58D	Shallow Bedrock	387.40	388.65	256.91	277.90 - 257.90	35.91	352.74
BMW59D	Shallow Bedrock	389.91	391.65	204.26	226.91 - 206.91	40.79	350.86
BMW66D	Shallow Bedrock	332.10	335.05	53.65	62.10 - 57.10	11.61	323.44
BMW67C	Deep Bedrock	394.60	397.47	235.63	254.60 - 239.60	45.09	352.38
BMW68D	Deep Bedrock	371.70	374.22	191.99	204.70 - 194.70	27.29	346.93
BMW69A	Shallow Bedrock	337.90	340.51	303.13	315.90 - 305.90	5.12	335.39
BMW70A	Shallow Bedrock	327.50	330.06	288.41	296.50 - 291.50	5.26	324.80
BMW71C	Deep Bedrock	332.90	335.32	98.30	110.90 - 100.90	16.55	318.77
BMW77	Shallow Bedrock	363.30	366.26	289.79	307.30 - 292.30	24.39	341.87

Notes:

Depth to groundwater was measured on 26 June 2017.

(1) All elevations presented in feet relative to the North American Vertical Datum (1988).

TOC - Top of Casing

ft BTOC - Feet Below Top of Casing

ft msl - Feet Relative to Mean Sea Level

NA - Not Applicable

Table A.7.4.6-2
Well Construction Details and
Groundwater Elevations – August 2017
Area B Landfills, Fort Detrick, Maryland

Monitoring Well	Zone	Ground Elevation[(1)] (ft msl)	TOC Elevation[(1)] (ft msl)	Total Depth[(1)] (ft msl)	Screened Interval[(1)] (ft msl)	Depth to Groundwater (ft BTOC)	Groundwater Elevation[(1)] (ft msl)
BMW20D	Shallow Bedrock	366.17	368.31	189.66	218.17 - 198.17	18.01	350.30
BMW24D	Shallow Bedrock	365.47	368.16	187.25	201.22 - 191.02	20.30	347.86
BMW32D	Shallow Bedrock	356.21	356.21	268.80	281.21 - 271.21	4.31	351.90
BMW53F	Deep Bedrock	349.10	351.69	41.47	54.10 - 44.10	11.30	340.39
BMW56D	Shallow Bedrock	380.86	382.86	282.58	309.86 - 289.86	39.10	343.76
BMW58D	Shallow Bedrock	387.40	388.65	256.91	277.90 - 257.90	38.60	350.05
BMW59D	Shallow Bedrock	389.91	391.65	204.26	226.91 - 206.91	43.20	348.45
BMW66D	Shallow Bedrock	332.10	335.05	53.65	62.10 - 57.10	12.20	322.85
BMW67C	Deep Bedrock	394.60	397.47	235.63	254.60 - 239.60	48.20	349.27
BMW68D	Deep Bedrock	371.70	374.22	191.99	204.70 - 194.70	29.70	344.52
BMW69A	Shallow Bedrock	337.90	340.51	303.13	315.90 - 305.90	5.10	335.41
BMW70A	Shallow Bedrock	327.50	330.06	288.41	296.50 - 291.50	5.80	324.26
BMW71C	Deep Bedrock	332.90	335.32	98.30	110.90 - 100.90	16.65	318.67
BMW77	Shallow Bedrock	363.30	366.26	289.79	307.30 - 292.30	24.75	341.51

Notes:

Depth to groundwater was measured on 28 August 2017.

(1) All elevations presented in feet relative to the North American Vertical Datum (1988).

TOC - Top of Casing

ft BTOC - Feet Below Top of Casing

ft msl - Feet Relative to Mean Sea Level

NA - Not Applicable

Table A.7.4.6-3
Well Construction Details and
Groundwater Elevations – October 2017
Area B Landfills, Fort Detrick, Maryland

Monitoring Well	Zone	Ground Elevation[(1)] (ft msl)	TOC Elevation[(1)] (ft msl)	Total Depth[(1)] (ft msl)	Screened Interval[(1)] (ft msl)	Depth to Groundwater (ft BTOC)	Groundwater Elevation[(1)] (ft msl)
BMW20	Overburden	367.00	368.70	331.20	321.20 - 331.20	19.87	348.83
BMW20D	Shallow Bedrock	366.17	368.31	189.66	218.17 - 198.17	20.72	347.59
BMW24D	Shallow Bedrock	365.47	368.16	187.25	201.22 - 191.02	22.67	345.49
BMW32D	Shallow Bedrock	356.21	356.21	268.80	281.21 - 271.21	9.37	346.84
BMW53F	Deep Bedrock	349.10	351.69	41.47	54.10 - 44.10	13.61	338.08
BMW56D	Shallow Bedrock	380.86	382.86	282.58	309.86 - 289.86	41.87	340.99
BMW58D	Shallow Bedrock	387.40	388.65	256.91	277.90 - 257.90	41.62	347.03
BMW59D	Shallow Bedrock	389.91	391.65	204.26	226.91 - 206.91	45.72	345.93
BMW66D	Shallow Bedrock	332.10	335.05	53.65	62.10 - 57.10	13.00	322.05
BMW67C	Deep Bedrock	394.60	397.47	235.63	254.60 - 239.60	51.18	346.29
BMW68D	Deep Bedrock	371.70	374.22	191.99	204.70 - 194.70	32.44	341.78
BMW69A	Shallow Bedrock	337.90	340.51	303.13	315.90 - 305.90	5.27	335.24
BMW70A	Shallow Bedrock	327.50	330.06	288.41	296.50 - 291.50	6.71	323.35
BMW71C	Deep Bedrock	332.90	335.32	98.30	110.90 - 100.90	16.92	318.40
BMW77	Shallow Bedrock	363.30	366.26	289.79	307.30 - 292.30	26.88	339.38

Notes:

Depth to groundwater was measured on 18 October 2017.

(1) All elevations presented in feet relative to the North American Vertical Datum (1988).

TOC - Top of Casing

ft BTOC - Feet Below Top of Casing

ft msl - Feet Relative to Mean Sea Level

NA - Not Applicable

Table A.7.4.6-4
Well Construction Details and
Groundwater Elevations – December 2017
Area B Landfills, Fort Detrick, Maryland

Monitoring Well	Zone	Ground Elevation[(1)] (ft msl)	TOC Elevation[(1)] (ft msl)	Total Depth[(1)] (ft msl)	Screened Interval[(1)] (ft msl)	Depth to Groundwater (ft BTOC)	Groundwater Elevation[(1)] (ft msl)
BMW20	Overburden	367.00	368.70	331.20	321.20 - 331.20	21.70	347.00
BMW20D	Shallow Bedrock	366.17	368.31	189.66	218.17 - 198.17	22.16	346.15
BMW24D	Shallow Bedrock	365.47	368.16	187.25	201.22 - 191.02	23.80	344.36
BMW32D	Shallow Bedrock	356.21	356.21	268.80	281.21 - 271.21	10.80	345.41
BMW53F	Deep Bedrock	349.10	351.69	41.47	54.10 - 44.10	14.70	336.99
BMW56D	Shallow Bedrock	380.86	382.86	282.58	309.86 - 289.86	42.75	340.11
BMW58D	Shallow Bedrock	387.40	388.65	256.91	277.90 - 257.90	42.67	345.98
BMW59D	Shallow Bedrock	389.91	391.65	204.26	226.91 - 206.91	46.79	344.86
BMW67C	Deep Bedrock	394.60	397.47	235.63	254.60 - 239.60	52.31	345.16
BMW68D	Deep Bedrock	371.70	374.22	191.99	204.70 - 194.70	33.33	340.89
BMW69A	Shallow Bedrock	337.90	340.51	303.13	315.90 - 305.90	5.87	334.64
BMW70A	Shallow Bedrock	327.50	330.06	288.41	296.50 - 291.50	7.09	322.97
BMW71C	Deep Bedrock	332.90	335.32	98.30	110.90 - 100.90	17.09	318.23
BMW77	Shallow Bedrock	363.30	366.26	289.79	307.30 - 292.30	28.59	337.67

Notes:

Depth to groundwater was measured on 18 December 2017.

(1) All elevations presented in feet relative to the North American Vertical Datum (1988).

TOC - Top of Casing

ft BTOC - Feet Below Top of Casing

ft msl - Feet Relative to Mean Sea Level

NA - Not Applicable

Table A.7.4.6-5
Investigation Derived Waste
Analytical Results – June 2017
Area B Landfills, Fort Detrick, Maryland

Analyte	Location		IDW-01
	Sample ID		FTD72-IDW01 -062817
	Date		6/28/17
	Unit	MCL	
Acetone	µg/L	-	--
Benzene	µg/L	5	4.7
Bromodichloromethane	µg/L	80(1)	--
Bromoform	µg/L	80(1)	--
Bromomethane	µg/L	-	--
2-Butanone	µg/L	-	--
Carbon Disulfide	µg/L	-	--
Carbon Tetrachloride	µg/L	5	--
Chlorobenzene	µg/L	100	0.5 J
Chloroethane	µg/L	-	--
Chloroform	µg/L	70(1)	38
Chloromethane	µg/L	-	--
Cyclohexane	µg/L	-	--
1,2-Dibromo-3-Chloropropane	µg/L	0.2	--
Dibromochloromethane	µg/L	60(1)	--
1,2-Dibromoethane	µg/L	0.05	--
1,2-Dichlorobenzene	µg/L	600	--
1,3-Dichlorobenzene	µg/L	-	--
1,4-Dichlorobenzene	µg/L	75	--
Dichlorodifluoromethane	µg/L	-	--
1,1-Dichloroethane	µg/L	-	1 J
1,2-Dichloroethane	µg/L	5	2.6
1,1-Dichloroethene	µg/L	7	**11**
cis-1,2-Dichloroethene	µg/L	70	46
trans-1,2-Dichloroethene	µg/L	100	--
1,2-Dichloropropane	µg/L	5	--
cis-1,3-Dichloropropene	µg/L	-	--
trans-1,3-Dichloropropene	µg/L	-	--
Ethylbenzene	µg/L	700	--
Freon 113	µg/L	-	--
2-Hexanone	µg/L	-	--
Isopropylbenzene	µg/L	-	--
Methyl Acetate	µg/L	-	--
Methyl Tertiary Butyl Ether	µg/L	-	--
4-Methyl-2-Pentanone	µg/L	-	--
Methylcyclohexane	µg/L	-	--
Methylene Chloride	µg/L	5	--
Styrene	µg/L	100	--
1,1,2,2-Tetrachloroethane	µg/L	-	--
Tetrachloroethene	µg/L	5	**7.2**
Toluene	µg/L	1,000	--
1,2,3-Trichlorobenzene	µg/L	-	--
1,2,4-Trichlorobenzene	µg/L	70	4.4
1,1,1-Trichloroethane	µg/L	200	3.3
1,1,2-Trichloroethane	µg/L	5	--
Trichloroethene	µg/L	5	**190**
Trichlorofluoromethane	µg/L	-	16
Vinyl Chloride	µg/L	2	1.8 J
m+p-Xylene	µg/L	10,000(2)	--
o-Xylene	µg/L	10,000(2)	--

Notes:

Results exceeding the MCL are highlighed in gray and presented in boldfaced font.

-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.

(1) 80 µg/L is the MCL for total trihalomethanes (total of bromodichloromethane, bromoform, dibromochloromethane, and chloroform) and is applicable to public drinking water supplies that use disinfection products. Chloroform has a Maximum Contaminant Level Goal (MCLG) of 70 µg/L. Dibromochloromethane has a MCLG of 60 µg/L.

(2) 10,000 µg/L is the MCL for total xylenes.

µg/L - Micrograms per Liter

J - Estimated Value

MCL - Maximum Contaminant Level

Table A.7.4.6-6
Investigation Derived Waste
Analytical Results – August 2017
Area B Landfills, Fort Detrick, Maryland

Analyte			Location	IDW-01	IDW-02	IDW-03
			Sample ID	FTD72-IDW01-101817	FTD72-IDW02-101817	FTD72-IDW03-101817
			Date	10/18/17	10/18/17	10/18/17
	Unit	MCL				
Acetone	µg/L	-		12	--	--
Benzene	µg/L	5		--	0.2 J	1.5
Bromodichloromethane	µg/L	80[(1)]		--	--	--
Bromoform	µg/L	80[(1)]		--	0.1 J	--
Bromomethane	µg/L	-		--	--	--
2-Butanone	µg/L	-		--	--	--
Carbon Disulfide	µg/L	-		--	--	--
Carbon Tetrachloride	µg/L	5		--	--	--
Chlorobenzene	µg/L	100			--	0.3 J
Chloroethane	µg/L	-		--	--	--
Chloroform	µg/L	70[(1)]		1.9	2.9	41
Chloromethane	µg/L	-		--	--	--
Cyclohexane	µg/L	-		--	--	--
1,2-Dibromo-3-Chloropropane	µg/L	0.2		--	--	--
Dibromochloromethane	µg/L	60[(1)]		--	--	--
1,2-Dibromoethane	µg/L	0.05		--	--	--
1,2-Dichlorobenzene	µg/L	600		--	--	0.2 J
1,3-Dichlorobenzene	µg/L	-		--	--	--
1,4-Dichlorobenzene	µg/L	75		--	--	0.2 J
Dichlorodifluoromethane	µg/L	-		--	--	--
1,1-Dichloroethane	µg/L	-				0.5
1,2-Dichloroethane	µg/L	5		0.1 J	0.1 J	**7.0**
1,1-Dichloroethene	µg/L	7		--	0.2 J	0.5 J
cis-1,2-Dichloroethene	µg/L	70		0.4 J	2.2	40
trans-1,2-Dichloroethene	µg/L	100		--	--	--
1,2-Dichloropropane	µg/L	5		--	--	0.3 J
cis-1,3-Dichloropropene	µg/L	-		--	--	--
trans-1,3-Dichloropropene	µg/L	-		--	--	--
Ethylbenzene	µg/L	700		--	--	--
Freon 113	µg/L	-		--	--	--
2-Hexanone	µg/L	-		--	--	--
Isopropylbenzene	µg/L	-		--	--	--
Methyl Acetate	µg/L	-		--	--	--
Methyl Tertiary Butyl Ether	µg/L	-		--	--	--
4-Methyl-2-Pentanone	µg/L	-		--	--	--
Methylcyclohexane	µg/L	-		--	--	--
Methylene Chloride	µg/L	5		--	--	--
Styrene	µg/L	100		--	--	--
1,1,2,2-Tetrachloroethane	µg/L	-		--	--	--
Tetrachloroethene	µg/L	5		0.4 J	2.0	**7.6**
Toluene	µg/L	1,000		--	--	--
1,2,3-Trichlorobenzene	µg/L	-		--	--	--
1,2,4-Trichlorobenzene	µg/L	70		0.1 J	0.4 J	2.0
1,1,1-Trichloroethane	µg/L	200			0.1 J	0.3 J
1,1,2-Trichloroethane	µg/L	5		--	--	1.3
Trichloroethene	µg/L	5		4.6	**15**	**69**
Trichlorofluoromethane	µg/L	-		0.1 J	0.2 J	0.1 J
Vinyl Chloride	µg/L	2				
m+p-Xylene	µg/L	10,000[(2)]		--	--	--
o-Xylene	µg/L	10,000[(2)]		--	--	--

Notes:

Results exceeding the MCL are highlighed in gray and presented in boldfaced font.

-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.

(1) 80 µg/L is the MCL for total trihalomethanes (total of bromodichloromethane, bromoform, dibromochloromethane, and chloroform) and is applicable to public drinking water supplies that use disinfection products. Chloroform has a Maximum Contaminant Level Goal (MCLG) of 70 µg/L. Dibromochloromethane has a MCLG of 60 µg/L.

(2) 10,000 µg/L is the MCL for total xylenes.

µg/L - Micrograms per Liter

J - Estimated Value

MCL - Maximum Contaminant Level

Table A.7.4.6-7
Investigation Derived Waste
Analytical Results – October 2017
Area B Landfills, Fort Detrick, Maryland

Analyte	Location		IDW-04	IDW-05
	Sample ID		FTD72-IDW04 -102317	FTD72-IDW05 -102317
	Date		10/23/17	10/23/17
	Unit	MCL		
Acetone	µg/L	-	--	--
Benzene	µg/L	5	--	
Bromodichloromethane	µg/L	80(1)	--	--
Bromoform	µg/L	80(1)	--	--
Bromomethane	µg/L	-	--	--
2-Butanone	µg/L	-	--	--
Carbon Disulfide	µg/L	-	--	--
Carbon Tetrachloride	µg/L	5	--	--
Chlorobenzene	µg/L	100	--	--
Chloroethane	µg/L	-	--	--
Chloroform	µg/L	70(1)	2.7	3.5
Chloromethane	µg/L	-	--	--
Cyclohexane	µg/L	-	--	--
1,2-Dibromo-3-Chloropropane	µg/L	0.2	--	--
Dibromochloromethane	µg/L	60(1)	--	--
1,2-Dibromoethane	µg/L	0.05	--	--
1,2-Dichlorobenzene	µg/L	600	--	--
1,3-Dichlorobenzene	µg/L	-	--	--
1,4-Dichlorobenzene	µg/L	75	--	--
Dichlorodifluoromethane	µg/L	-	--	--
1,1-Dichloroethane	µg/L	-	--	--
1,2-Dichloroethane	µg/L	5	0.1 J	0.1 J
1,1-Dichloroethene	µg/L	7	0.6	1.0
cis-1,2-Dichloroethene	µg/L	70	0.4 J	0.7
trans-1,2-Dichloroethene	µg/L	100	--	--
1,2-Dichloropropane	µg/L	5	--	--
cis-1,3-Dichloropropene	µg/L	-	--	--
trans-1,3-Dichloropropene	µg/L	-	--	--
Ethylbenzene	µg/L	700	--	--
Freon 113	µg/L	-	--	--
2-Hexanone	µg/L	-	--	--
Isopropylbenzene	µg/L	-	--	--
Methyl Acetate	µg/L	-	--	--
Methyl Tertiary Butyl Ether	µg/L	-	--	--
4-Methyl-2-Pentanone	µg/L	-	--	--
Methylcyclohexane	µg/L	-	--	--
Methylene Chloride	µg/L	5	--	--
Styrene	µg/L	100	--	--
1,1,2,2-Tetrachloroethane	µg/L	-	--	--
Tetrachloroethene	µg/L	5	0.6	0.8
Toluene	µg/L	1,000	--	--
1,2,3-Trichlorobenzene	µg/L	-	--	--
1,2,4-Trichlorobenzene	µg/L	70	--	--
1,1,1-Trichloroethane	µg/L	200	0.2 J	0.2 J
1,1,2-Trichloroethane	µg/L	5	--	--
Trichloroethene	µg/L	5	**9.1**	**13**
Trichlorofluoromethane	µg/L	-	1.9	2.4
Vinyl Chloride	µg/L	2	--	--
m+p-Xylene	µg/L	10,000(2)	--	--
o-Xylene	µg/L	10,000(2)	--	--

Notes:

Results exceeding the MCL are highlighed in gray and presented in boldfaced font.

-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.

(1) 80 µg/L is the MCL for total trihalomethanes (total of bromodichloromethane, bromoform, dibromochloromethane, and chloroform) and is applicable to public drinking water supplies that use disinfection products. Chloroform has a Maximum Contaminant Level Goal (MCLG) of 70 µg/L. Dibromochloromethane has a MCLG of 60 µg/L.

(2) 10,000 µg/L is the MCL for total xylenes.

µg/L - Micrograms per Liter

J - Estimated Value

MCL - Maximum Contaminant Level

Table A.7.4.6-8
Investigation Derived Waste
Analytical Results – December 2017
Area B Landfills, Fort Detrick, Maryland

Analyte		Location	IDW-01	IDW-02	IDW-03	IDW-04
		Sample ID	FTD72-IDW01 -122117	FTD72-IDW02 -122117	FTD72-IDW03 -122117	FTD72-IDW04 -122117
		Date	12/21/17	12/21/17	12/21/17	10/23/17
	Unit	MCL				
Acetone	µg/L	-	15	--	--	--
Benzene	µg/L	5	0.1 J		--	
Bromodichloromethane	µg/L	80(1)	--	--	--	--
Bromoform	µg/L	80(1)	--	--	--	--
Bromomethane	µg/L	-	--	--	--	--
2-Butanone	µg/L	-	--	--	--	--
Carbon Disulfide	µg/L	-	--	--	--	--
Carbon Tetrachloride	µg/L	5	--	--	--	--
Chlorobenzene	µg/L	100	--	--	--	--
Chloroethane	µg/L	-	--	--	--	--
Chloroform	µg/L	70(1)	2.7	0.8	4.3	1.1
Chloromethane	µg/L	-	--	--	--	--
Cyclohexane	µg/L	-	--	--	--	--
1,2-Dibromo-3-Chloropropane	µg/L	0.2	--	--	--	--
Dibromochloromethane	µg/L	60(1)	--	--	--	--
1,2-Dibromoethane	µg/L	0.05	--	--	--	--
1,2-Dichlorobenzene	µg/L	600	--	--	--	--
1,3-Dichlorobenzene	µg/L	-	--	--	--	--
1,4-Dichlorobenzene	µg/L	75	--	--	--	--
Dichlorodifluoromethane	µg/L	-	--	--	--	--
1,1-Dichloroethane	µg/L	-	--	--	--	--
1,2-Dichloroethane	µg/L	5	0.1 J	--	0.1 J	--
1,1-Dichloroethene	µg/L	7	1.4	0.2 J	0.8	0.2 J
cis-1,2-Dichloroethene	µg/L	70	0.5 J	--	0.5 J	0.2 J
trans-1,2-Dichloroethene	µg/L	100	--	--	--	--
1,2-Dichloropropane	µg/L	5	--	--	--	--
cis-1,3-Dichloropropene	µg/L	-	--	--	--	--
trans-1,3-Dichloropropene	µg/L	-	--	--	--	--
Ethylbenzene	µg/L	700	--	--	--	--
Freon 113	µg/L	-	--	--	--	--
2-Hexanone	µg/L	-	--	--	--	--
Isopropylbenzene	µg/L	-	--	--	--	--
Methyl Acetate	µg/L	-	--	--	--	--
Methyl Tertiary Butyl Ether	µg/L	-	--	--	--	--
4-Methyl-2-Pentanone	µg/L	-	--	--	--	--
Methylcyclohexane	µg/L	-	--	--	--	--
Methylene Chloride	µg/L	5	--	--	--	--
Styrene	µg/L	100	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	-	--	--	--	--
Tetrachloroethene	µg/L	5	5.5	0.3 J	0.7	0.4 J
Toluene	µg/L	1,000	--	--	--	--
1,2,3-Trichlorobenzene	µg/L	-	0.3 J	--	--	--
1,2,4-Trichlorobenzene	µg/L	70	0.6	--	0.2 J	0.1 J
1,1,1-Trichloroethane	µg/L	200	0.2 J	--	0.2 J	--
1,1,2-Trichloroethane	µg/L	5	--	--	--	--
Trichloroethene	µg/L	5	**11**	2.2	**14**	4.7
Trichlorofluoromethane	µg/L	-	3.3	1.0	3.8	0.9
Vinyl Chloride	µg/L	2	--	--	--	--
m+p-Xylene	µg/L	10,000(2)	--	--	--	--
o-Xylene	µg/L	10,000(2)	--	--	--	--

Notes:

Results exceeding the MCL are highlighed in gray and presented in boldfaced font.

-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.

(1) 80 µg/L is the MCL for total trihalomethanes (total of bromodichloromethane, bromoform, dibromochloromethane, and chloroform) and is applicable to public drinking water supplies that use disinfection products. Chloroform has a Maximum Contaminant Level Goal (MCLG) of 70 µg/L. Dibromochloromethane has a MCLG of 60 µg/L.

(2) 10,000 µg/L is the MCL for total xylenes.

µg/L - Micrograms per Liter

J - Estimated Value

MCL - Maximum Contaminant Level

Table A.7.4.6-9
Quarterly Groundwater Analytical Results – June 2017
Area B Landfills, Fort Detrick, Maryland

Analyte	Location		BMW20	BMW20D	BMW24D	BMW32D	BMW53F	BMW56D	BMW58D	BMW59D	BMW66D	BMW67C	BMW68D	BMW69A	BMW70A	BMW71C	BMW77
	Sample ID		FTD72-BMW20 (040617)	FTD72-BMW20D (062717)	FTD72-BMW24D (051617)	FTD72-BMW32D (062817)	FTD72-BMW53F (062717)	FTD72-BMW56D (062717)	FTD72-BMW58D (062617)	FTD72-BMW59D (040517)	FTD72-BMW66D (062717)	FTD72-BMW67C (041017)	FTD72-BMW68D (051717)	FTD72-BMW69A (062817)	FTD72-BMW70 (062717)	FTD72-BMW71C (062817)	FTD72-BMW77 (040517)
	Date		4/6/17	6/27/17	5/16/17	6/28/17	6/27/17	6/27/17	6/26/17	4/5/17	6/27/17	4/10/17	5/17/17	6/28/17	6/27/17	6/28/17	4/5/17
	Unit	MCL	RSL Tapwater														
Acetone	µg/L	-	14,000	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	µg/L	5	0.46	--	-- (--)	--	--	--	**64**	--	--	--	**11 (11)**	**6.2 J**	--	--	--	0.1 J
Bromodichloromethane	µg/L	80[1]	0.13	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	µg/L	80[1]	3.3	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	µg/L	-	7.5	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	µg/L	-	-	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Disulfide	µg/L	-	810	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	µg/L	5	0.46	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	µg/L	100	78	--	-- (--)	--	--	--	6.1 J	--	--	--	--	--	--	--	--	0.1 J
Chloroethane	µg/L	-	21,000	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	µg/L	70[1]	0.22	--	-- (--)	--	--	7.2	**430**	12	4.5	2.3	**910 (890)**	**380**	--	--	0.7	0.6
Chloromethane	µg/L	-	190	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	µg/L	-	13,000	NA	-- (--)	--	--	--	--	--	--	NA	--	--	--	--	--	NA
1,2-Dibromo-3-chloropropane	µg/L	0.2	0.00033	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	µg/L	60[1]	0.87	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	µg/L	0.05	0.0075	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	600	300	--	-- (--)	--	--	--	3.3 J	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	µg/L	-	-	NA	-- (--)	--	--	--	--	--	NA	--	NA	--	--	--	--	NA
1,4-Dichlorobenzene	µg/L	75	0.48	--	-- (--)	--	--	--	4.6 J	--	--	--	--	--	--	--	--	0.2 J
Dichlorodifluoromethane	µg/L	-	200	NA	-- (--)	--	--	--	3.5 J	--	NA	--	NA	--	--	--	--	NA
1,1-Dichloroethane		-	2.8	--	-- (--)	--	--	--	12	0.2 J	--	--	3.4 J (4.2 J)	6.4 J	--	--	--	0.2 J
1,2-Dichloroethane	µg/L	5	0.17	--	-- (--)	--	--	0.2 J	**23**	0.4 J	0.1 J	--	**14 (14)**	**16 J**	--	--	--	--
1,1-Dichloroethene	µg/L	7	280	--	-- (--)	--	--	2.3	**220**	4.2	1	0.9	**120 (140)**	**150**	--	--	0.2 J	3.5
cis-1,2-Dichloroethene	µg/L	70	36	--	-- (--)	--	--	0.9	**530**	2.6	0.4 J	0.9	**160 (190)**	**170**	--	--	--	0.7
trans-1,2-Dichloroethene	µg/L	100	360	--	-- (--)	--	--	--	2.7 J	--	--	--	2.3 J (2.1 J)	--	--	--	--	--
1,2-Dichloropropane	µg/L	5	0.44	--	-- (--)	--	--	--	2.5 J	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	-	-	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	-	-	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	µg/L	700	1.5	--	-- (--)	--	--	--	6.4 J	--	--	--	--	--	--	--	--	--
Freon 113	µg/L	-	55,000	NA	-- (--)	--	--	--	15	0.3 J	NA	--	NA	--	--	--	--	NA
2-Hexanone	µg/L	-	38	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	µg/L	-	450	NA	-- (--)	--	--	--	--	--	NA	--	NA	--	--	--	--	NA
Methyl Acetate	µg/L	-	20,000	NA	-- (--)	--	--	--	--	--	NA	--	NA	--	--	--	--	NA
Methyl Tertiary Butyl Ether	µg/L	-	14	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	µg/L	-	6,300	-	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylcyclohexane	µg/L	-	-	NA	-- (--)	--	--	--	--	--	NA	--	NA	--	--	--	--	NA
Methylene Chloride	µg/L	5	11	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	µg/L	100	1,200	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	-	0.076	--	-- (--)	--	--	--	1.4 J	--	--	--	--	--	--	--	--	--
Tetrachloroethene	µg/L	5	11	--	-- (--)	**1,900**	--	0.7	**130**	1.4	0.5 J	0.6	**51 (57)**	**59**	--	--	0.2 J	**16**
Toluene	µg/L	1,000	1,100	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	µg/L	-	7	NA	-- (--)	--	--	--	--	--	NA	--	NA	--	--	--	--	NA
1,2,4-Trichlorobenzene	µg/L	70	1.2	NA	-- (--)	--	--	--	**99**	--	NA	--	NA	6.0 J	--	--	--	NA
1,1,1-Trichloroethane	µg/L	200	8,000	--	-- (--)	--	--	0.7	48	0.6	0.2 J	0.2 J	36 (44)	31	--	--	--	--
1,1,2-Trichloroethane	µg/L	5	0.28	--	-- (--)	--	--	--	3.0 J	--	--	--	--	--	--	--	--	--
Trichloroethene	µg/L	5	0.49	--	-- (--)	--	--	**30**	**3,100**	**47**	**14**	**12**	**2,100 (2,200)**	**2,000**	--	--	1.4	4.2
Trichlorofluoromethane	µg/L	-	5,200	--	-- (--)	--	--	11	260	13	6.5	2.7	750 (730)	240	--	--	1.5	--
Vinyl Chloride	µg/L	2	0.019	--	-- (--)	--	--	--	**32**	--	--	--	--	--	--	--	--	--
m+p-Xylene	µg/L	10,000[2]	-	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	µg/L	10,000[2]	190	--	-- (--)	--	--	--	2.4 J	--	--	--	--	--	--	--	--	--

Notes:

Duplicate sample results are presented in parenthesis adjacent to the parent sample result.

Results in **bold** have exceeded their respective Maximum Contaminant Level (MCL).

[1] 80 µg/L is the MCL for total trihalomethanes (total of bromodichloromethane, bromoform, dibromochloromethane, and chloroform) and is applicable to public drinking water supplies that use disinfection products. Chloroform has a maximum contaminant level goal (MCLG) of 70 µg/L. Dibromochloromethane has a MCLG of 60 µg/L.

-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.

Results in gray shading have exceeded their respective EPA Regional Screening Level (RSL).

[2] 10,000 µg/L is the MCL for total xylenes.

J - Estimated Value

NA - Not Analyzed

EPA - Environmental Protection Agency

µg/L - Micrograms per Liter

Table A.7.4.6-10
Quarterly Groundwater Analytical Results – August 2017
Area B Landfills, Fort Detrick, Maryland

Analyte	Location		BMW20D	BMW24D	BMW32D	BMW53F	BMW56D	BMW58D	BMW59D	BMW66D	BMW67C	BMW68D	BMW69A	BMW70A	BMW71C	BMW77
	Sample ID		FTD72-BMW20D (083017)	FTD72-BMW24D (083017)	FTD72-BMW32D (082917)	FTD72-BMW53F (082917)	FTD72-BMW56D (083017)	FTD72-BMW58D (082817)	FTD72-BMW59D (082817)	FTD72-BMW66D (082917)	FTD72-BMW67C (083017)	FTD72-BMW68D (083017)	FTD72-BMW69A (083017)	FTD72-BMW70 (082917)	FTD72-BMW71C (082917)	FTD72-BMW77 (082917)
	Date		8/30/17	8/30/17	8/29/17	8/29/17	8/30/17	8/28/17	8/28/17	8/29/17	8/30/17	8/30/17	8/30/17	8/29/17	8/29/17	8/29/17
	Unit	MCL	RSL Tapwater													
Acetone	µg/L	-	14,000	--	--	--	3.1 J	--	--	-- (--)	--	--	--	--	--	--	--
Benzene	µg/L	5	0.46	--	--	--	--	**69**	--	-- (--)	--	**8.0 J**	--	--	--	--	0.2 J
Bromodichloromethane	µg/L	80[1]	0.13	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Bromoform	µg/L	80[1]	3.3	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Bromomethane	µg/L	-	7.5	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
2-Butanone	µg/L	-	-	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Carbon Disulfide	µg/L	-	810	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Carbon Tetrachloride	µg/L	5	0.46	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Chlorobenzene	µg/L	100	78	--	--	--	--	6.3 J	--	-- (--)	--	--	--	--	--	--	0.2 J
Chloroethane	µg/L	-	21,000	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Chloroform	µg/L	70[1]	0.22	--	1.4 J	--	7.3	**540**	11	4.3 (4.3)	2.5	**960**	**350**	--	--	0.7	1
Chloromethane	µg/L	-	190	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Cyclohexane	µg/L	-	13,000	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	µg/L	0.2	0.00033	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Dibromochloromethane	µg/L	60[1]	0.87	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
1,2-Dibromoethane	µg/L	0.05	0.0075	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	600	300	--	--	--	--	3.9 J	--	-- (--)	--	--	--	--	--	--	0.2 J
1,3-Dichlorobenzene	µg/L	-	-	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
1,4-Dichlorobenzene	µg/L	75	0.48	--	--	--	--	4.9 J	--	-- (--)	--	--	--	--	--	--	0.3 J
Dichlorodifluoromethane	µg/L	-	200	--	--	--	--	4.7 J	--	-- (--)	--	3.0 J	--	--	--	--	--
1,1-Dichloroethane	µg/L	-	2.8	--	--	--	--	14	0.2 J	-- (--)	--	4.4 J	6.3 J	--	--	--	0.3 J
1,2-Dichloroethane	µg/L	5	0.17	--	--	--	0.3 J	**26**	0.3 J	0.2 J (0.1 J)	0.1 J	**14**	**17 J**	--	--	--	0.2 J
1,1-Dichloroethene	µg/L	7	280	--	--	--	2.5	**290**	3.5	1.1 (1.1)	0.9	**160**	**120**	--	--	0.2 J	**7.7**
cis-1,2-Dichloroethene	µg/L	70	36	--	--	--	0.8	**740**	1.9	0.4 J (0.4 J)	0.7	**210**	**150**	--	--	--	1.3
trans-1,2-Dichloroethene	µg/L	100	360	--	--	--	--	4.5 J	--	-- (--)	--	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	5	0.44	--	--	--	--	2.6 J	--	-- (--)	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	-	-	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	-	-	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Ethylbenzene	µg/L	700	1.5	--	--	--	--	23	--	-- (--)	--	--	--	--	--	--	--
Freon 113	µg/L	-	55,000	--	--	--	--	23	0.2 J	-- (--)	--	22	--	--	--	--	--
2-Hexanone	µg/L	-	38	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Isopropylbenzene	µg/L	-	450	--	--	--	--	2.3 J	--	-- (--)	--	--	--	--	--	--	--
Methyl Acetate	µg/L	-	20,000	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Methyl Tertiary Butyl Ether	µg/L	-	14	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
4-Methyl-2-pentanone	µg/L	-	6,300	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Methylcyclohexane	µg/L	-	-	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Methylene Chloride	µg/L	5	11	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
Styrene	µg/L	100	1,200	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	-	0.076	--	--	--	--	1.6 J	--	-- (--)	--	--	--	--	--	--	--
Tetrachloroethene	µg/L	5	11	--	**260**	--	0.7	**160**	1.3	0.4 J (0.4 J)	0.7	**60**	**47**	--	--	0.2 J	**23**
Toluene	µg/L	1,000	1,100	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	µg/L	-	7	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	2.5
1,2,4-Trichlorobenzene	µg/L	70	1.2	--	--	--	--	**140**	--	-- (--)	--	9.0 J	--	--	--	--	5.4
1,1,1-Trichloroethane	µg/L	200	8,000	--	--	--	0.6	64	0.5 J	0.2 J (0.2 J)	0.2 J	45	27	--	--	--	0.1 J
1,1,2-Trichloroethane	µg/L	5	0.28	--	--	--	--	3.9 J	--	-- (--)	--	--	--	--	--	--	--
Trichloroethene	µg/L	5	0.49	--	4.4	--	**27**	**4,100**	**35**	**14 (14)**	**12**	**2,500**	**1,600**	--	--	1.3	**8.0**
Trichlorofluoromethane	µg/L	-	5,200	--	1.7 J	--	8.7	310	8.8	5.5 (5.5)	2.1	830	200	--	--	1.2	--
Vinyl Chloride	µg/L	2	0.019	--	--	--	--	**27**	--	-- (--)	--	--	--	--	--	--	--
m+p-Xylene	µg/L	10,000[2]	-	--	--	--	--	--	--	-- (--)	--	--	--	--	--	--	--
o-Xylene	µg/L	10,000[2]	190	--	--	--	--	3.0 J	--	-- (--)	--	--	--	--	--	--	--

Notes:

Duplicate sample results are presented in parenthesis adjacent to the parent sample result.
Results in **bold** have exceeded their respective Maximum Contaminant Level (MCL).
[1] 80 µg/L is the MCL for total trihalomethanes (total of bromodichloromethane, bromoform, dibromochloromethane, and chloroform) and is applicable to public drinking water supplies that use disinfection products. Chloroform has a maximum contaminant level goal (MCLG) of 70 µg/L. Dibromochloromethane has a MCLG of 60 µg/L.

-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.
Results in gray shading have exceeded their respective EPA Regional Screening Level (RSL).
[2] 10,000 µg/L is the MCL for total xylenes.
J - Estimated Value
NA - Not Analyzed
EPA - Environmental Protection Agency
µg/L - Micrograms per Liter

Table A.7.4.6-11
Quarterly Groudwater Analytical Results – October 2017
Area B Landfills, Fort Detrick, Maryland

Analyte	Location			BMW20	BMW20D	BMW24D	BMW32D	BMW53F	BMW56D	BMW58D	BMW59D	BMW66D	BMW67C	BMW68D	BMW69A	BMW70A	BMW71C	BMW77
	Sample ID			FTD72-BMW20 (101917)	FTD72-BMW20D (102017)	FTD72-BMW24D (101817)	FTD72-BMW32D (102317)	FTD72-BMW53F (101917)	FTD72-BMW56D (102017)	FTD72-BMW58D (102317)	FTD72-BMW59D (101917)	FTD72-BMW66D (101817)	FTD72-BMW67C (102017)	FTD72-BMW68D (102017)	FTD72-BMW69A (101917)	FTD72-BMW70 (101817)	FTD72-BMW71C (101917)	FTD72-BMW77 (101817)
	Date			10/19/17	10/20/17	10/18/17	10/23/17	10/19/17	10/20/17	10/23/17	10/19/17	10/18/17	10/20/17	10/20/17	10/19/17	6/27/17	10/19/17	10/18/17
	Unit	MCL	RSL Tapwater															
Acetone	µg/L	-	14,000	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	µg/L	5	0.46	--	--	-- (--)	--	--	**65**	--	--	--	**28**	**5.2 J**	--	--	--	0.2 J
Bromodichloromethane	µg/L	80[(1)]	0.13	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	µg/L	80[(1)]	3.3	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	µg/L	-	7.5	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	µg/L	-	-	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Disulfide	µg/L	-	810	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	µg/L	5	0.46	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	µg/L	100	78	--	--	-- (--)	--	--	6.2 J	--	--	--	--	--	--	--	--	0.2 J
Chloroethane	µg/L	-	21,000	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	µg/L	70[(1)]	0.22	--	--	1.5 J (1.4 J)	--	5.9	**490**	27	3.6	1.9	**1,000**	**360**	--	--	0.6	0.7
Chloromethane	µg/L	-	190	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	µg/L	-	13,000	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	µg/L	0.2	0.00033	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	µg/L	60[(1)]	0.87	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	µg/L	0.05	0.0075	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	600	300	--	--	-- (--)	--	--	3.5 J	--	--	--	--	--	--	--	--	0.2 J
1,3-Dichlorobenzene	µg/L	-	-	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	0.3 J
1,4-Dichlorobenzene	µg/L	75	0.48	--	--	-- (--)	--	--	5.0 J	--	--	--	--	--	--	--	--	0.3 J
Dichlorodifluoromethane	µg/L	-	200	--	--	-- (--)	--	--	4.9 J	0.2 J	--	--	3.1 J	--	--	--	--	--
1,1-Dichloroethane	µg/L	-	2.8	--	--	-- (--)	--	--	12	0.3 J	--	--	14	6.1 J	--	--	--	0.2 J
1,2-Dichloroethane	µg/L	5	0.17	--	--	-- (--)	--	0.2 J	**23**	0.6	0.1 J	--	**29**	**16 J**	--	--	--	0.1 J
1,1-Dichloroethene	µg/L	7	280	--	--	-- (--)	--	2.4 J	**330**	**14**	1.2	0.9 J	**580**	**160**	--	--	0.2 J	**7.5**
cis-1,2-Dichloroethene	µg/L	70	36	--	--	-- (--)	--	0.9	**650**	6.4	0.5 J	0.9	**720**	**140**	**--**	--	--	1.7
trans-1,2-Dichloroethene	µg/L	100	360	--	--	-- (--)	--	--	2.7 J	--	--	--	--	--	**--**	--	--	--
1,2-Dichloropropane	µg/L	5	0.44	--	--	-- (--)	--	--	2.4 J	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	-	-	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	-	-	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	µg/L	700	1.5	--	--	-- (--)	--	--	20	--	--	--	--	--	--	--	--	--
Freon 113	µg/L	-	55,000	--	--	-- (--)	--	--	27	0.9	--	--	59	--	--	--	--	--
2-Hexanone	µg/L	-	38	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	µg/L	-	450	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
Methyl Acetate	µg/L	-	20,000	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
Methyl Tertiary Butyl Ether	µg/L	-	14	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	µg/L	-	6,300	-	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
Methylcyclohexane	µg/L	-	-	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	µg/L	5	11	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	µg/L	100	1,200	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	-	0.076	--	--	-- (--)	--	--	1.7 J	--	--	--	3.5 J	--	--	--	--	--
Tetrachloroethene	µg/L	5	11	--	--	**530 (460)**	--	0.7	**150**	4.2	0.4 J	0.6 U	**88**	**63**	**--**	0.2 JU	0.2 J	**27 J**
Toluene	µg/L	1,000	1,100	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	µg/L	-	7	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	2.8
1,2,4-Trichlorobenzene	µg/L	70	1.2	--	--	-- (--)	--	--	**140**	--	--	--	35	11 J	--	--	--	6.4
1,1,1-Trichloroethane	µg/L	200	8,000	--	--	-- (--)	--	0.5	54	1.8	0.2 J	0.2 J	140	27	**--**	**--**	**--**	0.1 J
1,1,2-Trichloroethane	µg/L	5	0.28	--	--	-- (--)	--	--	3.8 J	0.1 J	--	--	**6.3 J**	--	--	--	--	--
Trichloroethene	µg/L	5	0.49	--	--	**5.3 (5.1)**	--	**26**	**3,900**	**120**	**13**	**10**	**6,000**	**2,000**	**--**	--	1.4	**8.2**
Trichlorofluoromethane	µg/L	-	5,200	--	--	2.1 J (2.1 J)	--	8.5	330	31	5.5	2.1	920	260	--	--	1.2	--
Vinyl Chloride	µg/L	2	0.019	--	--	-- (--)	--	--	**31**	--	--	--	--	--	**--**	--	--	--
m+p-Xylene	µg/L	10,000[(2)]	-	--	--	-- (--)	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	µg/L	10,000[(2)]	190	--	--	-- (--)	--	--	--	--	--	--	39	--	--	--	--	--

Notes:

Duplicate sample results are presented in parenthesis adjacent to the parent sample result.

Results in **bold** have exceeded their respective Maximum Contaminant Level (MCL).

(1) 80 µg/L is the MCL for total trihalomethanes (total of bromodichloromethane, bromoform, dibromochloromethane, and chloroform) and is applicable to public drinking water supplies that use disinfection products. Chloroform has a maximum contaminant level goal (MCLG) of 70 µg/L. Dibromochloromethane has a MCLG of 60 µg/L.

-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit

Results in gray shading have exceeded their respective EPA Regional Screening Level (RSL).

(2) 10,000 µg/L is the MCL for total xylenes.

J - Estimated Value

EPA - Environmental Protection Agency

NA - Not Analyzed

µg/L - Micrograms per Liter

Table A.7.4.6-12
Quarterly Groundwater Analytical Results – December 2017
Area B Landfills, Fort Detrick, Maryland

Analyte	Location			BMW20	BMW20D	BMW24D	BMW32D	BMW53F	BMW56D	BMW58D	BMW59D	BMW66D	BMW67C	BMW68D	BMW69A	BMW70A	BMW71C	BMW77
	Sample ID			FTD72-BMW20 (121917)	FTD72-BMW20D (122017)	FTD72-BMW24D (122117)	FTD72-BMW32D (122017)	FTD72-BMW53F (121917)	FTD72-BMW56D (122017)	FTD72-BMW58D (122017)	FTD72-BMW59D (122017)	FTD72-BMW66D	FTD72-BMW67C (122017)	FTD72-BMW68D (122017)	FTD72-BMW69A (122017)	FTD72-BMW70 (122017)	FTD72-BMW71C (121917)	FTD72-BMW77 (121817)
	Date			12/19/17	12/20/17	12/21/17	12/20/17	12/19/17	12/20/17	12/20/17	12/20/17		12/20/17	12/20/17	12/20/17	12/20/17	12/19/17	12/18/17
	Unit	MCL	RSL Tapwater															
Acetone	µg/L	-	14,000	--	--	-- (--)	--	--	--	--	--		--	280	--	--	--	--
Benzene	µg/L	5	0.46	--	--	-- (--)	--	--	**66**	--	--		**11 J**	4.9 J	--	--	--	0.2 J
Bromodichloromethane	µg/L	80[1]	0.13	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
Bromoform	µg/L	80[1]	3.3	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
Bromomethane	µg/L	-	7.5	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
2-Butanone	µg/L	-	-	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
Carbon Disulfide	µg/L	-	810	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
Carbon Tetrachloride	µg/L	5	0.46	--	--	-- (--)	--	0.1 J	--	--	--		--	--	--	--	--	--
Chlorobenzene	µg/L	100	78	--	--	-- (--)	--	--	6.5 J	--	--		--	--	--	--	--	0.3 J
Chloroethane	µg/L	-	21,000	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
Chloroform	µg/L	70[1]	0.22	--	--	1.8 J (1.8 J)	--	6.8	**640**	9.3	4.2		**1,100**	**420**	--	--	0.7	0.7
Chloromethane	µg/L	-	190	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
Cyclohexane	µg/L	-	13,000	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
1,2-Dibromo-3-Chloropropane	µg/L	0.2	0.00033	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
Dibromochloromethane	µg/L	60[1]	0.87	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
1,2-Dibromoethane	µg/L	0.05	0.0075	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	600	300	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	0.2 J
1,3-Dichlorobenzene	µg/L	-	-	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	0.3 J
1,4-Dichlorobenzene	µg/L	75	0.48	--	--	-- (--)	--	--	6.1 J	--	--		--	--	--	--	--	0.4 J
Dichlorodifluoromethane	µg/L	-	200	--	--	-- (--)	--	--	5.8 J	--	--		--	4.1 J	--	--	--	--
1,1-Dichloroethane	µg/L	-	2.8	--	--	-- (--)	--	--	14 J	--	--		7.4 J	6.4 J	--	--	--	0.3 J
1,2-Dichloroethane	µg/L	5	0.17	--	--	-- (--)	--	0.2 J	**29**	0.2 J	0.1 J		**21 J**	**17**	--	--	--	0.1 J
1,1-Dichloroethene	µg/L	7	280	--	--	0.7 J (0.6 J)	--	2.4	**300**	2.8	1.1		**280**	**140**	--	--	0.3 J	**10**
cis-1,2-Dichloroethene	µg/L	70	36	--	--	-- (--)	--	0.7	**710**	1.2	0.4 J		**280**	**130**	--	--	--	1.5
trans-1,2-Dichloroethene	µg/L	100	360	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
1,2-Dichloropropane	µg/L	5	0.44	--	--	-- (--)	--	--	--	--	--		--	2.3 J	--	--	--	--
cis-1,3-Dichloropropene	µg/L	-	-	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	-	-	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
Ethylbenzene	µg/L	700	1.5	--	--	-- (--)	--	--	21 J	--	--		--	--	--	--	--	--
Freon 113	µg/L	-	55,000	--	--	-- (--)	--	0.2 J	30	0.3 J	--		43	12	--	--	--	--
2-Hexanone	µg/L	-	38	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
Isopropylbenzene	µg/L	-	450	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
Methyl Acetate	µg/L	-	20,000	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
Methyl Tertiary Butyl Ether	µg/L	-	14	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
4-Methyl-2-Pentanone	µg/L	-	6,300	-	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
Methylcyclohexane	µg/L	-	-	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
Methylene Chloride	µg/L	5	11	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
Styrene	µg/L	100	1,200	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	-	0.076	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
Tetrachloroethene	µg/L	5	11	--	0.1 J	**200 J (250 J)**	--	0.7	**150**	1.4	0.4 J		**65**	**65**	--	--	0.2 J	**28**
Toluene	µg/L	1,000	1,100	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
1,2,3-Trichlorobenzene	µg/L	-	7	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	3.6
1,2,4-Trichlorobenzene	µg/L	70	1.2	--	--	-- (--)	--	--	**120**	--	--		8.0 J	10	--	--	--	9.7
1,1,1-Trichloroethane	µg/L	200	8,000	--	--	-- (--)	--	0.7	74	0.5	0.2 J		87	37	--	--	--	0.1 J
1,1,2-Trichloroethane	µg/L	5	0.28	--	--	-- (--)	--	--	**5.7 J**	--	--		--	2.0 J	--	--	--	--
Trichloroethene	µg/L	5	0.49	--	--	**5.1 (5.0)**	--	**26**	**4,200**	**28**	**13**		**3,300**	**2,100**	--	--	1.4	**9.8**
Trichlorofluoromethane	µg/L	-	5,200	--	--	3.1 (3.0)	--	11	410	12	6.7		1100	320	--	--	1.4	--
Vinyl Chloride	µg/L	2	0.019	--	--	-- (--)	--	--	**33**	--	--		--	**3.1 J**	--	--	--	--
m+p-Xylene	µg/L	10,000[2]	-	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--
o-Xylene	µg/L	10,000[2]	190	--	--	-- (--)	--	--	--	--	--		--	--	--	--	--	--

Notes:

Duplicate sample results are presented in parenthesis adjacent to the parent sample result.

Results in **bold** have exceeded their respective Maximum Contaminant Level (MCL).

[1] 80 µg/L is the MCL for total trihalomethanes (total of bromodichloromethane, bromoform, dibromochloromethane, and chloroform) and is applicable to public drinking water supplies that use disinfection products. Chloroform has a maximum contaminant level goal (MCLG) of 70 µg/L. Dibromochloromethane has a MCLG of 60 µg/L.

-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.

Results in gray shading have exceeded their respective EPA Regional Screening Level (RSL).

[2] 10,000 µg/L is the MCL for total xylenes.

J - Estimated Value

EPA - Environmental Protection Agency

NA - Not Analyzed

µg/L - Micrograms per Liter

Table A.7.4.6-13
Robinson Spring Analytical Results – June 2017
Area B Landfills, Fort Detrick, Maryland

Analyte			Location	Robinson Spring
			Sample ID	RISP-03-SPRING
			Date	6/27/17
	Unit	MCL	RSL Tapwater	
Acetone	µg/L	-	14,000	--
Benzene	µg/L	5	0.46	--
Bromodichloromethane	µg/L	80(1)	0.13	--
Bromoform	µg/L	80(1)	3.3	--
Bromomethane	µg/L	-	7.5	--
2-Butanone	µg/L	-	-	--
Carbon Disulfide	µg/L	-	810	--
Carbon Tetrachloride	µg/L	5	0.46	--
Chlorobenzene	µg/L	100	78	--
Chloroethane	µg/L	-	21,000	--
Chloroform	µg/L	70(1)	0.22	1.9
Chloromethane	µg/L	-	190	--
Cyclohexane	µg/L	-	13,000	--
1,2-Dibromo-3-Chloropropane	µg/L	0.2	0.00033	--
Dibromochloromethane	µg/L	60(1)	0.87	--
1,2-Dibromoethane	µg/L	0.05	0.0075	--
1,2-Dichlorobenzene	µg/L	600	300	--
1,3-Dichlorobenzene	µg/L	-	-	--
1,4-Dichlorobenzene	µg/L	75	0.48	--
Dichlorodifluoromethane	µg/L	-	200	--
1,1-Dichloroethane	µg/L	-	2.8	--
1,2-Dichloroethane	µg/L	5	0.17	--
1,1-Dichloroethene	µg/L	7	280	0.6
cis-1,2-Dichloroethene	µg/L	70	36	0.8
trans-1,2-Dichloroethene	µg/L	100	360	--
1,2-Dichloropropane	µg/L	5	0.44	--
cis-1,3-Dichloropropene	µg/L	-	-	--
trans-1,3-Dichloropropene	µg/L	-	-	--
Ethylbenzene	µg/L	700	1.5	--
Freon 113	µg/L	-	55,000	--
2-Hexanone	µg/L	-	38	--
Isopropylbenzene	µg/L	-	450	--
Methyl Acetate	µg/L	-	20,000	--
Methyl Tertiary Butyl Ether	µg/L	-	14	--
4-Methyl-2-Pentanone	µg/L	-	6,300	--
Methylcyclohexane	µg/L	-	-	--
Methylene Chloride	µg/L	5	11	--
Styrene	µg/L	100	1,200	--
1,1,2,2-Tetrachloroethane	µg/L	-	0.076	--
Tetrachloroethene	µg/L	5	11	0.5
Toluene	µg/L	1,000	1,100	--
1,2,3-Trichlorobenzene	µg/L	-	7	--
1,2,4-Trichlorobenzene	µg/L	70	1.2	--
1,1,1-Trichloroethane	µg/L	200	8,000	0.1 J
1,1,2-Trichloroethane	µg/L	5	0.28	--
Trichloroethene	µg/L	5	0.49	**8.6**
Trichlorofluoromethane	µg/L	-	5,200	1.6
Vinyl Chloride	µg/L	2	0.019	--
m+p-Xylene	µg/L	10,000(2)	-	--
o-Xylene	µg/L	10,000(2)	190	--

Notes:

Results in **bold** have exceeded their respective Maximum Contaminant Level (MCL).

Results in gray shading have exceeded their respective EPA Regional Screening Level (RSL).

-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.

(1) 80 µg/L is the MCL for total trihalomethanes (total of bromodichloromethane, bromoform, dibromochloromethane, and chloroform). Chloroform has a maximum contaminant level goal (MCLG) of 70 µg/L. Dibromochloromethane has a MCLG of 60 µg/L.

(2) 10,000 µg/L is the MCL for total xylenes

J - Estimated Value EPA - Environmental Protection Agency µg/L - Micrograms per Liter

Table A.7.4.6-14
Robinson Spring Analytical Results – August 2017
Area B Landfills, Fort Detrick, Maryland

Analyte			Location	Robinson Spring
			Sample ID	RISP-03-SPRING
			Date	8/30/17
	Unit	MCL	RSL Tapwater	
Acetone	µg/L	-	14,000	--
Benzene	µg/L	5	0.46	--
Bromodichloromethane	µg/L	80(1)	0.13	--
Bromoform	µg/L	80(1)	3.3	--
Bromomethane	µg/L	-	7.5	--
2-Butanone	µg/L	-	-	--
Carbon Disulfide	µg/L	-	810	--
Carbon Tetrachloride	µg/L	5	0.46	--
Chlorobenzene	µg/L	100	78	--
Chloroethane	µg/L	-	21,000	--
Chloroform	µg/L	70(1)	0.22	2.0
Chloromethane	µg/L	-	190	--
Cyclohexane	µg/L	-	13,000	--
1,2-Dibromo-3-Chloropropane	µg/L	0.2	0.00033	--
Dibromochloromethane	µg/L	60(1)	0.87	--
1,2-Dibromoethane	µg/L	0.05	0.0075	--
1,2-Dichlorobenzene	µg/L	600	300	--
1,3-Dichlorobenzene	µg/L	-	-	--
1,4-Dichlorobenzene	µg/L	75	0.48	--
Dichlorodifluoromethane	µg/L	-	200	--
1,1-Dichloroethane	µg/L	-	2.8	--
1,2-Dichloroethane	µg/L	5	0.17	--
1,1-Dichloroethene	µg/L	7	280	0.6
cis-1,2-Dichloroethene	µg/L	70	36	0.9
trans-1,2-Dichloroethene	µg/L	100	360	--
1,2-Dichloropropane	µg/L	5	0.44	--
cis-1,3-Dichloropropene	µg/L	-	-	--
trans-1,3-Dichloropropene	µg/L	-	-	--
Ethylbenzene	µg/L	700	1.5	--
Freon 113	µg/L	-	55,000	--
2-Hexanone	µg/L	-	38	--
Isopropylbenzene	µg/L	-	450	--
Methyl Acetate	µg/L	-	20,000	--
Methyl Tertiary Butyl Ether	µg/L	-	14	--
4-Methyl-2-Pentanone	µg/L	-	6,300	--
Methylcyclohexane	µg/L	-	-	--
Methylene Chloride	µg/L	5	11	--
Styrene	µg/L	100	1,200	--
1,1,2,2-Tetrachloroethane	µg/L	-	0.076	--
Tetrachloroethene	µg/L	5	11	0.6
Toluene	µg/L	1,000	1,100	--
1,2,3-Trichlorobenzene	µg/L	-	7	--
1,2,4-Trichlorobenzene	µg/L	70	1.2	--
1,1,1-Trichloroethane	µg/L	200	8,000	0.1 J
1,1,2-Trichloroethane	µg/L	5	0.28	--
Trichloroethene	µg/L	5	0.49	**8.0**
Trichlorofluoromethane	µg/L	-	5,200	1.1
Vinyl Chloride	µg/L	2	0.019	--
m+p-Xylene	µg/L	10,000(2)	-	--
o-Xylene	µg/L	10,000(2)	190	--

Notes:

Results in **bold** have exceeded their respective Maximum Contaminant Level (MCL).

Results in gray shading have exceeded their respective EPA Regional Screening Level (RSL).

-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.

(1) 80 µg/L is the MCL for total trihalomethanes (total of bromodichloromethane, bromoform, dibromochloromethane, and chloroform). Chloroform has a maximum contaminant level goal (MCLG) of 70 µg/L. Dibromochloromethane has a MCLG of 60 µg/L.

(2) 10,000 µg/L is the MCL for total xylenes

J - Estimated Value EPA - Environmental Protection Agency µg/L - Micrograms per Liter

Table A.7.4.6-15
Robinson Spring Analytical Results – October 2017
Area B Landfills, Fort Detrick, Maryland

Analyte			Location	Robinson Spring
			Sample ID	RISP-03-SPRING
			Date	10/19/17
	Unit	MCL	RSL Tapwater	
Acetone	µg/L	-	14,000	--
Benzene	µg/L	5	0.46	--
Bromodichloromethane	µg/L	80(1)	0.13	--
Bromoform	µg/L	80(1)	3.3	--
Bromomethane	µg/L	-	7.5	--
2-Butanone	µg/L	-	-	--
Carbon Disulfide	µg/L	-	810	--
Carbon Tetrachloride	µg/L	5	0.46	--
Chlorobenzene	µg/L	100	78	--
Chloroethane	µg/L	-	21,000	--
Chloroform	µg/L	70(1)	0.22	1.7
Chloromethane	µg/L	-	190	--
Cyclohexane	µg/L	-	13,000	--
1,2-Dibromo-3-Chloropropane	µg/L	0.2	0.00033	--
Dibromochloromethane	µg/L	60(1)	0.87	--
1,2-Dibromoethane	µg/L	0.05	0.0075	--
1,2-Dichlorobenzene	µg/L	600	300	--
1,3-Dichlorobenzene	µg/L	-	-	--
1,4-Dichlorobenzene	µg/L	75	0.48	--
Dichlorodifluoromethane	µg/L	-	200	--
1,1-Dichloroethane	µg/L	-	2.8	--
1,2-Dichloroethane	µg/L	5	0.17	--
1,1-Dichloroethene	µg/L	7	280	0.6
cis-1,2-Dichloroethene	µg/L	70	36	0.9
trans-1,2-Dichloroethene	µg/L	100	360	--
1,2-Dichloropropane	µg/L	5	0.44	--
cis-1,3-Dichloropropene	µg/L	-	-	--
trans-1,3-Dichloropropene	µg/L	-	-	--
Ethylbenzene	µg/L	700	1.5	--
Freon 113	µg/L	-	55,000	--
2-Hexanone	µg/L	-	38	--
Isopropylbenzene	µg/L	-	450	--
Methyl Acetate	µg/L	-	20,000	--
Methyl Tertiary Butyl Ether	µg/L	-	14	--
4-Methyl-2-Pentanone	µg/L	-	6,300	--
Methylcyclohexane	µg/L	-	-	--
Methylene Chloride	µg/L	5	11	--
Styrene	µg/L	100	1,200	--
1,1,2,2-Tetrachloroethane	µg/L	-	0.076	--
Tetrachloroethene	µg/L	5	11	0.6
Toluene	µg/L	1,000	1,100	--
1,2,3-Trichlorobenzene	µg/L	-	7	--
1,2,4-Trichlorobenzene	µg/L	70	1.2	--
1,1,1-Trichloroethane	µg/L	200	8,000	0.1 J
1,1,2-Trichloroethane	µg/L	5	0.28	--
Trichloroethene	µg/L	5	0.49	**7.9**
Trichlorofluoromethane	µg/L	-	5,200	1.1
Vinyl Chloride	µg/L	2	0.019	--
m+p-Xylene	µg/L	10,000(2)	-	--
o-Xylene	µg/L	10,000(2)	190	--

Notes:

Results in **bold** have exceeded their respective Maximum Contaminant Level (MCL).

Results in gray shading have exceeded their respective EPA Regional Screening Level (RSL).

-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.

(1) 80 µg/L is the MCL for total trihalomethanes (total of bromodichloromethane, bromoform, dibromochloromethane, and chloroform). Chloroform has a maximum contaminant level goal (MCLG) of 70 µg/L. Dibromochloromethane has a MCLG of 60 µg/L.

(2) 10,000 µg/L is the MCL for total xylenes

J - Estimated Value EPA - Environmental Protection Agency µg/L - Micrograms per Liter

Table A.7.4.6-16
Robinson Spring Analytical Results – December 2017
Area B Landfills, Fort Detrick, Maryland

Analyte			Location	Robinson Spring
			Sample ID	RISP-03-SPRING
			Date	12/21/17
	Unit	MCL	RSL Tapwater	
Acetone	µg/L	-	14,000	--
Benzene	µg/L	5	0.46	--
Bromodichloromethane	µg/L	80(1)	0.13	--
Bromoform	µg/L	80(1)	3.3	--
Bromomethane	µg/L	-	7.5	--
2-Butanone	µg/L	-	-	--
Carbon Disulfide	µg/L	-	810	--
Carbon Tetrachloride	µg/L	5	0.46	--
Chlorobenzene	µg/L	100	78	--
Chloroethane	µg/L	-	21,000	--
Chloroform	µg/L	70(1)	0.22	1.8
Chloromethane	µg/L	-	190	--
Cyclohexane	µg/L	-	13,000	--
1,2-Dibromo-3-Chloropropane	µg/L	0.2	0.00033	--
Dibromochloromethane	µg/L	60(1)	0.87	--
1,2-Dibromoethane	µg/L	0.05	0.0075	--
1,2-Dichlorobenzene	µg/L	600	300	--
1,3-Dichlorobenzene	µg/L	-	-	--
1,4-Dichlorobenzene	µg/L	75	0.48	--
Dichlorodifluoromethane	µg/L	-	200	--
1,1-Dichloroethane	µg/L	-	2.8	--
1,2-Dichloroethane	µg/L	5	0.17	--
1,1-Dichloroethene	µg/L	7	280	0.6
cis-1,2-Dichloroethene	µg/L	70	36	0.7
trans-1,2-Dichloroethene	µg/L	100	360	--
1,2-Dichloropropane	µg/L	5	0.44	--
cis-1,3-Dichloropropene	µg/L	-	-	--
trans-1,3-Dichloropropene	µg/L	-	-	--
Ethylbenzene	µg/L	700	1.5	--
Freon 113	µg/L	-	55,000	--
2-Hexanone	µg/L	-	38	--
Isopropylbenzene	µg/L	-	450	--
Methyl Acetate	µg/L	-	20,000	--
Methyl Tertiary Butyl Ether	µg/L	-	14	--
4-Methyl-2-Pentanone	µg/L	-	6,300	--
Methylcyclohexane	µg/L	-	-	--
Methylene Chloride	µg/L	5	11	--
Styrene	µg/L	100	1,200	--
1,1,2,2-Tetrachloroethane	µg/L	-	0.076	--
Tetrachloroethene	µg/L	5	11	0.6
Toluene	µg/L	1,000	1,100	--
1,2,3-Trichlorobenzene	µg/L	-	7	--
1,2,4-Trichlorobenzene	µg/L	70	1.2	--
1,1,1-Trichloroethane	µg/L	200	8,000	0.1 J
1,1,2-Trichloroethane	µg/L	5	0.28	--
Trichloroethene	µg/L	5	0.49	**8.4**
Trichlorofluoromethane	µg/L	-	5,200	1.8
Vinyl Chloride	µg/L	2	0.019	--
m+p-Xylene	µg/L	10,000(2)	-	--
o-Xylene	µg/L	10,000(2)	190	--

Notes:

Results in **bold** have exceeded their respective Maximum Contaminant Level (MCL).

Results in gray shading have exceeded their respective EPA Regional Screening Level (RSL).

-- Indicates that an analyte was analyzed for but was not detected at or above the method reporting limit.

(1) 80 µg/L is the MCL for total trihalomethanes (total of bromodichloromethane, bromoform, dibromochloromethane, and chloroform). Chloroform has a maximum contaminant level goal (MCLG) of 70 µg/L. Dibromochloromethane has a MCLG of 60 µg/L.

(2) 10,000 µg/L is the MCL for total xylenes

J - Estimated Value EPA - Environmental Protection Agency µg/L - Micrograms per Liter

Attachment 7.4.6
FIGURES

Legend

- Area B Boundary
- Installation Area

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Semi-Annual Monitoring Report

Date: 1 December 2016
By: J. Gatherer

FIGURE A.7.4.6-1

Site Location

Fort Detrick
Frederick, MD

FT. DETRICK
GIS File Path:

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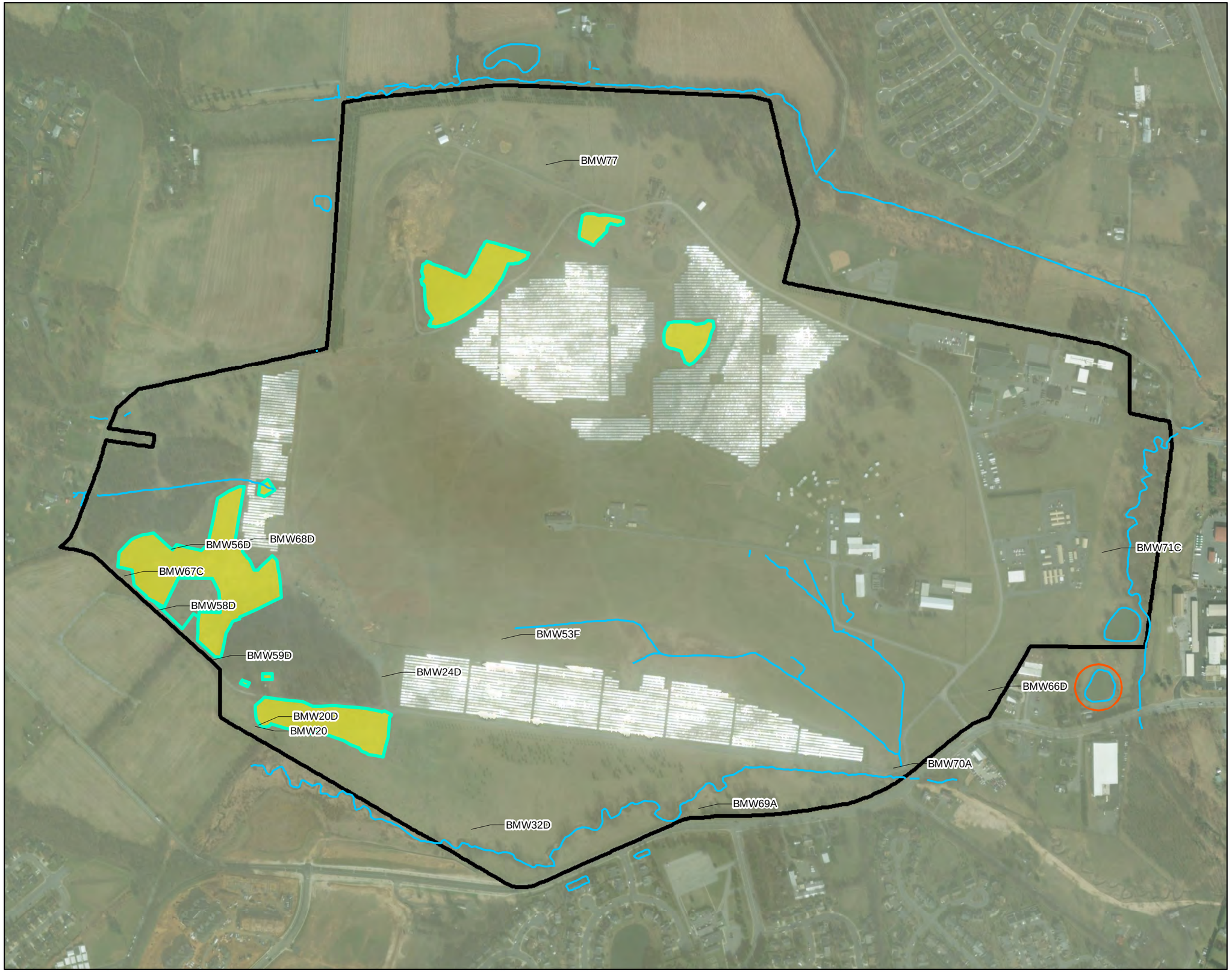

Legend

BMW67C WellID

Landfill Boundary

Landfill Cap Area

Area B Boundary

Stream

Robinson Spring

Notes:
1) Elevations of potentiometric contours are shown as ft MSL.

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Annual Monitoring Report

Date: 13 March 2018
By: J. Gatherer

FIGURE A.7.4.6-2

Quarterly Monitoring Network

Fort Detrick
Frederick, MD

FT. DETRICK
GIS File Path:

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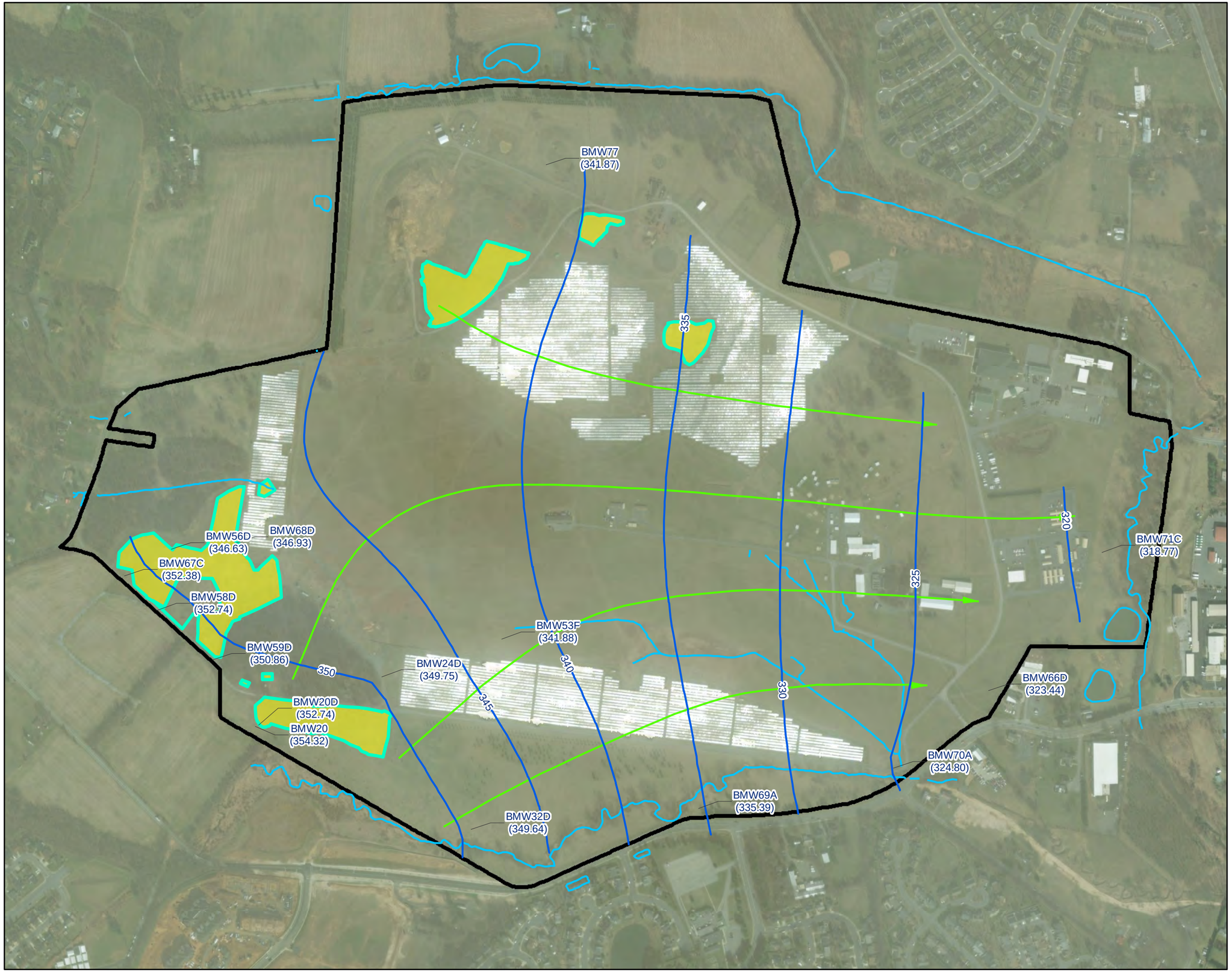

Legend

BMW67C (352.38) Well ID
Groundwater Elevation

Potentiometric Contours (Jun 2017)

- Contour Int. = 5-ft
- Generalized Direction Groundwater Flow
- Landfill Boundary
- Landfill Cap Area
- Area B Boundary
- Stream

Notes:
1) Elevations of potentiometric contours are shown as ft MSL.

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Annual Monitoring Report

Date: 13 March 2018
By: J. Gatherer

FIGURE A.7.4.6-3

Groundwater Elevations June 2017

Fort Detrick
Frederick, MD

FT. DETRICK
GIS File Path:

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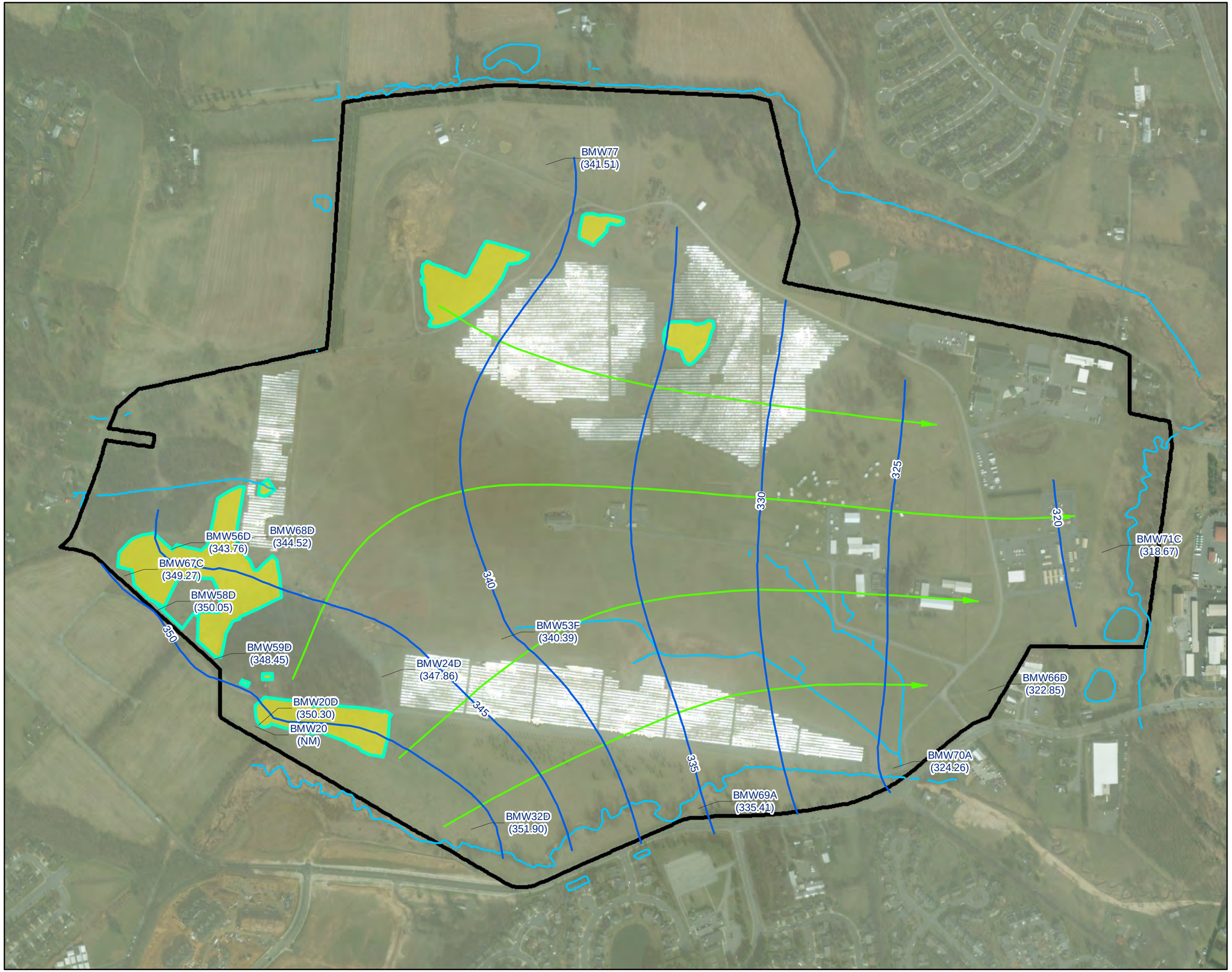

Legend

BMW67C (349.27) — Well ID / Groundwater Elevation

Potentiometric Contours (Aug 2017)

- Contour Int. = 5-ft
- Generalized Direction Groundwater Flow
- Landfill Boundary
- Landfill Cap Area
- Area B Boundary
- Stream

Notes:
1) Elevations of potentiometric contours are shown as ft MSL.
NM = Not measured

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Annual Monitoring Report

Date: 13 March 2018
By: J. Gatherer

FT. DETRICK
GIS File Path:

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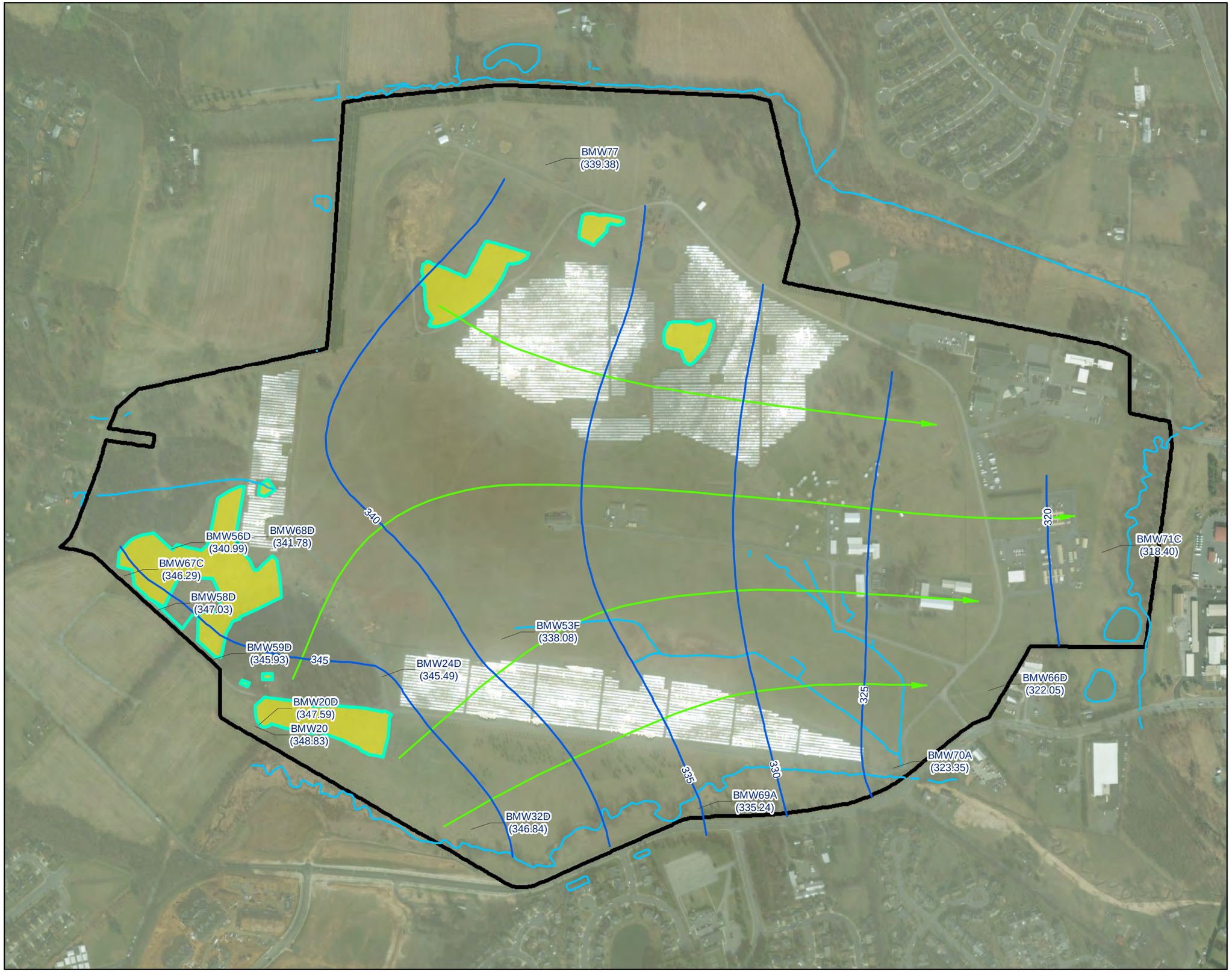
FIGURE A.7.4.6-4

Groundwater Elevations August 2017

Fort Detrick
Frederick, MD



Legend

BMW67C (346.29) Well ID
Groundwater Elevation

Potentiometric Contours (Oct 2017)

- Contour Int. = 5-ft
- Generalized Direction Groundwater Flow
- Landfill Boundary
- Landfill Cap Area
- Area B Boundary
- Stream

Notes:
1) Elevations of potentiometric contours are shown as ft MSL.

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Annual Monitoring Report

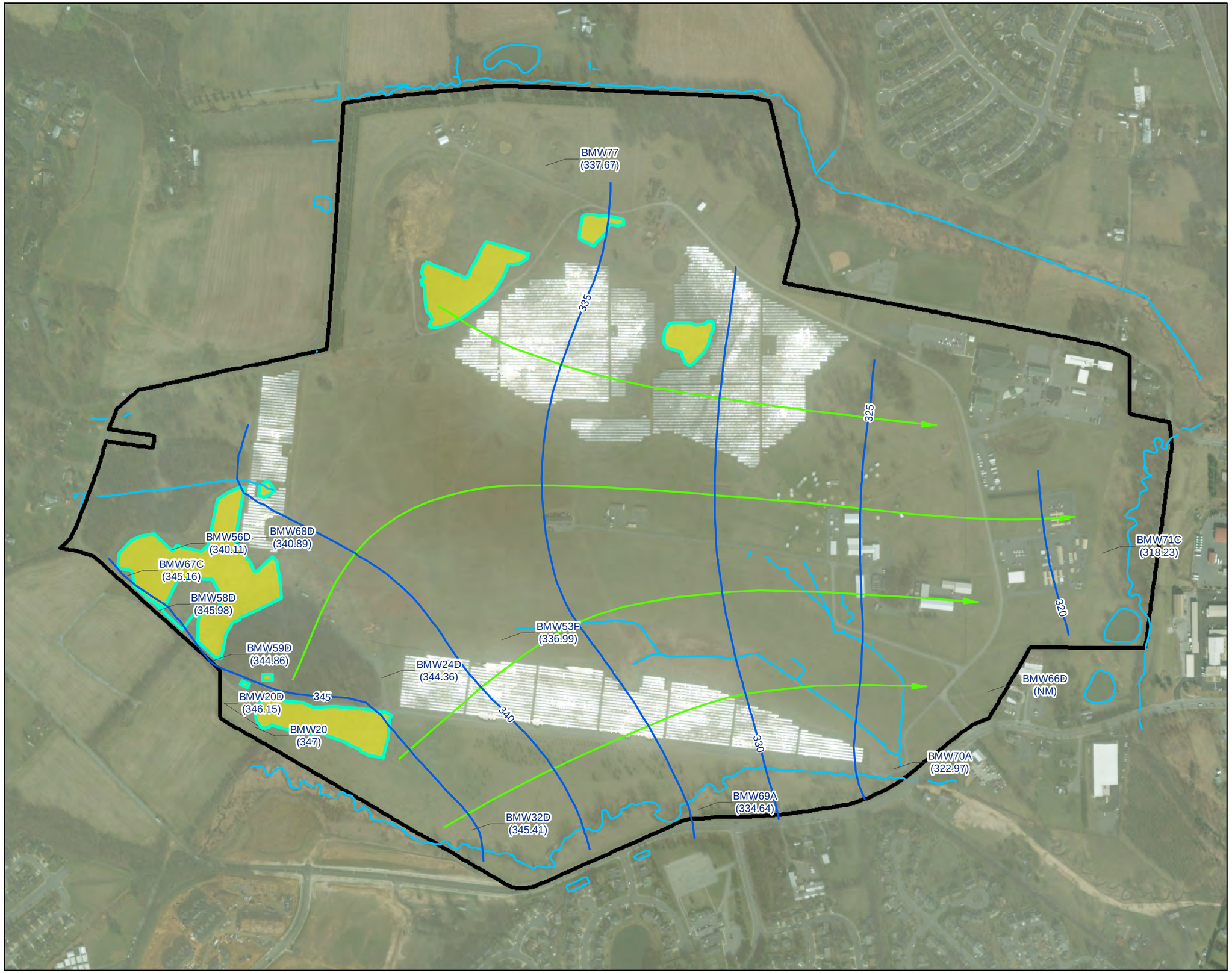
Date: 13 March 2018
By: J. Gatherer

FT. DETRICK
GIS File Path:
C:\GIS_Projects\Ft_Detrick\Maps\AreaB\AnnualReports\2016 3-1_MonitoringNetwork_AreaB_2016.mxd

FIGURE A.7.4.6-5

Groundwater Elevations October 2017

Fort Detrick
Frederick, MD



Legend

BMW67C (345.16) Well ID
Groundwater Elevation

Potentiometric Contours (Dec 2017)

- Contour Int. = 5-ft
- Generalized Direction Groundwater Flow
- Landfill Boundary
- Landfill Cap Area
- Area B Boundary
- Stream

Notes:
1) Elevations of potentiometric contours are shown as ft MSL.
NM = Not measured

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Annual Monitoring Report

Date: 13 March 2018
By: J. Gatherer

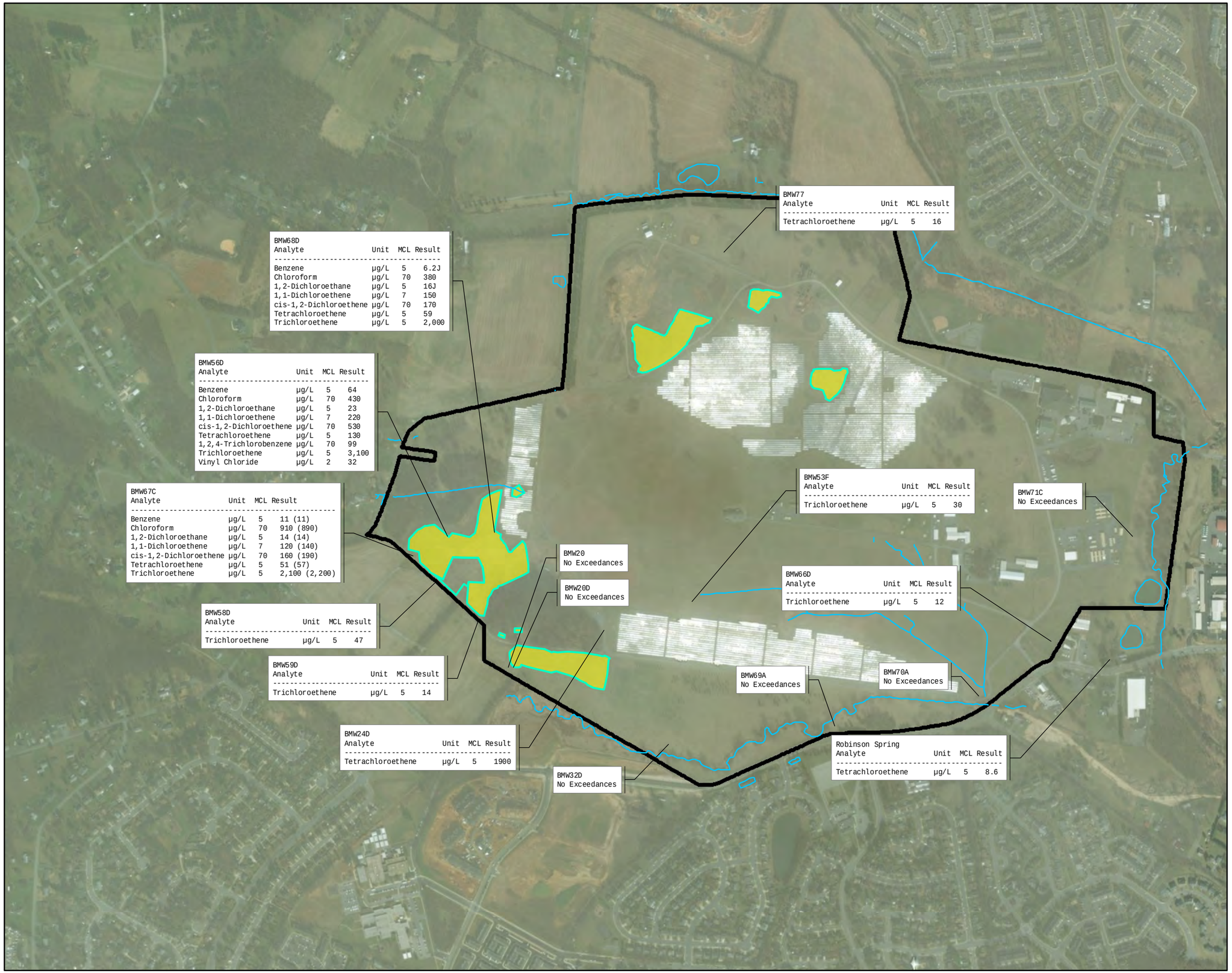
FT. DETRICK
GIS File Path:

C:\GIS_Projects\Ft_Detrick\Maps\AreaB\AnnualReports\2016 3-1_MonitoringNetwork_AreaB_2016.mxd

FIGURE A.7.4.6-6

Groundwater Elevations December 2017

Fort Detrick
Frederick, MD



Legend

- Landfill Boundary
- Landfill Cap Area
- Area B Boundary
- Stream

Notes:
1. Results in parentheses indicate duplicate sample results.
MCL = Maximum Contaminant Level
µg/L = micrograms per liter
J = Estimated

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Annual Monitoring Report

Date: 13 March 2018
By: J. Gatherer

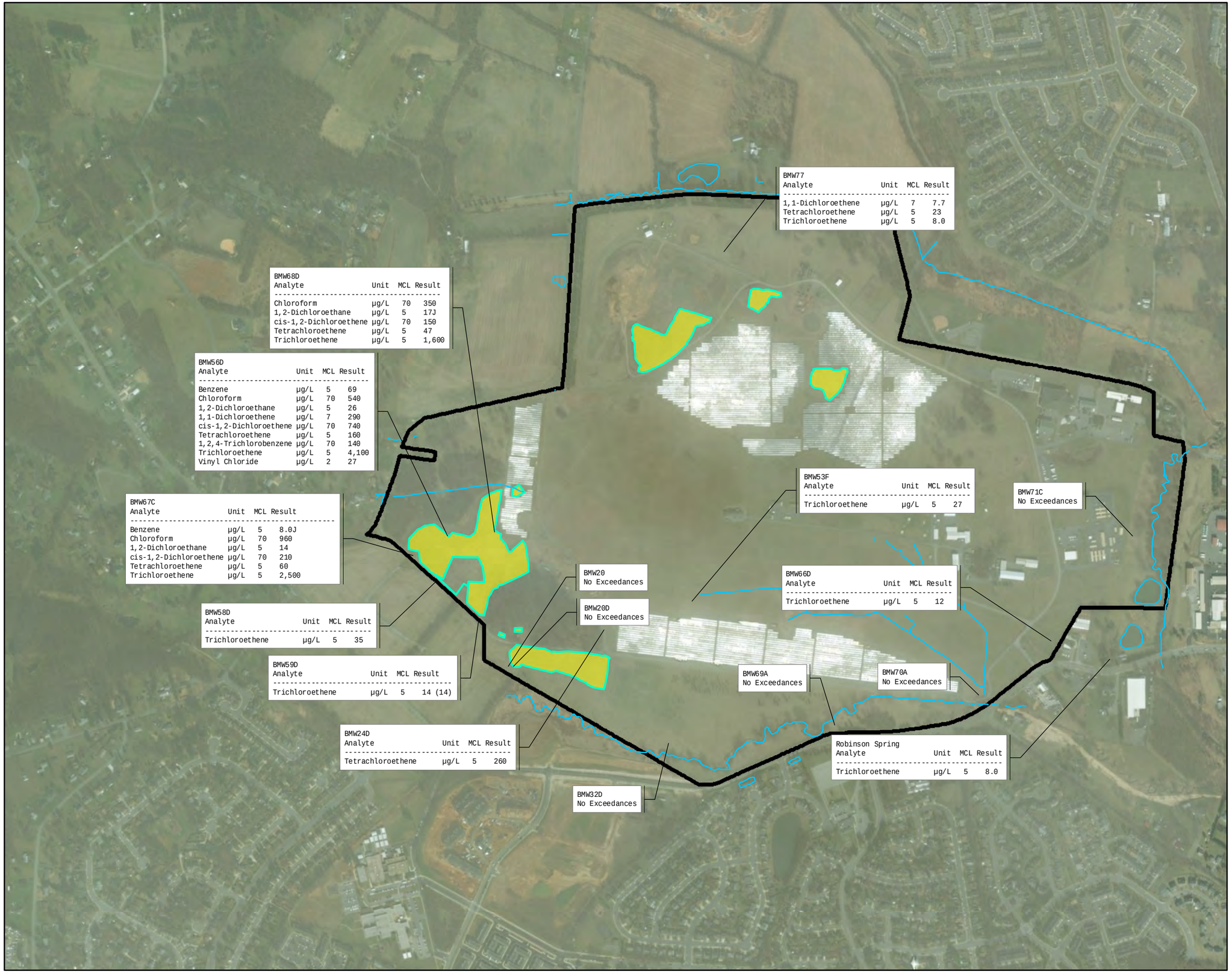
FT. DETRICK
GIS File Path:

C:\GIS_Projects\Ft_Detrick\Maps\AreaB\SemiAnnualReports\2016\November 5-2_ResultsAboveMCL_AreaB_2016.mxd

FIGURE A.7.4.6-7

Analytical Results Above the MCL
June 2017

Fort Detrick
Frederick, MD



Legend

- Landfill Boundary
- Landfill Cap Area
- Area B Boundary
- Stream

Notes:
1. Results in parentheses indicate duplicate sample results.
MCL = Maximum Contaminant Level
µg/L = micrograms per liter
J = Estimated

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Annual Monitoring Report

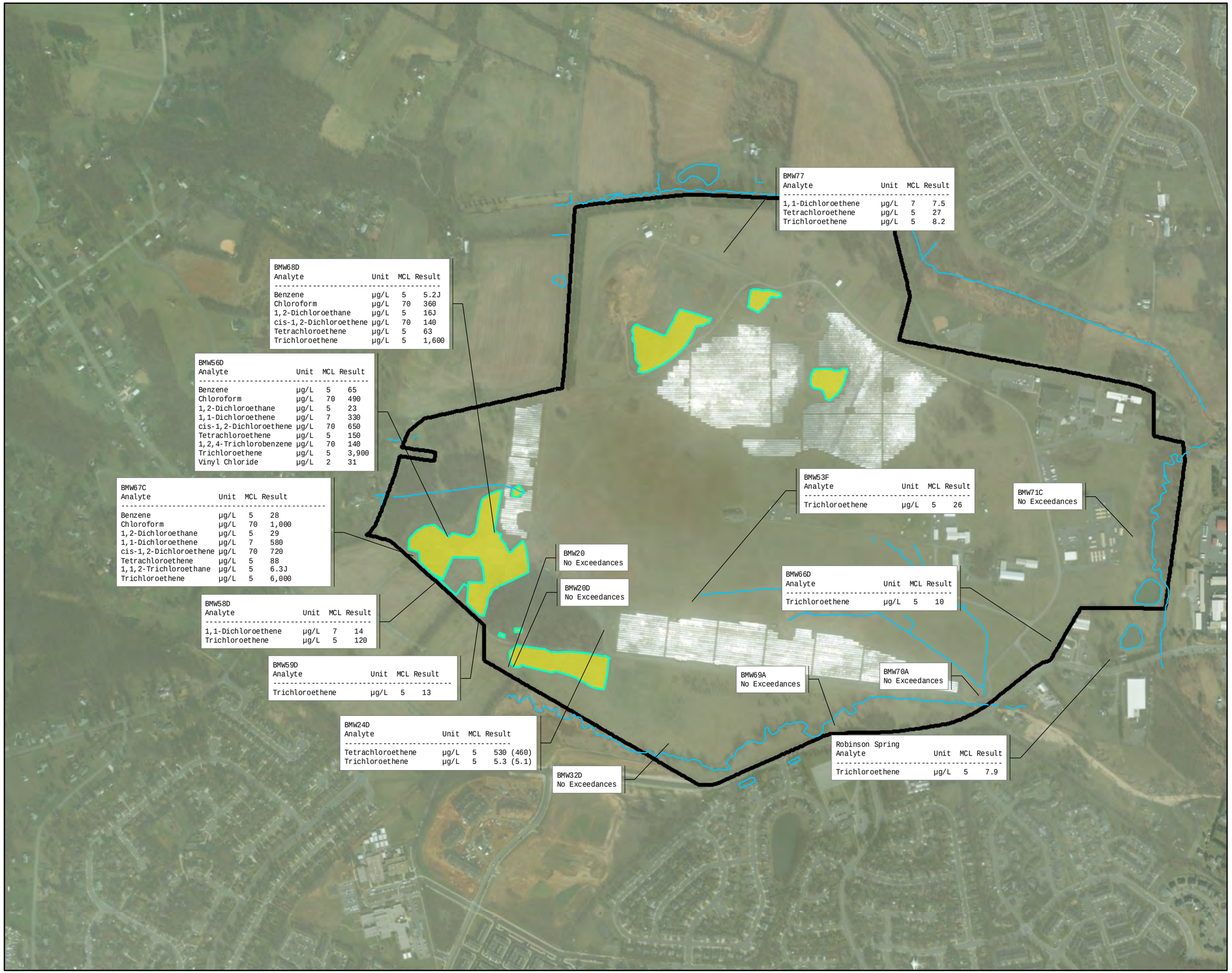
Date: 13 March 2018
By: J. Gatherer

FT. DETRICK
GIS File Path:
C:\GIS_Projects\Ft_Detrick\Maps\AreaB\SemiAnnualReports\2016\November 5-2_ResultsAboveMCL_AreaB_2016.mxd

FIGURE A.7.4.6-8

Analytical Results Above the MCL August 2017

Fort Detrick
Frederick, MD



Legend

- Landfill Boundary
- Landfill Cap Area
- Area B Boundary
- Stream

Notes:
1. Results in parentheses indicate duplicate sample results.
MCL = Maximum Contaminant Level
µg/L = micrograms per liter
J = Estimated

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Annual Monitoring Report

Date: 13 March 2018
By: J. Gatherer

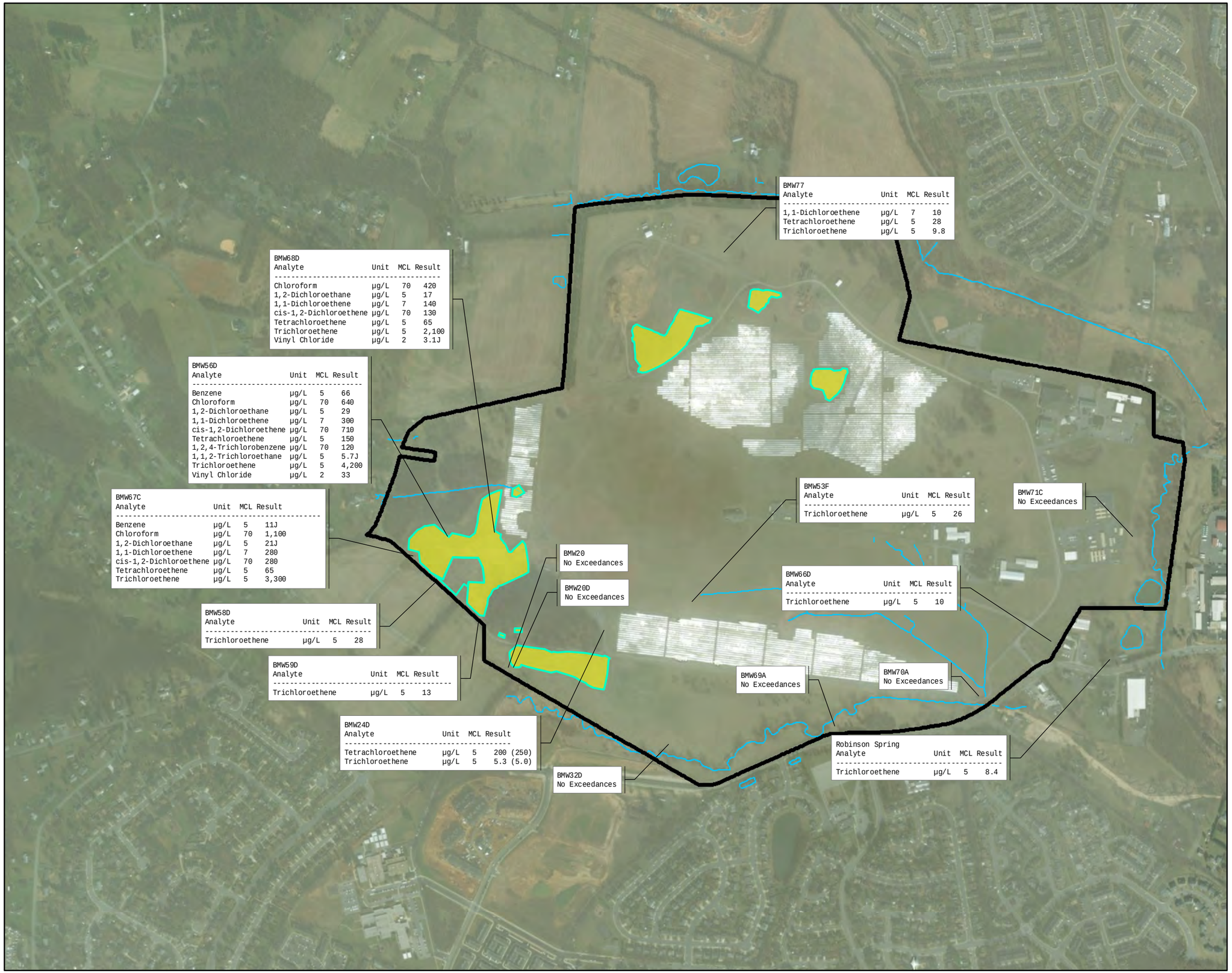
FT. DETRICK
GIS File Path:

C:\GIS_Projects\Ft_Detrick\Maps\AreaB\SemiAnnualReports\2016\November 5-2_ResultsAboveMCL_AreaB_2016.mxd

FIGURE A.7.4.6-9

Analytical Results Above the MCL October 2017

Fort Detrick
Frederick, MD



Legend

- Landfill Boundary
- Landfill Cap Area
- Area B Boundary
- Stream

Notes:
1. Results in parentheses indicate duplicate sample results.
MCL = Maximum Contaminant Level
µg/L = micrograms per liter
J = Estimated

N

REFERENCE/PROJECTION:Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Area B Landfill
Annual Monitoring Report

Date: 13 March 2018
By: J. Gatherer

FT. DETRICK
GIS File Path:
C:\GIS_Projects\Ft_Detrick\Maps\AreaB\SemiAnnualReports\2016\November 5-2_ResultsAboveMCL_AreaB_2016.mxd

FIGURE A.7.4.6-10

Analytical Results Above the MCL December 2017

Fort Detrick
Frederick, MD

Attachment 7.5.1
Area B Groundwater Monitoring Results
January 2008

(Shaw Environmental, Inc., 2008)

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Attachment 7.5.1
Tables

Table A.7.5.1-1
Analytical Samples Collected for TCL VOC Analysis during the January 2008 Periodic Sampling Event

Sample Identification (ID)	Description
Monitoring Wells Area B	
BMW11D	Groundwater Sample
BMW20D	Groundwater Sample
BMW21D	Groundwater Sample
BMW24D	Groundwater Sample
BMW31D	Groundwater Sample
BMW35	Groundwater Sample
BMW35D	Groundwater Sample
BMW47	Groundwater Sample
BMW47D	Groundwater Sample
BMW54D	Groundwater Sample
BMW55D	Groundwater Sample
BMW58D	Groundwater Sample
BMW59D	Groundwater Sample
BMW61	Groundwater Sample
Residential Wells and Surface Water Samples	
DWSRD-1	Groundwater Sample, Montevue Lane
DWSRD-13	Groundwater Sample, Shookstown Road
DWSRD-26	Groundwater Sample, Shookstown Road
DWGRAN-18	Groundwater Sample, Shookstown Road
DWELL-66	Groundwater Sample, Kemp Lane
DWELL-77	Groundwater Sample, Kemp Lane
DWELL-314	Groundwater Sample, Kemp Lane
ASTLINSP	Surface Water Sample, Kemp Lane
RISP-3	Surface Water Sample, Robinson's Spring
RISP-4	Surface Water Sample, Robinson's Spring
STR5SW-42	Surface Water Sample, Montevue Lane
Quality Control Samples	
RB011608	Rinse blank of pump
RB011608B	Rinse blank of disposable bailer
RB011708	Rinse blank of pump
DWSRD-26D	Duplicate of DWSRD-26
BMW24DD	Duplicate of BMW24D
BMW35DDup	Duplicate of BMW35D
TB011508	Trip blank shipped 16 January 2008
TB011608	Trip blank shipped 17 January 2008
TB012208	Trip blank shipped 23 January 2008

Table A.7.5.1-2
Chemical Detections in Water Samples, January 2008

Analyte	MCL	BMW11D	LQ	VQ	BMW20D	LQ	VQ	BMW21D	LQ	VQ	BMW24D	LQ	VQ	BMW24DD	LQ	VQ	BMW31D	LQ	VQ	BMW35	LQ	VQ	BMW35D	LQ	VQ	BMW35DDup	LQ	VQ
1,1,1-Trichloroethane	200	ND			ND			ND			0.5	J	J	0.4	J	J	ND			ND			ND			ND		
1,1-Dichloroethene	7	ND			ND			ND			0.6	J	J	0.7	J	J	ND			ND			ND			ND		
2-Butanone	DNE	ND			3.8	J	J	ND			ND			ND			ND			ND			ND			ND		
Acetone	DNE	12		B	18		B	11		B	4.0	J	B	3.6	J	B	7.6		B	ND			8.4		B	8.1		B
Benzene	5	ND			ND			0.5	J	J	ND			ND			ND			ND			ND			ND		
Carbon disulfide	DNE	ND			4.8			ND			ND			ND			ND			ND			ND			ND		
Chloroform	80	0.3	J	J	ND			ND			6.1			6.0			ND			1.4			1.2			1.1		
cis-1,2-Dichloroethene	70	ND			ND			ND			0.6	J	J	0.5	J	J	ND			0.4	J	J	0.4	J	J	ND		
Tetrachloroethene	5	0.4	J	B	0.6	J	B	0.3	J	B	**137**			**145**			82			0.7	J	B	1.1		B	0.9	J	B
Toluene	1000	1.9			2.4			1.4			1.2		B	1.0		B	1.7			0.6	J	B	2.5			2.2		
Trichloroethene	5	ND			ND			ND			**13**			**13**			1.6			4.7			2.2			2.0		

Analyte	MCL	BMW47	LQ	VQ	BMW47D	LQ	VQ	BMW54D	LQ	VQ	BMW55D	LQ	VQ	BMW58D	LQ	VQ	BMW59D	LQ	VQ	BMW61	LQ	VQ	ASTLINSP	LQ	VQ	DWGRAN-18	LQ	VQ
1,1,1-Trichloroethane	200	ND			ND			0.3	J	J	ND			5.1			0.9	J	J	ND			ND			ND		
1,1-Dichloroethane	7	ND			ND			ND			ND			0.7	J	J	ND			ND			ND			ND		
1,1-Dichloroethene	7	ND			ND			ND			ND			10			1.6			ND			ND			ND		
1,2-Dichloroethane	5	ND			ND			ND			ND			1.9			0.3	J	J	ND			ND			ND		
Acetone	DNE	ND			ND			ND			3.0	J	B	6.2		B	6.6		B	ND			ND		R	ND		R
Chloroform	80	0.1	J	J	3.2			2.0			ND			59			12			ND			ND			ND		
cis-1,2-Dichloroethene	70	ND			0.5	J	J	0.3	J	J	ND			9.7			1.2			ND			ND			ND		
Tetrachloroethene	5	0.4	J	B	0.7	J	B	0.3	J	B	0.7	J	B	**5.3**		B	1.0		B	ND			ND			ND		
Toluene	1000	0.6	J	B	0.8	J	B	0.4	J	J	1.2		B	1.7		B	1.9		B	0.3	J	J	ND			ND		
Trichloroethene	5	ND			2.0			**7.9**			ND			**130**			**23.6**			2.2			ND			ND		

Analyte	MCL	DWELL-314	LQ	VQ	DWELL-77	LQ	VQ	DWELL-66	LQ	VQ	DWSRD-26	LQ	VQ	DWSRD-26D	LQ	VQ	STR5SW-42	LQ	VQ	RISP-3	LQ	VQ	RISP-4	LQ	VQ	DWSRD-13	LQ	VQ
1,1,1-Trichloroethane	200	ND			ND			ND			ND			ND			ND			0.3	J	J	ND			ND		
Chloroform	80	ND			ND			ND			0.7	J	J	0.7	J	J	0.9	J	J	2.5			1.5			ND		
cis-1,2-Dichloroethene	70	ND			ND			ND			ND			ND			ND			0.7	J	J	0.3	J	J	ND		
Tetrachloroethene	5	ND			ND			ND			0.3	J	B	0.3	J	B	ND			0.9	J	J	0.5	J	B	ND		
Toluene	1000	ND			ND			ND			0.3	J	J	0.3	J	J	ND			ND			ND			ND		
Trichloroethene	5	ND			ND			ND			1.7			1.7			0.3	J	J	**10.0**			**6.1**			ND		

Analyte	MCL	DWSRD-1	LQ	VQ
Benzene	5	0.2	J	J

MCL = Maximum Contaminant Level (Ref. 2006 Edition of the Drinking Water Standards and Health Advisories, U.S. Environmental Protection Agency, Office of Water, EPA 822-R-06-013)
DNE = Does Not Exist
ND = Not Detected
LQ = Laboratory Qualifier
VQ = Validation Qualifier
Qualifiers:
J = Analyte present. Reported value may not be accurate or precise.
B = Not detected substantially above the level reported in laboratory or field blanks.
Note: Detections that exceed MCLs are represented in bold.

Table A.7.5.1-3
Historical TCE and PCE Results for Periodic and Other Critical Sampling Locations

	BMW11D		BMW20D		BMW21D		BMW24D		BMW31D		BMW35		BMW35D		BMW37D		BMW47		BMW47D		BMW50D		BMW52D		BMW53D		BMW54D		BMW55D		BMW56D	
Date	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**
Apr/May 95	<10 U	<10 U			4 J	<10 U	45	2 J	2 J	<10 U	8 J	<10 U	7 J	<10 U			4 J	<10 U	8 J	<10 U	<10 U	<10 U	67	2 J	39	<10 U	24	0.4 J				
Mar/Apr 97					U	U	40	1.1	U	U			2.6	U			2.4	U	1.4	U	U	U	29	0.87 J	14	0.38 J	18	0.6 J	0.7 J	U	29	15
Aug 97							71	300																					0.4 J	U	39	17
Oct 97																																
Nov 97																																
Nov 97																																
Jul/Aug 98			U	U	U	U	70 J	10000	60	600					100	1000							900	8000 J	500 J	4000 J	21	1.7			100	200
Oct/Nov 98																																
Jan 99			U	0.6 J	U	14 J			300	10000																						
Feb/Mar 99			U	U	U	1.8 J	60 J	5000	30	2000					200 B	2000							60 JB	400 J	300 J	3000 J	11	0.8 J			150	60
Apr 99			U	U	U	U			4.1	36																						
May 99			U	0.4 J					9.2	300																						
Jun/Jul 99			U	U	U	U	40	11500	34	500					160	510							60	9500	75	300	17	0.4 J			130	50 J
Aug/Sep 99			U	U	U	U			1.6	48																						
Nov 99			U	U	U	U	<1000 U	23000	2.3	110					135	750							45	230	65	260	14	0.5 J			24	32
Feb 00			U	U	U	U			2	77 D																						
May 00			U	U	U	U	37	1900 DJ	2	39 DJ					140	150 J							49	520	220	2000 J	14	U			220 D	200 DJ
Jun 00																																
Aug 00			U	1	U	U	<100 U	4100 J	<20 U	110 J									9	17 J			38 J	230 J	94 J	530 J	8	1	U	4 B	110	54 J
Sep 00																																
Oct 00																			6 L	1 J												
Nov 00			U	U	U	29 J	43 XJ	2300 D	9	380 DJ					82	750 J			6	1 J			36	150	84 J	270 J	15	U	U	U	240 D	320 D
Dec 00																																
Jan/Feb 01			U	U	U	U	U	3100	10	390					130	840			10	0.9 J			40	50	<180 U	1200	13	U	U	U	80	51
Mar 01																																
Apr/May 01			U	U	U	U	78 J	16000 JXD	26 DJ	800 DJ					92	300			8	1			27	110	73	240	13	0.4 J	U	U	60	37
Jun 01																																
Jul 01							57	3800 D											6	1											51	52
Aug 01			U	U	U	U	36	1000	10	350					230	160			8	0.9 J			40	40	58	140	11	U	U	U	110	54 J
Sep 01																																
Oct/Nov 01			U	U	U	U			5.1	610					200	1400			9.9	1.7			26	94	93	770	13	U	U	U	4.2	6.8
Dec 01																																
Feb 02	0.1 J	0.1 J	U	U					11	1000	0.6 J	U	8.6	0.5 J			1.3 J	0.4 J	7 J	1.3	U	U					12	0.5 J	U	U	2.7	8.6
May 02	U	U	U	U					8.4	640	2.5	0.2 J	4.1	0.2 J			0.9 J	0.2 J	6.6	1.3	U	U					9.0	0.2 J	U	U	7.6	8.2
Aug 02	U	0.1 J	U	U					5.8	360	2.4	0.2 J	1.3	0.1 J			3.4	0.5 J	6.7	1.2	U	U					9.3	0.3 J	U	U	0.5 J	5.9
Nov 02	U	0.2 J	0.1 J	1.3					5 J	510	4.6	0.4 J	8.4	0.6 J			2.6	0.8 J	8.6 K	1.6	U	0.4 J					10	0.3 J	U	0.2 J		
May/Jun 03	U	U	U	U					6 J	690 J	3.7	0.2 J	4.0	0.3 J			5.4	0.7 J	16	1.8	U	U					9.2	0.3 J	U	U		
Oct 03	U	U	U	U					2.6	170	4.7	0.4 J	3.6	0.4 J			0.7 J	U	13	1.7	U	U					13	0.4 J	U	U		
Sep 04	U	U	U	U					2.4	150 J	2.9	0.5 J	2.8	0.4 J			U	U	6.3	1.4	U	U					7.4	0.4 J	U	U		
Dec 04	1.9 B	0.3 JB	U	U					7.6 B	430	4.0 B	0.5 JB	6.7 B	0.5 JB			1.9 B	0.6 JB	6.6 B	1.5 B	0.3 JB	U					15 B	0.6 JB	U	1 JB		
Mar/Apr 05	U	1.5	U	1.0 J	U	1 B	36	11900	13	793	3.9	0.9 J	4.4	1.0 J	196	328	U	0.8 J	6.8	1.7	U	U	26	8.8	41	18	13	U	U	8.3	117	324
July 05	U	U	U	U	U	U	22	490	2.9 J	300	3.5	0.4 J	3.3	0.4 J			U	U	4.6	0.8 J							11	0.6 J	U	U		
Sep 05	U	0.2 J	U	U	U	U	20	2100	3.3	320	4.1	0.5 J	4.3	0.5 J	140	340	0.4 J	U	4.5	0.7 J							7.2	0.5 J	U	0.2 J	8.3	22
Dec 05	U	U	U	U	U	U	12 K	260 K	0.9 J	170	1.2	0.3 B	2.1	0.4 B			U	U	1.2	0.4 B							7.0	0.3 B	U	U		
March 06	U	U	U	U	U	U	17 J	61 J	2.5 J	170 J	2.9 J	0.4 J	3.7 J	0.43 J			U	U	2.3 J	0.6 J							8.9 J	0.4 J	U	U		
June 06	U	U	U	UL	U	UL	15	220	1.5	140	2.8	U	3.0	U			U	U	1.8	0.3 J							4.3	U	U	U		
Sep 06	U	U	U	U	U	U	17	190	3.2	170	4.3	U	4.6	0.52 J	83	180	U	U	3.2	0.6 J							14	1 J	U	U	47	10
Dec 06	U	U	U	U	U	U	17	150	2.3	190	4.2	U	5.0	U	270	210	U	U	1.8	U			29	2.8	33	4.7	10	U	U	U	8.4	5.0
Mar/May 07	U	U	U	U	U	U	<100 U	320 J	<20 U	54 J	5.2	0.5 J	4.9	0.47 J	250	89 J	U	U	2.0	0.4 J			28	1.1 J	41	130 J	9.8	0.4 J	U	U	280	50 J
July 07	U	U	U	U	U	U	15	97	1 J	55	4.9	0.7 J	3.7	0.69 J			U	U	2.2	0.6 J					40	106	8.7	0.5 J	U	U	86	5.6
Sep 07	U	0.5 J	U	0.5 J	U	U	8.0	70	1.3	64	4.0	0.7 J	3.9	0.7 J			0.3 J	0.4 J	2.3	0.7 J							5.5	0.7 J	U	U		
Jan 08	U	0.4 JB	U	0.6 JB	U	0.3 JB	13.0	145	1.6	82	4.7	0.7 JB	2.2	1.1 B			U	0.4 JB	2	0.7 JB							7.9	0.3 JB	U	0.7 JB		

Notes:

All values are in micrograms per liter (µg/L)

TCE = Trichloroethene

PCE = Tetrachloroethene

U = Analyte not detected (< reporting limit given when greater than 1)

D = Duplicate and/or diluted sample

V = Sample was received at the laboratory at greater than 4 degrees Celsius, or was not correctly preserved in the field.

X = Analyte concentration is above the upper reporting level.

B = The analyte or compound was detected in the sample and laboratory method blank and/or associated field blank. The compound reported is considered not detected substantially above the level reported in the laboratory and/or field blanks.

J = Analyte Present. Reported value may not be accurate or precise (estimated).

K = Analyte Present. Reported value may be biased high (estimated).

L = Analyte Present. Reported value may be biased low (estimated).

Table A.7.5.1-3
Historical TCE and PCE Results for Periodic and Other Critical Sampling Locations
Page 2 of 2

	BMW57D		BMW58D		BMW59D		BMW61		DWSRD-1		DWSRD-6		DWSRD-13		DWGRAN-17		DWGRAN-18		DWSRD-26		DWELL-66		DWELL-77		DWELL-314		ASTLINSP		STR5SW-42		RISP-3		RISP-4	
Date	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**	**TCE**	**PCE**
Apr/May 95									5 J	<10 U	1 J	<10 U	<10 U	<10 U			<10 U	<10 U			<10 U	<10 U	<10 U	<10 U					<10 U	<10 U				
Mar/Apr 97	300	20 J	500	8.7																											4.5	0.5 J	2.9	0.3 J
Aug 97	500	20000	1000	24											U	U													0.5 J	0.8 J				
Oct 97																															5000	20000	11	1 J
Nov 97																															11	0.9 J		
Nov 97											0.9 J	U	U	U																	11 V	200 V		
Jul/Aug 98	800	2E+05	1000	30000	100	11	2.5	U	3.4	0.3 J			U	U	U	U													U	U	5.9	0.4 J	3.3	0.3 J
Oct/Nov 98									2.9	U					U	U															12 L	0.7 J		
Jan 99							2.2	U	1.9	U					U	U													0.5 J	U	11	0.7 J	6.1	0.4 J
Feb/Mar 99	1000 J	1E+05	1000	10000	85	5	1.7	U	1.9	U					U	U													0.4 J	U	12	0.8 J	5.9	0.4 J
Apr 99							1.7	U							U	U													0.5 J	U	11	0.7 J	5.7	0.4 J
May 99							1.9	U																										
Jun/Jul 99			500	140	90	2.2	1.1	U							0.3 J	U													0.8 J	U	14	0.8 J	7.5	0.4 J
Aug/Sep 99							1.1	U					U	U	U	U															15	1 J	6.8	0.4 J
Nov 99	550	12000	250	550	72	2.6	1 J	U							U	0.3 J													0.7 J	U	13	0.9 J	6.8	0.5 J
Feb 00							2	U							U	U													0.9 J	U	12	0.9 J	7	U
May 00	710 D	8500 D	420 D	69 DJ	82	4	2	U							U	U															9	0.7 J	6	U
Jun 00																			0.3 J	0.3 J									0.6 J	U	10	0.9 J	6	0.6 J
Aug 00	600 J	11000 J	250 J	31	67	2	2	0.7 J			0.7 J	U													U	U			0.7 J	U	12	1 B	6	1 B
Sep 00													U	U															U	U	10	U	6	U
Oct 00																																		
Nov 00	430 XJ	970 XJ	410 D	880 D	100	3 B	2	U			1	U	U	U															1	U	13	1	8	0.7 J
Dec 00																													1 J	U	16 K	1	10 K	0.8 J
Jan/Feb 01			420	39	93	5 ND	3	U			0.7 J	U	U	U															1 J	U	15	1 J	7	0.5 J
Mar 01															U	U	U	U			U	U					U	U	0.7 J	U				
Apr/May 01			280 JDX	25	65	1	0.6 J	U					U	U	U	U																		
Jun 01															U	U													0.6 J	U				
Jul 01			480 D	63 D																														
Aug 01			820 J	41 J	74	1	1	U			0.9 J	U	U	U	U	U			U	U									0.8 J	U				
Sep 01															U	U			0.7 JB	U									1	U				
Oct/Nov 01			770	51	40	0.9 FP	U	U			U	U	U	U	U	U			0.6 J	U									U	U				
Dec 01															U	U			13	8.4 J	U	U							1.0 J	U				
Feb 02			880	110			1.6	U			0.5 J	U	U	U	U	U			0.9 J	0.3 J	U	U					U	U	0.9 J	U				
May 02			680	66			1.5	U	2.2	0.2 J	0.8 J	U	U	U	U	U			0.6 J	0.2 J	U	U					U	U	0.8 J	0.1 J				
Aug 02			1000 L	80			1.3	U	2.5	0.3 J	0.7 J	0.2 J	U	U	U	U			1.3	0.2 JB	U	U					U	U						
Nov 02			430	1300			1.7	0.1 J	0.5 J	0.1 J	0.5 J	0.1 J	U	U	U	U			0.6 J	0.6 J	U	0.1 J					U	0.1 J						
May/Jun 03			500	16			1.7	U	U	U	1.2	U	U	U	U	U			0.5 J	U	U	U					U	U						
Oct 03			210	11			0.6 J	U	U	U	0.8 J	U	U	U					0.6 J	U														
Sep 04			620	7.2			1.2	0.5 J	U	U			U	U			U	U	U	U	U	U					U	U	U	U				
Dec 04			230 K	9.8 J			10 B	1.5 B	U	U			U	U	0.6 JB	U	0.4 JB	U	1.0 B	U	U	U					0.5 JB	U						
Mar/Apr 05	999	80	182	7.4			1.9	U	U	U	0.8	U	U	U	U	U	U	U	1.0	U	U	U					U	U						
July 05			200	5.7	68	1.3	0.7 J	U	U	U	0.3 J	U	U	U			U	U	0.7 J	U	U	U					U	U			7.2	0.7 J	3.6	0.34 J
Sep 05	980	84	120	4.7	48	1.4	1.9	U	0.2 J	U	0.3 J	U	U	U			0.5 J	1.6	1.2	0.4 J	U	U					U	U			8.7	0.9 JB	5	0.48 JB
Dec 05			150	3.4 K	49	0.8 B	U	U	U	U	U	U	U	U			U	U	U	U	U	U					U	U			6.9 K	0.6 K	2.5	0.35 B
March 06			83 J	5.2 J	38 J	1.1 J	1.2 J	U	U	U			U	U	U	U	U	U	0.7 J	U	1.1 J	U	U	U	U	U	U	U	0.4 J	U	8.6 J	0.9 J	4.6 B	0.4 J
June 06			78	7.8 L	35	0.7 JL	U	U	U	U			U	U	U	U	U	U	0.8 J	0.4 JL	U	U	U	U	U	U	U	U	U	U	6.9	0.7 J	3.2	U
Sep 06	1900	150	130	17	52	1.8	1.7	U	U	U			U	U			U	U	2.5	0.7 J	U	U	U	U	U	U	U	U	U	U	5.6	0.5 J	10	0.9 J
Dec 06	330	27	100	4.2	40	0.9 J	1.6	U	U	U			U	U			U	U	1.2	U	U	U	U	U	U	U	U	U	0.6 J	U	9.5	0.9 J	5.3	0.5 J
March/May 07	1800	83 J	86	4.6 J	36	0.9 J	1.4	U	U	U			U	U			U	U	1.1 L	U	U	U	U	U	U	U	U	U	U	U	9.2 L	1.0 J	6.2 L	0.7 J
July 07			79	5.6	43	1.4	1.3	U	U	U			U	U			U	U	2.4	U	U	U	U	U	U	U	U	U	0.5 J	U	8.8	0.9 J	5.5	0.5 J
Sep 07			60	23	38	1.3	1.1	U	U	U			U	U			U	U	2.3	0.5 J	U	U	U	U	U	U	U	U	0.3 J	U	8.5	1.0 J	6.0	0.9 J
Jan 08			130	5.3 B	24	U	2.2	U	U	U			U	U			U	U	1.7	0.3 JB	U	U	U	U	U	U	U	U	0.3 J	U	10	0.9 J	6.1	0.5 JB

Notes:

All values are in micrograms per liter (µg/L)

TCE = Trichloroethene

PCE = Tetrachloroethene

U = Analyte not detected (< reporting limit given when greater than 1)

D = Duplicate and/or diluted sample

V = Sample was received at the laboratory at greater than 4 degrees Celsius, or was not correctly preserved in the field.

X = Analyte concentration is above the upper reporting level.

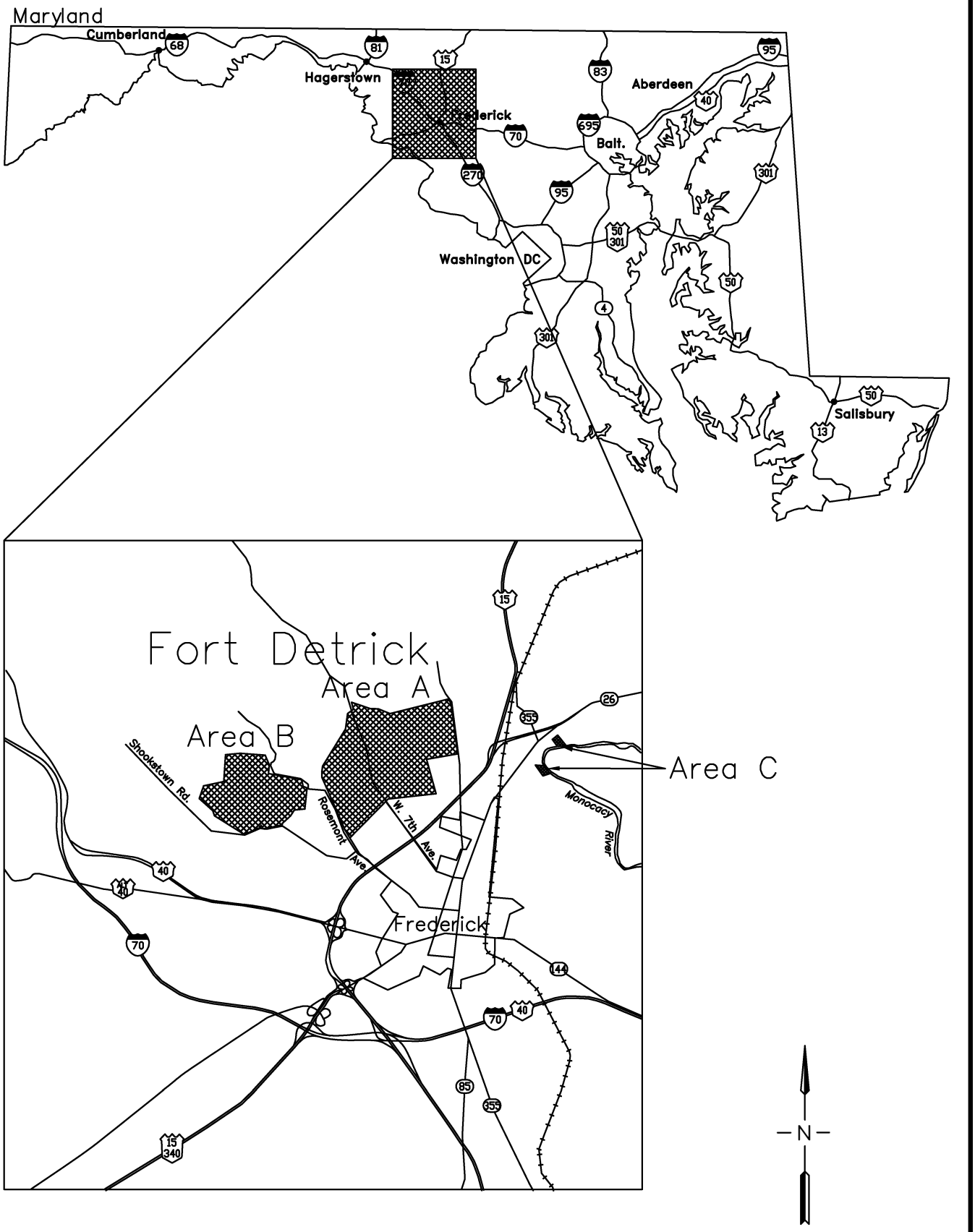
B = The analyte or compound was detected in the sample and laboratory method blank and/or associated field blank. The compound reported is considered not detected substantially above the level reported in the laboratory and/or field blanks.

J = Analyte Present. Reported value may not be accurate or precise (estimated).

K = Analyte Present. Reported value may be biased high (estimated).

L = Analyte Present. Reported value may be biased low (estimated).

Attachment 7.5.1
Figures

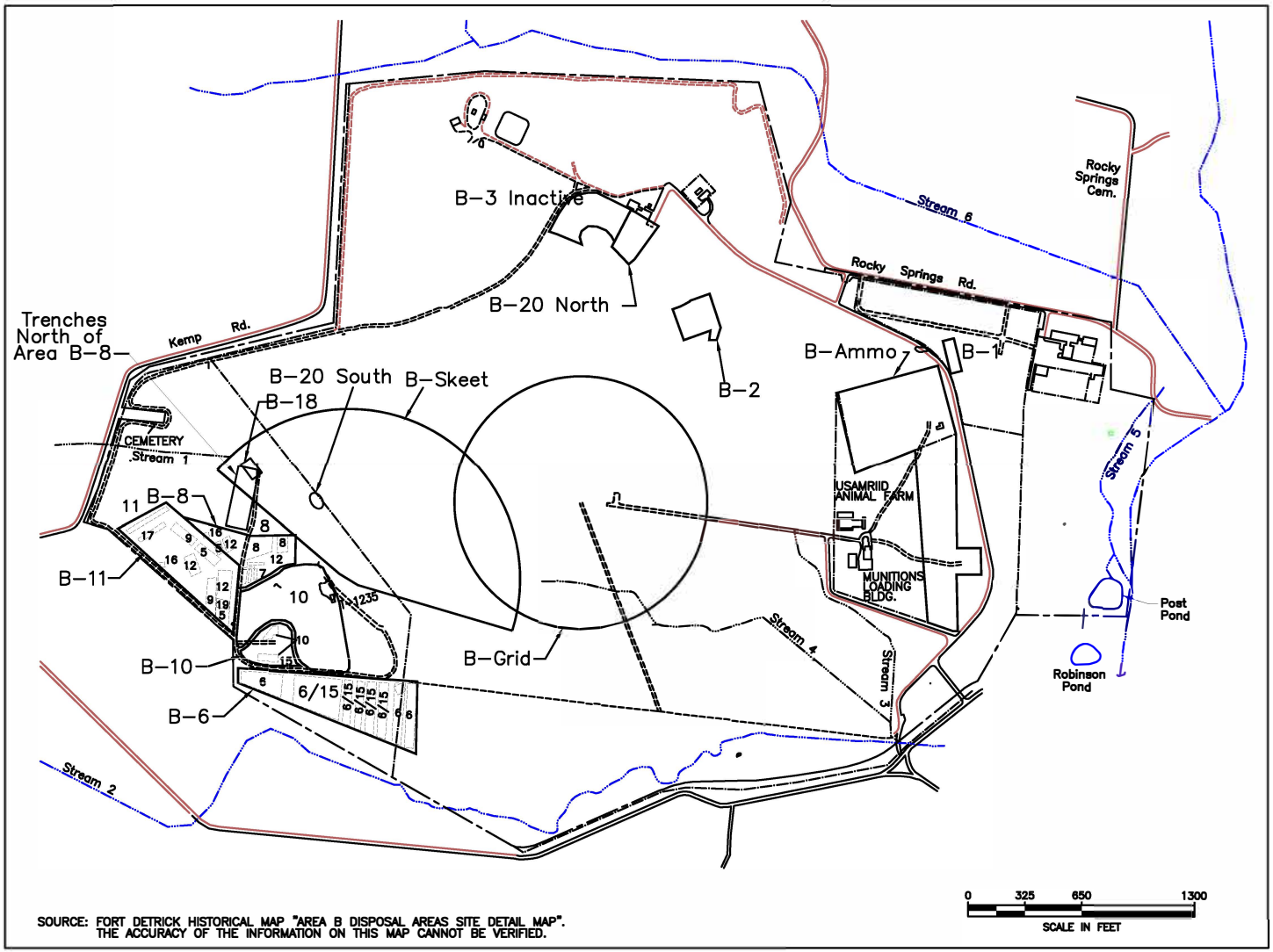


Department of the Army

Shaw Shaw Environmental, Inc.

FT DETRICK
ACAD FILE: Exhibit 1-1.dwg
1-30-06

Figure A.7.5.1-1
Site Location Map
Fort Detrick
Frederick, Maryland



A. SOME OF THE MATERIAL IN THESE TRENCHES WERE DECONTAMINATED (STERILIZED) MATERIALS FROM THE LABORATORIES. THE REST OF THE MATERIALS BURIED IN THESE TRENCHES WERE GENERATED AS A RESULT OF FACILITY ENGINEERING CONSTRUCTION OR RENOVATION INCLUDING PROCESS EQUIPMENT, PIPING, AND OTHER DEBRIS. THIS MATERIAL WAS NOT CONTAMINATED, BUT WAS BURIED HERE BECAUSE OF FORT DETRICK POLICY.

2.	METAL, WOOD, AND GENERAL WASTE.	1949–1951
5.	METAL, WOOD, AND DEBRIS.	1948–1950
6.	METAL ASHES AND DEBRIS.	1955–1960
7.	WOOD BURNING PIT.	1950–1955

B. MATERIALS FROM HOUSING AND OTHER CLEAN AREAS.

8.	GENERAL REFUSE.	1950–1955
9.	GENERAL REFUSE.	1970
10.	REFUSE, PRIMARILY BEDDING FROM NORMAL ANIMAL FARM OPERATIONS.	1965–1970

C. ACIDS AND CHEMICALS. PREVIOUSLY, IT WAS ACCEPTED PRACTICE TO DISPOSE OF THIS TYPE OF MATERIAL IN A LANDFILL. FORT DETRICK MAINTAINED A SEPARATE LANDFILL FOR CHEMICALS IN ORDER TO HAVE BETTER CONTROL OVER WHAT WAS BEING DISPOSED. ALL CHEMICALS FOR DISPOSAL WERE PROCESSED (ADMINISTRATIVELY) THROUGH THE SAFETY DIRECTORATE. ANY CHEMICAL NOT SUITABLE FOR BURYING WAS SENT THROUGH PROPER ARMY CHANNELS TO DESIGNATED PROCESSING AREAS.

11. ALL TYPES FROM FORT DETRICK WITH SMALL AMOUNTS FROM THE U.S. BUREAU OF STANDARDS AND WALTER REED, AMC. 1955–1970

12. SLUDGE FROM STRUCTURES 375 AND 384. DURING THE PERIOD OF CEASING ALL BIOLOGICAL WARFARE WORK (1969–1972), INORGANIC MATERIAL FROM HOLDING TANKS IN THE DECONTAMINATING PLANT, BUILDING 375, WAS FOUND TO CONTAIN BACILLUS ANTHRACIS. FACILITY ENGINEERING AND SAFETY DEVELOPED A PROCEDURE TO STERILIZE THE "SLUDGE" PRIOR TO REMOVING IT. DURING THE TIME THAT THE MATERIAL WAS REMOVED (1971–1972), RIGID CONTROL AND TESTING PROCEDURES WERE USED. ALL TESTS FOR STERILITY WERE NEGATIVE, INDICATING NO GROWTH. 1971–1972

15. LARGE ANIMAL BURIAL AND SPECIAL OPERATIONS MATERIALS. THROUGHOUT ALL BURIAL SITES, ANIMALS WERE BURIED FROM TIME TO TIME. THIS HAPPENED WHEN THE VOIDED LABORATORY INCINERATOR WAS OVERLOADED OR DOWN FOR REPAIRS. IN EVERY CASE, THE CARCASSES WERE STERILIZED PRIOR TO BURIAL.

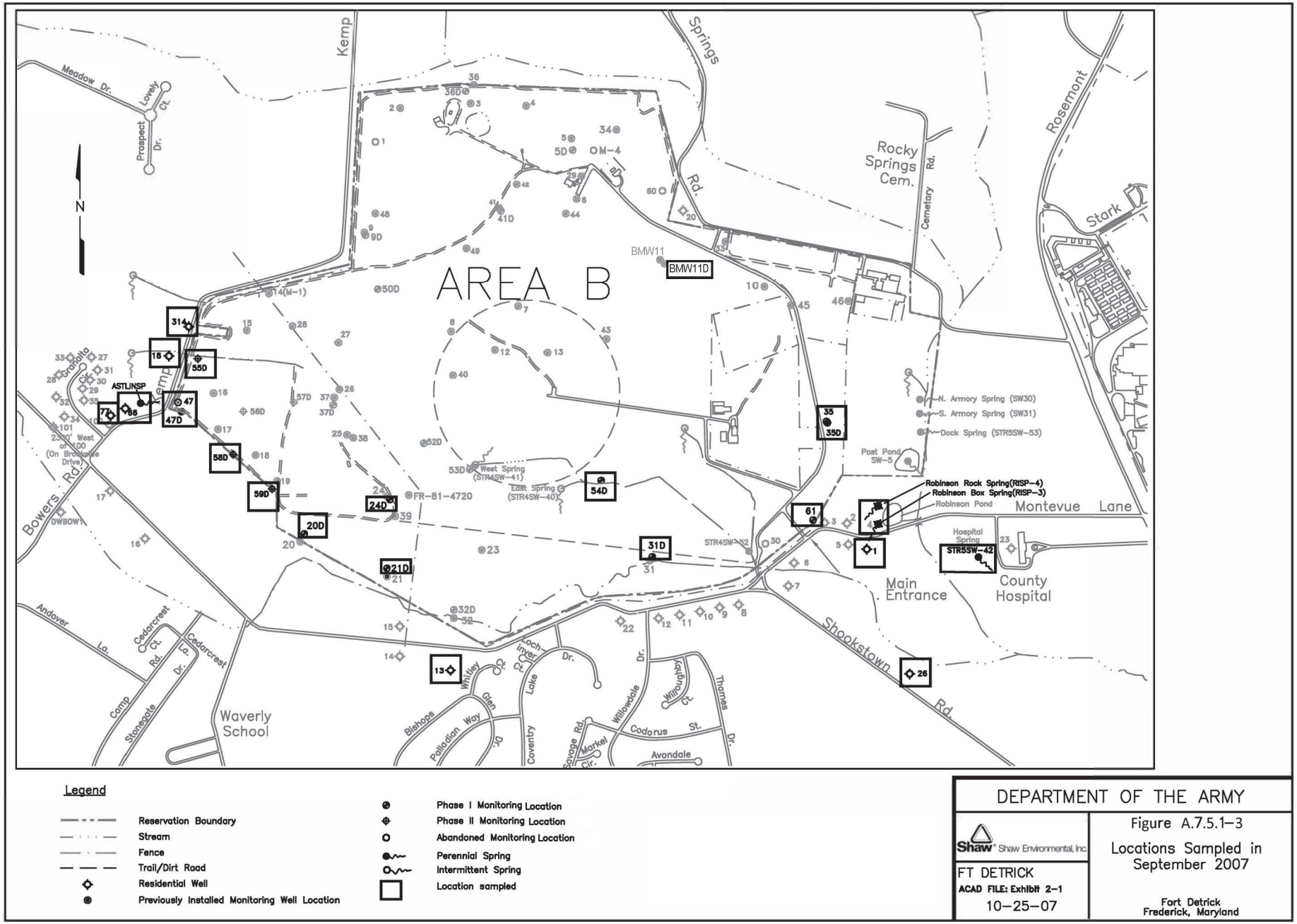
16. RADIOLOGICAL MATERIALS SITES. MID 1940's

Department of the Army

Shaw Shaw Environmental, Inc.

FT DETRICK
ACAD FILE: Exhibit 1-2
1-30-06

Figure A.7.5.1-2
Remedial Investigation Site Locations and Historical Disposal Areas
Fort Detrick
Frederick, Maryland



Legend

- Reservation Boundary
- Stream
- Fence
- Trail/Dirt Road
- Residential Well
- Previously Installed Monitoring Well Location
- Phase I Monitoring Location
- Phase II Monitoring Location
- Abandoned Monitoring Location
- Perennial Spring
- Intermittent Spring
- Location sampled

DEPARTMENT OF THE ARMY

Shaw Shaw Environmental, Inc.

FT DETRICK
ACAD FILE: Exhibit 2-1
10-25-07

Figure A.7.5.1-3
Locations Sampled in September 2007

Fort Detrick
Frederick, Maryland

AREA B

Kemp

Springs

Rosemont

Rocky Springs Cem.

Cemetary Rd.

Stark

Rd. 330

325

335

340

345

350

355

360

365

370

375

MW-36D (338.48)

MW-41D (367.47)

MW-9D (340.08)

MW-50D (340.28)

MW-5D (334.00)

MW-60

BMW11 (332.43)

BMW11D (333.44)

MW-55D (352.11)

MW-47D (347.58)

MW-56D (345.81)

MW-57D (338.79)

MW-37D (339.57)

MW-52D (338.50)

MW-53D (338.47)

MW-58D (344.99)

MW-59D (345.00)

MW-20D (347.59)

MW-24D (344.36)

MW-54D (337.04)

MW-21D (343.17)

MW-31D (333.23)

MW-32D (345.17)

MW-35D (323.55)

MW61 (320.98)

FR-81-4720

West Spring

East Spring

N. Armory Spring (SW30)

S. Armory Spring (SW31)

Dock Spring

Post Pond SW-5

Robinson Pond

Robinson Rock Spring

Robinson Box Spring

Hospital Spring

Main Entrance

County Hospital

Montevue Lane

Shookstown Rd.

Bowers Rd.

Andover La.

Cedarcrest Rd.

Cedarcrest Dr.

Camp Stoneagate

Waverly School

Meadow Dr.

Prospect Dr.

Lovely Ct.

Granada Cir.

2300' West of 100 (On Brookside Drive)

Whitley Glen Ct.

Lochinver Dr.

Lake Dr.

Bishops Palladian Way

Coventry Dr.

Savage Rd.

Markel Cir.

Willowdale Dr.

Willoughby Ct.

Codorus St.

Thames Dr.

Avondale Dr.

DWBOW1

Legend

- Reservation Boundary
- Stream
- Fence
- Trail/Dirt Road
- 320 Groundwater Contour (Fort Detrick Datum)
- Residential Well
- Previously Installed Monitoring Well Location
- Phase I Monitoring Location
- Phase II Monitoring Location
- Abandoned Monitoring Location
- Perennial Spring
- Intermittent Spring
- (321.21) Water Elevation (ft, Fort Detrick Datum)
- (NM) Not Measured

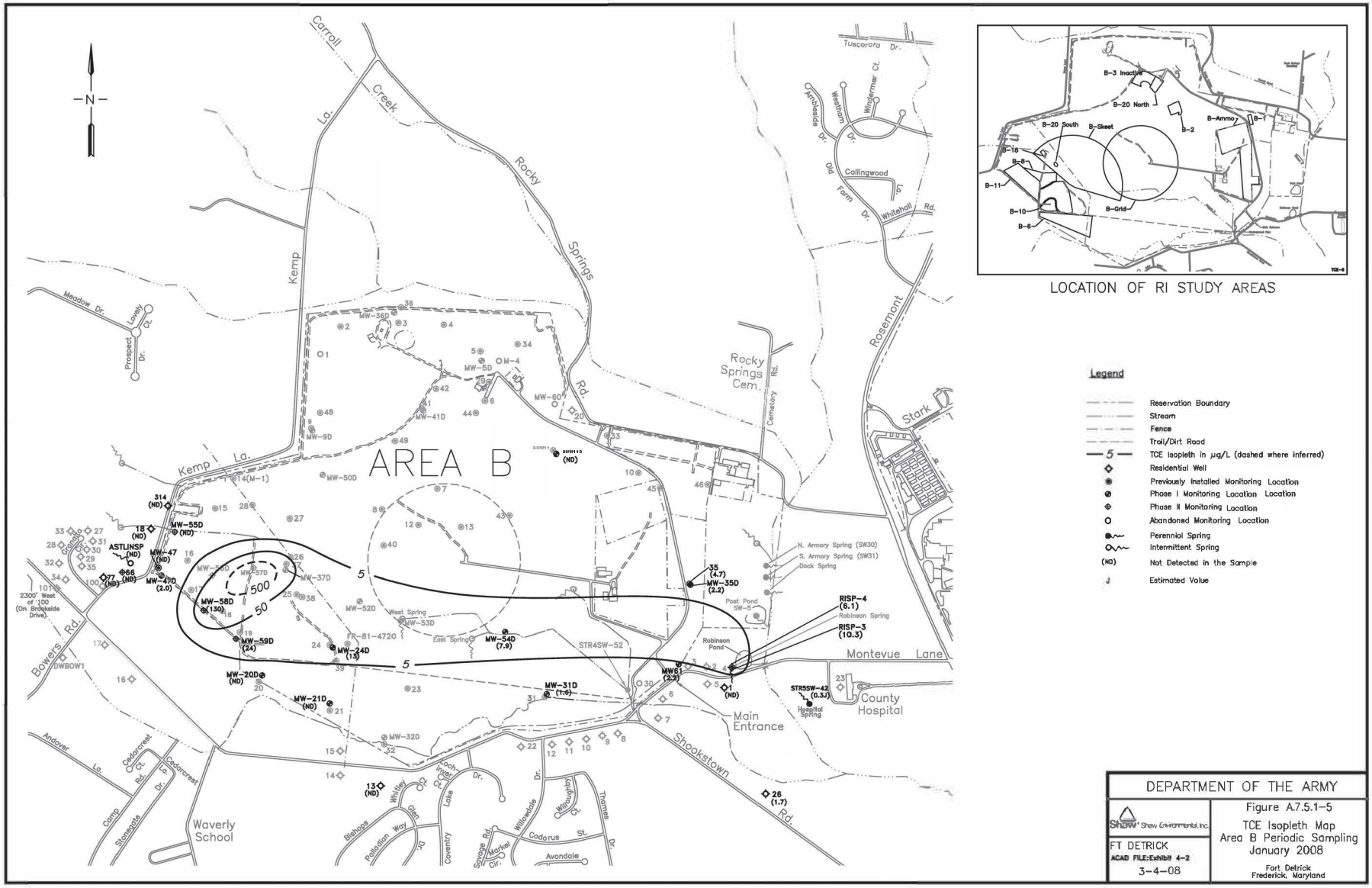
Contour Interval = 5 ft

Department of the Army

Shaw Environmental, Inc.

FT DETRICK
ACAD FILE: Exhibit 2-4
3-4-08

Figure A.7.5.1-4
AREA B POTENTIOMETRIC CONTOUR MAP
14 JANUARY 2008
FORT DETRICK
FREDERICK, MARYLAND



LOCATION OF RI STUDY AREAS

Legend

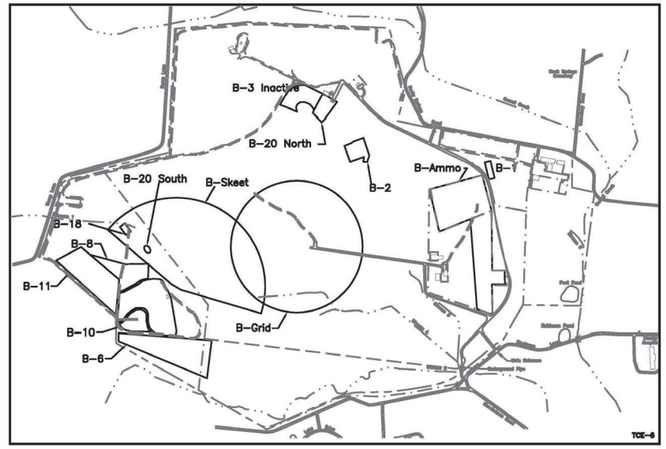
- Reservation Boundary
- Stream
- Fence
- Trail/Dirt Road
- 5 — TCE Isopleth in µg/L (dashed where inferred)
- Residential Well
- Previously Installed Monitoring Location
- Phase I Monitoring Location Location
- Phase II Monitoring Location
- Abandoned Monitoring Location
- Perennial Spring
- Intermittent Spring
- (ND) Not Detected in the Sample
- J Estimated Value

DEPARTMENT OF THE ARMY

Shaw Shaw Environmental, Inc.

FT DETRICK
ACAD FILE:Exhibit 4-2
3-4-08

Figure A.7.5.1-5
TCE Isopleth Map
Area B Periodic Sampling
January 2008
Fort Detrick
Frederick, Maryland



LOCATION OF RI STUDY AREAS

AREA B

Legend

- Reservation Boundary
- Stream
- Fence
- Trail/Dirt Road
- 5 — PCE Isopleth in µg/L (dashed where inferred)
- Residential Well
- Previously Installed Monitoring Location
- Phase I Monitoring Location
- Phase II Monitoring Location
- Abandoned Monitoring Location
- Perennial Spring
- Intermittent Spring
- (ND) Not Detected in the Sample
- J Estimated Value
- B Compound also detected in Quality Control blank

DEPARTMENT OF THE ARMY

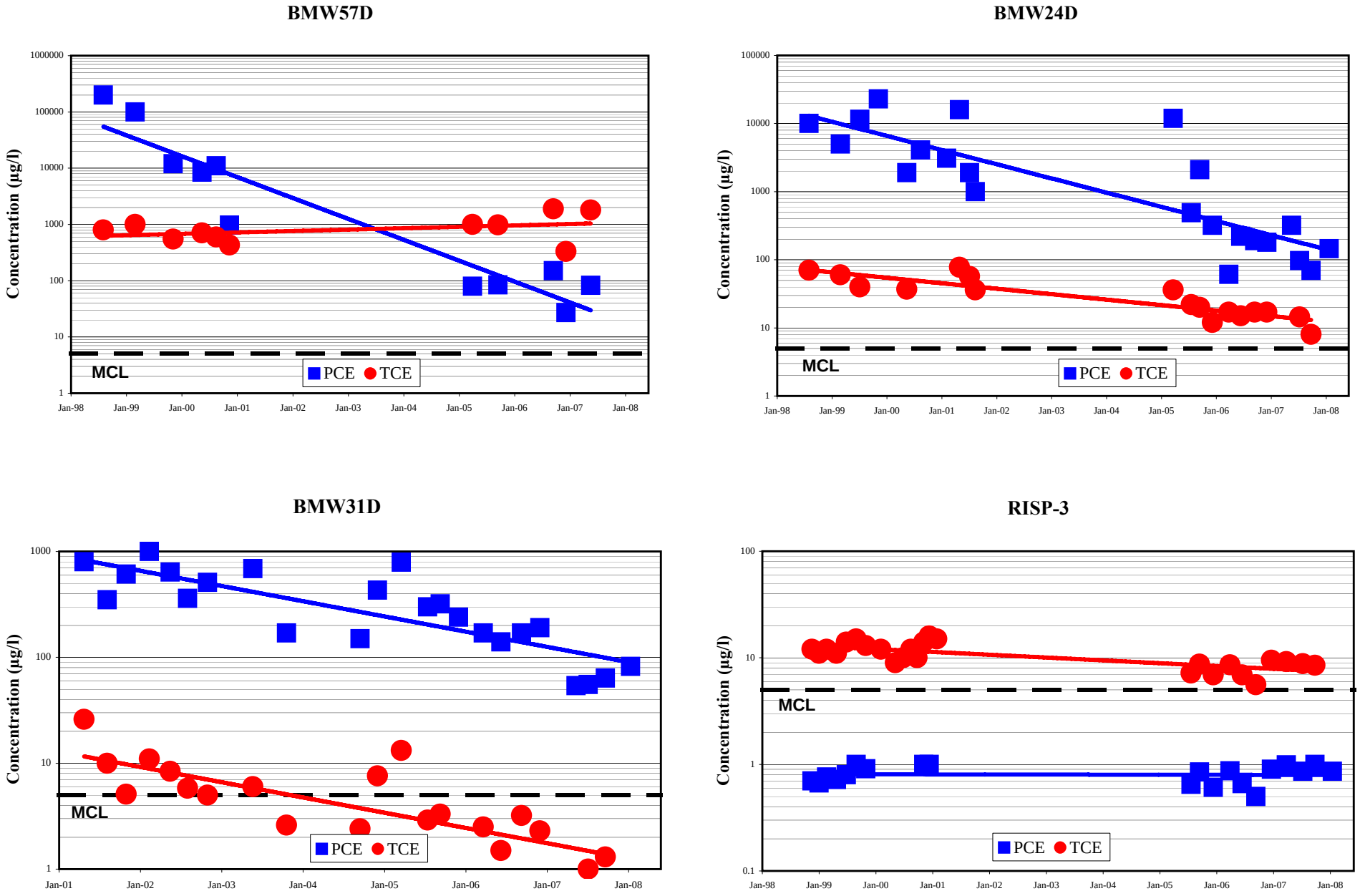
Shaw Shaw Environmental, Inc.

FT DETRICK
ACAD FILE: Exhibit 4-3
3-4-08

Figure A-7-5-1-6
PCE Isopleth Map
Area B Periodic Sampling
January 2008

Fort Detrick
Frederick, Maryland

Figure A.7.5.1-7 Temporal Trends for PCE and TCE in Select Locations



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Attachment 7.5.2
Area B Groundwater Monitoring Results
March 2008

(Shaw Environmental, Inc., 2008)

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Attachment 7.5.2
Tables

Table A.7.5.2-1
Chemical Detections in Water Samples, March 2008

Analyte	MCL	BMW11D	LQ	VQ	BMW20D	LQ	VQ	BMW21D	LQ	VQ	BMW24D	LQ	VQ	BMW31D	LQ	VQ	BMW31DD	LQ	VQ	BMW35	LQ	VQ	BMW35D	LQ	VQ	BMW35DD	LQ	VQ
1,1,1-Trichloroethane	200	ND			ND			ND			0.6	J	J	ND			ND			0.9	J	J	ND			0.9	J	J
1,1-Dichloroethene	7	ND			ND			ND			1.5			ND			ND			0.9	J	J	ND			0.9	J	J
Acetone	DNE	ND			3.1	J	B	ND			ND			ND			2.9	J	B	ND			3.3	J	B	ND		
Benzene	5	ND			ND			0.4	J	J	ND			ND			ND			ND			ND			ND		
Bromoform	80	ND			ND			ND			ND			ND			ND			ND			ND			1.6		B
Carbon disulfide	DNE	ND			2.0			0.7	J	J	ND			ND			ND			ND			ND			ND		
Chloroform	80	0.3	J	J	ND			ND			5.3			ND			ND			1.7			1.5			1.8		
Chloromethane	DNE	0.3	J	J	ND			ND			0.3	J	B	ND			0.4	J	B	ND			ND			ND		
cis-1,2-Dichloroethene	70	ND			ND			ND			0.7	J	J	ND			ND			0.4	J	J	0.4	J	J	0.4	J	J
styrene	100	0.7	J	J	ND			ND			ND			ND			ND			ND			ND			ND		
Tetrachloroethene	5	0.7	J	B	0.5	J	B	ND			**48**	M	L	**91**			**91**			1.2		B	0.9	J	B	1.3		B
Toluene	1000	0.6	J	B	0.4	J	B	ND			0.4	J	J	0.3	J	J	0.3	J	J	0.3	J	B	0.3	J	B	0.4	J	B
Trichloroethene	5	ND			ND			ND			**15**			1.8			1.8			**6.0**			4.4			**5.1**		

Analyte	MCL	BMW47	LQ	VQ	BMW47D	LQ	VQ	BMW54D	LQ	VQ	BMW55D	LQ	VQ	BMW58D	LQ	VQ	BMW59D	LQ	VQ	BMW61	LQ	VQ	ASTLINSP	LQ	VQ	DWGRAN-18	LQ	VQ
1,1,1-Trichloroethane	200	ND			ND			0.5	J	J	ND			3.4		J	1.4		J	ND			ND			ND		
1,1-Dichloroethane	7	ND			ND			ND			ND			0.4	J	J	ND			ND			ND			ND		
1,1-Dichloroethene	7	ND			ND			ND			ND			**7.6**			3.0			ND			ND			ND		
1,2-Dichloroethane	5	ND			ND			ND			ND			1.0	J	J	0.4	J	J	ND			ND			ND		
Acetone	DNE	3.1	J	B	ND			ND			3.0	J	B	ND			ND			ND			ND		R	ND		R
Bromoform	80	ND			ND			ND			ND			ND			ND			0.5	J	B	ND			ND		
Chloroform	80	ND			2.1			3.0			ND			33			14			ND			ND			ND		
cis-1,2-Dichloroethene	70	ND			0.4	J	J	0.4	J	J	ND			6.8			1.8			ND			ND			ND		
Tetrachloroethene	5	0.3	J	B	0.8	J	B	0.6	J	B	0.5	J	B	3.8			1.4			0.4	J	B	ND			ND		
Toluene	1000	ND			0.4	J	B	0.3	J	B	0.4	J	B	ND			0.4	J	J	ND			ND			ND		
Trichloroethene	5	ND			1.5			**9.4**			ND			**107**			**37**			1.0			ND			ND		

Analyte	MCL	DWELL-314	LQ	VQ	DWELL-77	LQ	VQ	DWELL-66	LQ	VQ	DWSRD-26	LQ	VQ	DWSRD-26D	LQ	VQ	STR5SW-42	LQ	VQ	RISP-3	LQ	VQ	RISP-4	LQ	VQ	DWSRD-13	LQ	VQ
1,1,1-Trichloroethane	200	ND			ND			ND			ND			ND			ND			0.3	J	J	ND			ND		
1,1-Dichloroethene	7	ND			ND			ND			ND			ND			ND			1.1			0.8	J	J	ND		
Acetone	DNE	ND		R	ND		R	ND		R	2.8	J	B	2.6	J	B	ND			ND			ND			2.7	J	J
Bromoform	80	ND			ND			ND			ND			ND			ND			0.6	J	B	ND			ND		
Chloroform	80	ND			ND			ND			0.6	J	J	0.6	J	J	1.0	J	J	2.4			1.4			ND		
cis-1,2-Dichloroethene	70	ND			ND			ND			ND			ND			ND			1.0	J	J	0.4	J	J	ND		
Tetrachloroethene	5	ND			ND			ND			0.3	J	B	0.4	J	B	ND			1.1			0.6	J	J	ND		
Toluene	1000	ND			ND			ND			0.4	J	B	0.4	J	B	ND			ND			ND			ND		
Trichloroethene	5	ND			ND			ND			1.1			1.2			0.4	J	J	**11**			**6.0**			ND		

Analyte	MCL	DWSRD-1	LQ	VQ
Benzene	5	0.2	J	J

MCL = Maximum Contaminant Level (Ref. 2006 Edition of the Drinking Water Standards and Health Advisories, U.S. Environmental Protection Agency, Office of Water, EPA 822-R-06-013)
DNE = Does Not Exist
ND = Not Detected
LQ = Laboratory Qualifier
VQ = Validation Qualifier
Qualifiers:
J = Analyte present. Reported value may not be accurate or precise.
B = Not detected substantially above the level reported in laboratory or field blanks.
M = The concentration is an estimate due to matrix effect.
L = Analyte Present. Reported value may be biased low (estimated).
R = Data Rejected.
Note: Detections that exceed MCLs are represented in bold.

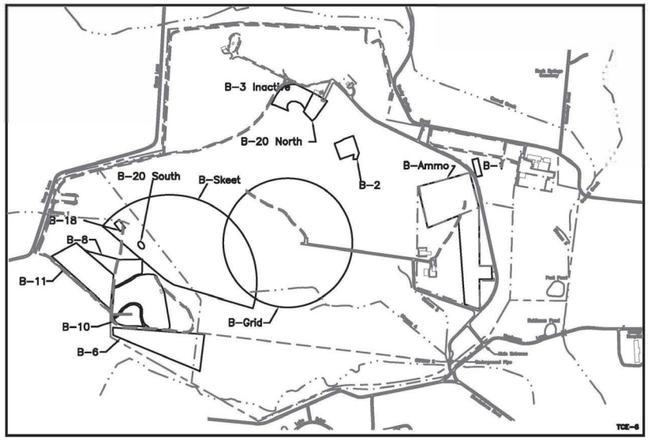
Table A.7.5.2-2
Chemical Detections in Water Samples, June 2008

Analyte	MCL	DWSRD-13 6/26/2008	LQ	VQ	DWGRAN-18 6/26/2008	LQ	VQ	DWELL-66 6/26/2008	LQ	VQ	DWELL-77 6/26/2008	LQ	VQ	DWELL-77D 6/26/2008	LQ	VQ	DWELL314 6/26/2008	LQ	VQ
Acetone	DNE	3.4	J	J	ND	U	R	ND	U	R	ND	U	R	ND	U	R	ND	U	R

MCL = Maximum Contaminant Level (Ref. 2006 Edition of the Drinking Water Standards and Health Advisories, U.S. Environmental Protection Agency, Office of Water, EPA 822-R-06-013)
DNE = Does Not Exist
ND = Not Detected
LQ = Laboratory Qualifier
VQ = Validation Qualifier
Qualifiers:
J = Analyte present. Reported value may not be accurate or precise.
R = Data Rejected.
Note: All samples analyzed for Target Compound List (TCL) Voloatile Organic Compounds (VOCs) using EPA Method 5030B/8260B.

Attachment 7.5.2
Figures

AREA B



LOCATION OF RI STUDY AREAS

Legend

- Reservation Boundary
- Stream
- Fence
- Trail/Dirt Road
- 5 — TCE Isopleth in µg/L (dashed where inferred)
- Residential Well
- Previously Installed Monitoring Location
- Phase I Monitoring Location
- Phase II Monitoring Location
- Abandoned Monitoring Location
- Perennial Spring
- Intermittent Spring
- (ND) Not Detected in the Sample
- J Estimated Value

DEPARTMENT OF THE ARMY

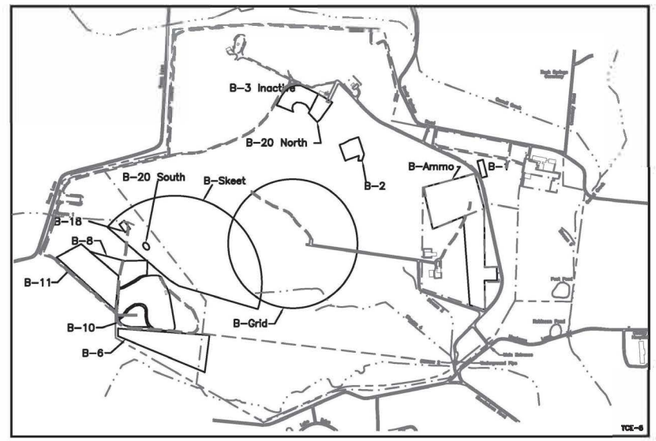
Shaw Shaw Environmental, Inc.

FT DETRICK
ACAD FILE: Exhibit 2
7/2/08

Figure A.7.5.2-1
TCE Isopleth Map
Area B Periodic Sampling
March 2008

Fort Detrick
Frederick, Maryland

AREA B



LOCATION OF RI STUDY AREAS

Legend

- Reservation Boundary
- Stream
- Fence
- Trail/Dirt Road
- 5 — PCE Isopleth in µg/L (dashed where inferred)
- Residential Well
- Previously Installed Monitoring Location
- Phase I Monitoring Location
- Phase II Monitoring Location
- Abandoned Monitoring Location
- Perennial Spring
- Intermittent Spring
- (ND) Not Detected in the Sample
- J Estimated Value
- B Compound also detected in Quality Control blank
- L Analyte Present. Reported value may be biased low (estimated)

DEPARTMENT OF THE ARMY	
Shaw Shaw Environmental, Inc. FT DETRICK ACAD FILE:Exhibit 3 3-4-08	Figure A.7.5.2-2 PCE Isopleth Map Area B Periodic Sampling March 2008 Fort Detrick Frederick, Maryland

Attachment 7.5.3
Area B Drinking Water/Groundwater Monitoring Results
November 2011

(Pika International, Inc./ARCADIS, 2013)

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Attachment 7.5.3
Tables

PIKA INTERNATIONAL, INC.

ARCADIS

Table A.7.5.3-1
Quarterly Groundwater Monitoring
Area B Groundwater, Fort Detrick, Maryland
November 2011

Chemical Name	Unit	Location ID	BMW018				BMW076				BMW077				BMW71A				RISP-3				DWELL-314			
		Sample ID	FTD72-BMW018(111511)				FTD72-BMW076(111511)				FTD72-BMW077(111511)				FTD72-BMW71A(111511)				FTD-RISP-3(111611)				FTD-DWELL-314(111611)			
		Sample Date	11/15/2011				11/15/2011				11/15/2011				11/15/2011				11/16/2011				11/16/2011			
		MCL	Lab Result	Lab Qual	Val Qual	MDE	Lab Result	Lab Qual	Val Qual	MDE	Lab Result	Lab Qual	Val Qual	MDE	Lab Result	Lab Qual	Val Qual	MDE	Lab Result	Lab Qual	Val Qual	MDE	Lab Result	Lab Qual	Val Qual	MDE
VOC																										
Acetone	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Benzene	µg/L	5	**0.4**	**J**		N.D.	N.D.			N.D.	**0.2**	**J**		N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Bromodichloromethane	µg/L	80	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Bromoform	µg/L	80	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Bromomethane	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
2-Butanone	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Carbon Disulfide	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Carbon Tetrachloride	µg/L	5	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Chlorobenzene	µg/L	100	N.D.			N.D.	N.D.			N.D.	**0.2**	**J**		N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Chloroethane	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Chloroform	µg/L	80	**5.7**			**5.1**	**0.3**	**J**		N.D.	0.5			N.D.	**1.2**			**1.1**	**1.9**			**1.7**	N.D.			N.D.
Chloromethane	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Cyclohexane	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
1,2-Dibromo-3-chloropropane	µg/L	0.2	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Dibromochloromethane	µg/L	80	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,2-Dibromoethane	µg/L	0.05	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,2-Dichlorobenzene	µg/L	600	N.D.			N.D.	N.D.			N.D.	**0.1**	**J**		N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,3-Dichlorobenzene	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,4-Dichlorobenzene	µg/L	75	N.D.			N.D.	N.D.			N.D.	**0.2**	**J**		N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Dichlorodifluoromethane	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,1-Dichloroethane	µg/L		**3.0**			**3.2**	N.D.			N.D.	**0.3**	**J**		N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,2-Dichloroethane	µg/L	5	**1.0**			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,1-Dichloroethene	µg/L		**14**			**12**	**0.1**	**J**		N.D.	**3.1**			**2.2**	**0.3**	**J**		N.D.	**0.6**			N.D.	N.D.			N.D.
cis-1,2-Dichloroethene	µg/L	70	**16**			**13**	N.D.			N.D.	**1.5**			**1.2**	**0.4**	**J**		N.D.	**1.0**			N.D.	N.D.			N.D.
trans-1,2-Dichloroethene	µg/L	100	**0.2**	**J**		N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,2-Dichloropropane	µg/L	5	**0.1**	**J**		N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
cis-1,3-Dichloropropene	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
trans-1,3-Dichloropropene	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Ethylbenzene	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Freon 113	µg/L		**0.2**	**J**		N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
2-Hexanone	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Isopropylbenzene	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Methyl Acetate	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Methyl Tertiary Butyl Ether	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
4-Methyl-2-Pentanone	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Methylcyclohexane	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Methylene Chloride	µg/L	5	1.3			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Styrene	µg/L	100	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,1,2,2-Tetrachloroethane	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Tetrachloroethene	µg/L	5	**2.6**			**3.1**	N.D.			N.D.	**15**			**19**	**0.2**	**J**		N.D.	**0.6**			N.D.	N.D.			N.D.
Toluene	µg/L	1000	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	**0.2**	**J**		N.D.	N.D.			N.D.	N.D.			N.D.
1,2,3-Trichlorobenzene	µg/L		N.D.			N.T.	N.D.			N.T.	**1.6**			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
1,2,4-Trichlorobenzene	µg/L	70	**0.1**	**J**		N.D.	N.D.			N.D.	**3.1**			**2.7**	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,1,1-Trichloroethane	µg/L	200	1.0			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	**0.2**	**J**		N.D.	N.D.			N.D.
1,1,2-Trichloroethane	µg/L	5	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Trichloroethene	µg/L	5	**150**			**180**	N.D.			N.D.	**5.5**			**4.9**	**3.2**			**2.7**	**9.4**			**7.5**	N.D.			N.D.
Trichlorofluoromethane	µg/L		3.6			N.T.	N.D.			N.T.	N.D.			N.T.	**1.8**			N.T.	**2.8**			N.T.	N.D.			N.T.
Vinyl Chloride	µg/L	2	**3.0**			**2.5**	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
m+p-Xylene	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	**0.1**	**J**		N.D.	N.D.			N.D.	N.D.			N.D.
o-Xylene	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Diisopropyl Ether	µg/L		N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.
tert-Butyl ethyl ether	µg/L		N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.
tert-Amyl methyl ether	µg/L		N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.
Naphthalene	µg/L		N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.
tert-Butyl alcohol	µg/L		N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.

Notes:
µg/L - micrograms per liter
N.D. - Non-detect at the specified reporting limit
N.T. - Not Tested
MCL - Maximum Contaminant Levels
J - Estimated value
UJ -Compound analyzed but not detected / concentration estimated
UL -Compound analyzed but not detected / concentration likely higher
ID - identification
Lab Result - laboratory analytical result
Lab Qual - laboratory qualification
Val Qual - data validation qualification
MDE - MDE split sample analytical result
Cells exceeding the MCLs are shaded gray

Table A.7.5.3-1
Quarterly Groundwater Monitoring
Area B Groundwater, Fort Detrick, Maryland
November 2011

Chemical Name	Unit	Location ID	DWELL-66				DWELL-77				DWELL-600				DWGRAW-18				DUP				BMW24D			
		Sample ID	FTD-DWELL-66(111611)				FTD-DWELL-77(111611)				FTD-DWELL-600(111611)				FTD-DWGRAW-18(111611)				FTD-DUP(111611)				FTD72-BMW24D(111711)			
		Sample Date	11/16/2011				11/16/2011				11/16/2011				11/16/2011				11/16/2011				11/17/2011			
		MCL	Lab Result	Lab Qual	Val Qual	MDE	Lab Result	Lab Qual	Val Qual	MDE	Lab Result	Lab Qual	Val Qual	MDE	Lab Result	Lab Qual	Val Qual	MDE	Lab Result	Lab Qual	Val Qual	MDE	Lab Result	Lab Qual	Val Qual	MDE
VOC																										
Acetone	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Benzene	µg/L	5	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Bromodichloromethane	µg/L	80	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Bromoform	µg/L	80	N.D.		UL	N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Bromomethane	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
2-Butanone	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Carbon Disulfide	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Carbon Tetrachloride	µg/L	5	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Chlorobenzene	µg/L	100	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Chloroethane	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Chloroform	µg/L	80	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	**4.1**			**4.4**
Chloromethane	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Cyclohexane	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
1,2-Dibromo-3-chloropropane	µg/L	0.2	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Dibromochloromethane	µg/L	80	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,2-Dibromoethane	µg/L	0.05	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,2-Dichlorobenzene	µg/L	600	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,3-Dichlorobenzene	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,4-Dichlorobenzene	µg/L	75	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Dichlorodifluoromethane	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,1-Dichloroethane	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,2-Dichloroethane	µg/L	5	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	**0.1**	**J**		N.D.
1,1-Dichloroethene	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	**1**			N.D.
cis-1,2-Dichloroethene	µg/L	70	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	**0.5**			N.D.
trans-1,2-Dichloroethene	µg/L	100	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,2-Dichloropropane	µg/L	5	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
cis-1,3-Dichloropropene	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
trans-1,3-Dichloropropene	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Ethylbenzene	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Freon 113	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
2-Hexanone	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Isopropylbenzene	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Methyl Acetate	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Methyl Tertiary Butyl Ether	µg/L		**0.2**	**J**		N.D.	**0.1**	**J**		N.D.	**0.1**	**J**		N.D.	N.D.			N.D.	**0.2**	**J**		N.D.	N.D.			N.D.
4-Methyl-2-Pentanone	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Methylcyclohexane	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Methylene Chloride	µg/L	5	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Styrene	µg/L	100	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,1,2,2-Tetrachloroethane	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Tetrachloroethene	µg/L	5	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	**110**			**130**
Toluene	µg/L	1000	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,2,3-Trichlorobenzene	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
1,2,4-Trichlorobenzene	µg/L	70	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,1,1-Trichloroethane	µg/L	200	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	**0.3**	**J**		N.D.
1,1,2-Trichloroethane	µg/L	5	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Trichloroethene	µg/L	5	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	**12**			**12**
Trichlorofluoromethane	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	**3.4**			N.T.
Vinyl Chloride	µg/L	2	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
m+p-Xylene	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
o-Xylene	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Diisopropyl Ether	µg/L		N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.
tert-Butyl ethyl ether	µg/L		N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.
tert-Amyl methyl ether	µg/L		N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.
Naphthalene	µg/L		N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.
tert-Butyl alcohol	µg/L		N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.

Notes:

µg/L - micrograms per liter
N.D. - Non-detect at the specified reporting limit
N.T. - Not Tested
MCL - Maximum Contaminant Levels
J - Estimated value
UJ -Compound analyzed but not detected / concentration estimated
UL -Compound analyzed but not detected / concentration likely higher
ID - identification
Lab Result - laboratory analytical result
Lab Qual - laboratory qualification
Val Qual - data validation qualification
MDE - MDE split sample analytical result
Cells exceeding the MCLs are shaded gray

Table A.7.5.3-1
Quarterly Groundwater Monitoring
Area B Groundwater, Fort Detrick, Maryland
November 2011

Chemical Name	Unit	Location ID	BMW31D				BMW53B				BMW70A				BMW66D				BMW57D				BMW59D			
		Sample ID	FTD72-BMW31D(111711)				FTD72-BMW53B(111711)				FTD72-BMW70A(111711)				FTD72-BMW66D(111811)				FTD72-BMW57D(111811)				FTD72-BMW59D(111811)			
		Sample Date	11/17/2011				11/17/2011				11/17/2011				11/18/2011				11/18/2011				11/18/2011			
		MCL	Lab Result	Lab Qual	Val Qual	MDE	Lab Result	Lab Qual	Val Qual	MDE	Lab Result	Lab Qual	Val Qual	MDE	Lab Result	Lab Qual	Val Qual	MDE	Lab Result	Lab Qual	Val Qual	MDE	Lab Result	Lab Qual	Val Qual	MDE
VOC																										
Acetone	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Benzene	µg/L	5	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	25			24	N.D.			N.D.
Bromodichloromethane	µg/L	80	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Bromoform	µg/L	80	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Bromomethane	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
2-Butanone	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Carbon Disulfide	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Carbon Tetrachloride	µg/L	5	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Chlorobenzene	µg/L	100	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	2.4	J		2.8	N.D.			N.D.
Chloroethane	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Chloroform	µg/L	80	**0.2**	**J**		N.D.	**4.1**			**4.2**	**0.1**	**J**		N.D.	**2.7**			**2.7**	200			230	**9.9**			**11**
Chloromethane	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Cyclohexane	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
1,2-Dibromo-3-chloropropane	µg/L	0.2	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Dibromochloromethane	µg/L	80	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,2-Dibromoethane	µg/L	0.05	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,2-Dichlorobenzene	µg/L	600	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	**1.4**	**J**		**1.3**	N.D.			N.D.
1,3-Dichlorobenzene	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,4-Dichlorobenzene	µg/L	75	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	**1.1**	**J**		**1.2**	N.D.			N.D.
Dichlorodifluoromethane	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	**1.8**	**J**	**J**	**2**	N.D.			N.D.
1,1-Dichloroethane	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	**8.5**			**7.2**	**0.1**	**J**		N.D.
1,2-Dichloroethane	µg/L	5	N.D.			N.D.	**0.1**	**J**		N.D.	N.D.			N.D.	N.D.			N.D.	**14**			**17**	**0.3**	**J**		N.D.
1,1-Dichloroethene	µg/L		N.D.			N.D.	**1.1**			N.D.	N.D.			N.D.	**0.8**			N.D.	**90**			**75**	**2.5**			**1.9**
cis-1,2-Dichloroethene	µg/L	70	**22**			**20**	**1.6**			**1.3**	N.D.			N.D.	**1.0**			N.D.	**230**			**240**	**1.5**			**1.3**
trans-1,2-Dichloroethene	µg/L	100	**0.1**	**J**		N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,2-Dichloropropane	µg/L	5	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	**2.3**	**J**		N.D.	N.D.			N.D.
cis-1,3-Dichloropropene	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
trans-1,3-Dichloropropene	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Ethylbenzene	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Freon 113	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	**3.9**	**J**		N.T.	N.D.			N.T.
2-Hexanone	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Isopropylbenzene	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Methyl Acetate	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Methyl Tertiary Butyl Ether	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
4-Methyl-2-Pentanone	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Methylcyclohexane	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Methylene Chloride	µg/L	5	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Styrene	µg/L	100	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,1,2,2-Tetrachloroethane	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Tetrachloroethene	µg/L	5	**25**			**36**	**0.9**			N.D.	N.D.			N.D.	**0.5**	**J**		N.D.	**72**			**100**	**0.9**			N.D.
Toluene	µg/L	1000	**0.1**	**J**		N.D.	N.D.			N.D.	N.D.			N.D.	**0.3**	**J**		N.D.	N.D.			N.D.	**0.1**	**J**		N.D.
1,2,3-Trichlorobenzene	µg/L		N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
1,2,4-Trichlorobenzene	µg/L	70	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	**26**			**29**	**0.2**	**J**		N.D.
1,1,1-Trichloroethane	µg/L	200	N.D.			N.D.	**0.4**	**J**		N.D.	N.D.			N.D.	**0.3**	**J**		N.D.	**21**			**29**	0.7			N.D.
1,1,2-Trichloroethane	µg/L	5	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	**1.2**	**J**		**1**	N.D.			N.D.
Trichloroethene	µg/L	5	**2.9**			**2.9**	**24**			**24**	**0.2**	**J**		N.D.	**9.5**			**9.4**	**1,500**			**1600**	**26**			**32**
Trichlorofluoromethane	µg/L		**0.2**	**J**		N.T.	**3.0**			N.T.	N.D.			N.T.	**2.6**			N.T.	**81**			N.T.	**8.2**			N.T.
Vinyl Chloride	µg/L	2	**5.1**			**4.6**	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	**12**			**8.9**	N.D.			N.D.
m+p-Xylene	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	**0.1**	**J**		N.D.	N.D.			N.D.	N.D.			N.D.
o-Xylene	µg/L		N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Diisopropyl Ether	µg/L		N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.
tert-Butyl ethyl ether	µg/L		N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.
tert-Amyl methyl ether	µg/L		N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.
Naphthalene	µg/L		N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.
tert-Butyl alcohol	µg/L		N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.

Notes:
µg/L - micrograms per liter
N.D. - Non-detect at the specified reporting limit
N.T. - Not Tested
MCL - Maximum Contaminant Levels
J - Estimated value
UJ -Compound analyzed but not detected / concentration estimated
UL -Compound analyzed but not detected / concentration likely higher
ID - identification
Lab Result - laboratory analytical result
Lab Qual - laboratory qualification
Val Qual - data validation qualification
MDE - MDE split sample analytical result
Cells exceeding the MCLs are shaded gray

Table A.7.5.3-1
Quarterly Groundwater Monitoring
Area B Groundwater, Fort Detrick, Maryland
November 2011

Chemical Name	Unit	Location ID	DUP001				BMW58D				BMW67A				BMW56D				BMW32D			
		Sample ID	FTD72-DUP001(111811)				FTD72-BMW58D(111811)				FTD72-BMW67A(111811)				FTD72-BMW56D(112111)				FTD72-BMW32D(112111)			
		Sample Date	11/18/2011				11/18/2011				11/18/2011				11/21/2011				11/21/2011			
		MCL	Lab Result	Lab Qual	Val Qual	MDE	Lab Result	Lab Qual	Val Qual	MDE	Lab Result	Lab Qual	Val Qual	MDE	Lab Result	Lab Qual	Val Qual	MDE	Lab Result	Lab Qual	Val Qual	MDE
VOC																						
Acetone	µg/L		N.D.		UJ	N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Benzene	µg/L	5	**4.6**	**J**	**J**	**4**	**0.1**	**J**		N.D.	**2.4**	**J**	**J**	**4**	**10**			**10**	N.D.			N.D.
Bromodichloromethane	µg/L	80	N.D.		UJ	N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Bromoform	µg/L	80	**37**		**J**	**42**	N.D.			N.D.	**18**		**J**	**37**	N.D.			N.D.	N.D.			N.D.
Bromomethane	µg/L		N.D.		UJ	N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
2-Butanone	µg/L		N.D.		UJ	N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Carbon Disulfide	µg/L		N.D.		UJ	N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Carbon Tetrachloride	µg/L	5	**1.6**	**J**	**J**	**2.1**	N.D.			N.D.	N.D.		UJ	**2**	N.D.			N.D.	N.D.			N.D.
Chlorobenzene	µg/L	100	N.D.		UJ	1.2	N.D.			N.D.	N.D.			**1.3**	**1.0**	**J**		N.D.	N.D.			N.D.
Chloroethane	µg/L		N.D.		UJ	N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Chloroform	µg/L	80	**2400**		**J**	**2800**	**17**			**20**	**1200**		**J**	**2800**	**90**			**110**	N.D.			N.D.
Chloromethane	µg/L		N.D.		UJ	N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Cyclohexane	µg/L		N.D.		UJ	N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
1,2-Dibromo-3-chloropropane	µg/L	0.2	N.D.		UJ	N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Dibromochloromethane	µg/L	80	**3.4**	**J**	**J**	**4.1**	N.D.			N.D.	**1.6**	**J**		**4.2**	N.D.			N.D.	N.D.			N.D.
1,2-Dibromoethane	µg/L	0.05	N.D.		UJ	N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,2-Dichlorobenzene	µg/L	600	N.D.		UJ	N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,3-Dichlorobenzene	µg/L		N.D.		UJ	N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,4-Dichlorobenzene	µg/L	75	N.D.		UJ	N.D.	N.D.			N.D.	N.D.			N.D.	**0.6**	**J**		N.D.	N.D.			N.D.
Dichlorodifluoromethane	µg/L		**2.4**	**J**	**J**	**3**	N.D.			N.D.	**1.2**	**J**		**2.6**	**0.7**	**J**		N.D.	N.D.			N.D.
1,1-Dichloroethane	µg/L		**1.9**	**J**	**J**	**1.8**	**0.2**	**J**		N.D.	N.D.		UJ	**1.7**	**4.6**			N.D.	N.D.			N.D.
1,2-Dichloroethane	µg/L	5	**48**		**J**	**62**	**0.5**	**J**		N.D.	**25**		**J**	**62**	**6.1**			N.D.	N.D.			N.D.
1,1-Dichloroethene	µg/L		**60**		**J**	**57**	**4.6**			**3**	**30**		**J**	**55**	**59**			**59**	N.D.			N.D.
cis-1,2-Dichloroethene	µg/L	70	**33**		**J**	**37**	**4.0**			**3.6**	**17**		**J**	**37**	**130**			**140**	N.D.			N.D.
trans-1,2-Dichloroethene	µg/L	100	N.D.		UJ	N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,2-Dichloropropane	µg/L	5	**4.0**	**J**	**J**	N.D.	N.D.			N.D.	**2.2**	**J**	**J**	N.D.	**0.5**	**J**		N.D.	N.D.			N.D.
cis-1,3-Dichloropropene	µg/L		N.D.		UJ	N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
trans-1,3-Dichloropropene	µg/L		N.D.		UJ	N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Ethylbenzene	µg/L		N.D.		UJ	N.D.	N.D.			N.D.	N.D.			N.D.	**2.8**			N.D.	N.D.			N.D.
Freon 113	µg/L		**4.9**	**J**	**J**	N.T.	**0.3**	**J**		N.T.	**2.4**	**J**	**J**	N.T.	**2.1**	**J**		N.T.	N.D.			N.T.
2-Hexanone	µg/L		N.D.		UJ	N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Isopropylbenzene	µg/L		N.D.		UJ	N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
Methyl Acetate	µg/L		N.D.		UJ	N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Methyl Tertiary Butyl Ether	µg/L		N.D.		UJ	N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
4-Methyl-2-Pentanone	µg/L		N.D.		UJ	N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Methylcyclohexane	µg/L		N.D.		UJ	N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
Methylene Chloride	µg/L	5	**4.0**	**J**	**J**	N.T.	N.D.			N.T.	**2.2**	**J**	**J**	N.T.	N.D.			N.T.	N.D.			N.T.
Styrene	µg/L	100	N.D.		UJ	N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
1,1,2,2-Tetrachloroethane	µg/L		N.D.		UJ	N.D.	N.D.			N.D.	N.D.			N.D.	**0.9**	**J**		N.D.	N.D.			N.D.
Tetrachloroethene	µg/L	5	**36**		**J**	**57**	**1.9**			**2.7**	**18**		**J**	**54**	**25**			**24**	**0.4**	**J**		N.D.
Toluene	µg/L	1000	N.D.		UJ	N.D.	N.D.			N.D.	N.D.			N.D.	**0.5**	**J**		N.D.	**0.2**	**J**		N.D.
1,2,3-Trichlorobenzene	µg/L		N.D.		UJ	N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.	N.D.			N.T.
1,2,4-Trichlorobenzene	µg/L	70	N.D.		UJ	N.D.	**0.2**	**J**		N.D.	N.D.			N.D.	**9.9**			N.D.	N.D.			N.D.
1,1,1-Trichloroethane	µg/L	200	**20**		**J**	**29**	**1.2**			**1.2**	**10**		**J**	**28**	**17**			**18**	N.D.			N.D.
1,1,2-Trichloroethane	µg/L	5	N.D.		UJ	N.D.	N.D.			N.D.	N.D.			N.D.	**1.0**	**J**		N.D.	N.D.			N.D.
Trichloroethene	µg/L	5	**2000**			**2200**	**54**			**72**	**990**			**2200**	**840**			**920**	**0.1**	**J**		N.D.
Trichlorofluoromethane	µg/L		**990**			N.T.	**12**			N.T.	**500**			N.T.	**27**			N.T.	N.D.			N.T.
Vinyl Chloride	µg/L	2	N.D.		UJ	N.D.	N.D.			N.D.	N.D.			N.D.	**4.3**			N.D.	N.D.			N.D.
m+p-Xylene	µg/L		N.D.		UJ	N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.	N.D.			N.D.
o-Xylene	µg/L		N.D.		UJ	N.D.	N.D.			N.D.	N.D.			N.D.	**2.9**			N.D.	N.D.			N.D.
Diisopropyl Ether	µg/L		N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.
tert-Butyl ethyl ether	µg/L		N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.
tert-Amyl methyl ether	µg/L		N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.
Naphthalene	µg/L		N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.
tert-Butyl alcohol	µg/L		N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.	N.T.			N.D.

Notes:
µg/L - micrograms per liter
N.D. - Non-detect at the specified reporting limit
N.T. - Not Tested
MCL - Maximum Contaminant Levels
J - Estimated value
UJ -Compound analyzed but not detected / concentration estimated
UL -Compound analyzed but not detected / concentration likely higher
ID - identification
Lab Result - laboratory analytical result
Lab Qual - laboratory qualification
Val Qual - data validation qualification
MDE - MDE split sample analytical result
Cells exceeding the MCLs are shaded gray

Table A.7.5.3-2
Quarterly Groundwater Monitoring Well Water Levels
Area B Groundwater, Fort Detrick, Maryland
November 2011

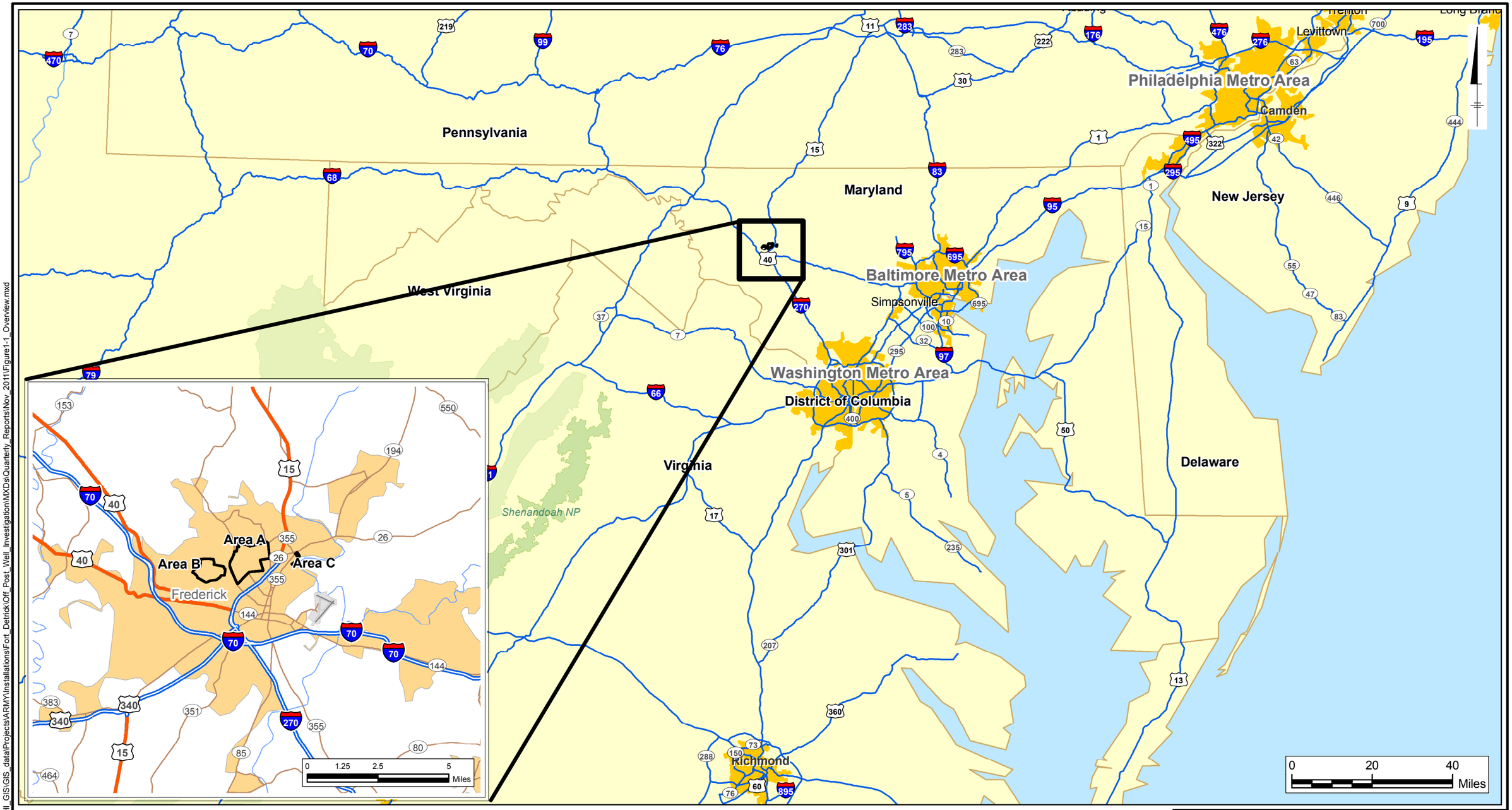
Well ID	Zone	Ground Level Elevation (ft msl)	Surface Completion	Well Diameter (inches)	Construction Material	Date of Installation	Inner Casing Elevation (ft msl)	Nov-11	
								Depth to Water (ft below measuring point)	Water Level Elevation (ft msl)
BMW18	Overburden	384	Stick-Up	4		1977	386.00	36.98	349.02
BMW24D	Shallow Bedrock	365.47	Stick-Up	4		1990	368.16	16.81	351.35
BMW31D	Shallow Bedrock	340.29	Stick-Up	4		1990	340.29	3.18	337.11
BMW32D	Shallow Bedrock	356.21	Stick-Up	4		1991	356.21	5.76	350.45
BMW53B	Shallow Bedrock	349.1*	Stick-Up	2	PVC	2010	351.90	28.08	323.82
BMW56D	Shallow Bedrock	380.86	Stick-Up	4		1993	382.86	---	---
BMW57D	Shallow Bedrock	373.36	Stick-Up	8		1993	375.39	27.81	347.58
BMW58D	Shallow Bedrock	387.4	Stick-Up	4		1993	388.65	33.7	354.95
BMW59D	Shallow Bedrock	389.91	Stick-Up	4		1993	391.65	38.72	352.93
BMW66D	Shallow Bedrock	332.1	Stick-Up	2		2009	335.05	10.98	324.07
BMW67A	Shallow Bedrock	393.4*	Stick-Up	2	Stainless Steel	2011	395.91	41.19	354.72
BMW70A	Shallow Bedrock	327.5*	Stick-Up	2	PVC	2011	330.06	39.03	291.03
BMW71A	Shallow Bedrock	331.6*	Stick-Up	2	PVC	2011	333.93	14.45	319.48
BMW076	Shallow Bedrock	386.0*	Stick-Up	2	PVC	2011	388.32	41.82	346.50
BMW077	Shallow Bedrock	363.3*	Stick-Up	2	PVC	2011	366.26	23.86	342.40

Notes:
All Elevations in feet relative to NAVD88 (MSL)
MSL - Mean Sea Level
*Wells BMW53B, BMW67A, BMW70A, BMW71A, BMW076, and BMW077 were surveyed in April/May 2012.

Attachment 7.5.3
Figures

PIKA INTERNATIONAL, INC.

ARCADIS



Legend

Fort Detrick Boundary

NOTES:

Base map data was obtained from ESRI StreetMap USA 2005.

Overview of Fort Detrick Area B

Quarterly Report
(November 2011)
Off-Post Private Well Investigation and Associated Activities,
Supplemental Public Outreach and Monitoring Well Sampling
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

PIKA INTERNATIONAL, INC. ARCADIS

FIGURE
A.7.5.3-1

\\arcadis-us.com\officedata\WhitePlains-NY\WHI_GIS\GIS_dataProjects\ARMY\Installations\Fort_Detrick\Off_Post_Well_Investigation\MXDs\Quarterly_Reports\Nov_2011\Figure1-1_Overview.mxd

Legend

- Fort Detrick Boundary
- Frederick City Boundary
- Monitoring Well
- Private Well Sampling Area
- Spring Location

0 0.125 0.25 Miles

Monitoring Wells, Private Wells, and Spring in the Study Area

Quarterly Report
(November 2011)
Off-Post Private Well Investigation and Associated Activities, Supplemental Public Outreach and Monitoring Well Sampling
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

PIKA INTERNATIONAL, INC. ARCADIS

FIGURE
A.7.5.3-2

\\arcadis-us.com\officedata\WhitePlains-NY\WHI_GIS\GIS_data\Projects\ARMY\Installations\Fort_Detrick\Off_Post_Well_Investigation\MXDs\Quarterly_Reports\Nov_2011\Figure1-2_StudyAreaWells.mxd

\\arcadis-us.com\office\data\WhitePlains-NY\WHI_GIS\GIS_data\Projects\ARMY\Installations\Fort_Detrick\Off_Post_Well_Investigation\MXDs\Quarterly_Reports\Nov_2011\Figure3-1_MonitoringWellsWaterLevels.mxd

BMW76
346.50 ft

BMW77
342.40 ft

BMW57D
347.58 ft

BMW56D

BMW67A
354.72 ft

BMW58D
354.95 ft

BMW18
349.02 ft

BMW59D
352.93 ft

BMW24D
351.35 ft

BMW53B
323.82 ft

BMW71A
319.48 ft

BMW66D
324.07 ft

BMW70A
291.03 ft

BMW31D
337.11 ft

BMW32D
350.45 ft

Area A

Area B

ROCKY SPRINGS RD

KEMP LN

MEADOW DR

PROSPECT DR

ROCKY GORGE CT

EAGLE ROCK LN

BEAR CREEK CT

TUSCANNEY DR

YELLOW SPRINGS RD

STARK ST

BOYLES ST

THOMPSON DR

BEASLEY DR

ROSEMONT AVE

MONTEVUE LN

GRANALTA CIR

SHOOKSTOWN RD

SCOTTS CHS

BOWERS RD

SHANNONBROOK LN

BOXFORD CT

ANDOVER LN

LONGFORD DR

CEDARCR E ST LN

OLD CAMP RD

WAVERLEY DR

LAKE COVE N TRY CT

WILLOWDALE DR

THAMES D R

BEXHILL DR

500
520
540
560
480
460
440
420
400
380
360
340
320

Legend

- Fort Detrick Boundary
- Frederick City Boundary

Monitoring Well

- Well ID
  Groundwater Elevation
- 20-foot Topographic Contour
- Private Well Sampling Area
- Spring Location

Note: All elevations are in feet above mean sea level

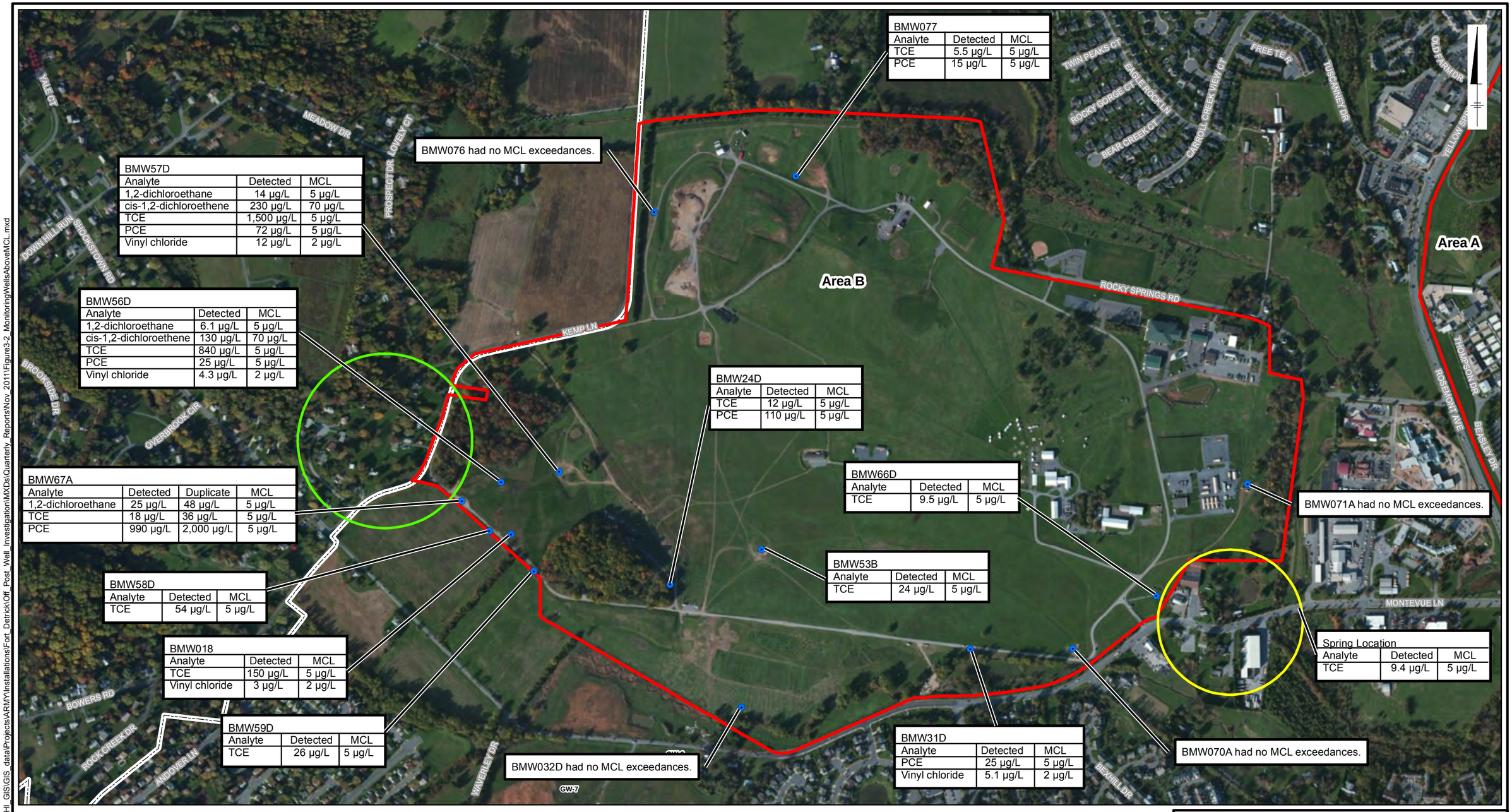
0 0.125 0.25 Miles

Monitoring Well Water Levels

Quarterly Report
(November 2011)
Off-Post Private Well Investigation and Associated Activities,
Supplemental Public Outreach and Monitoring Well Sampling
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

PIKA INTERNATIONAL, INC. ARCADIS

FIGURE
A.7.5.3-3



Legend

- Fort Detrick Boundary
- Frederick City Boundary
- Monitoring Well
- Private Well Sampling Area
- Spring Location

0 0.125 0.25 Miles

Monitoring Well and Spring Results Above MCL

Quarterly Report
(November 2011)
Off-Post Private Well Investigation and Associated Activities,
Supplemental Public Outreach and Monitoring Well Sampling
Fort Detrick Area B Groundwater
Fort Detrick, Maryland

PIKA INTERNATIONAL, INC. ARCADIS

FIGURE
A.7.5.3-4

\\arcadis-us.com\officedata\WhitePlains-NYWHI_GIS\GIS_data\Projects\ARMY\Installations\Fort_Detrick\Off_Post_Well_Investigation\MXDs\Quarterly_Reports\Nov_2011\Figure3-2_MonitoringWellsAboveMCL.mxd

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Attachment 7.5.4
Area B Full Round Groundwater Monitoring Results
2011/2012

(ARCADIS/Malcom Pirnie, 2013)

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ARCADIS MALCOLM PIRNIE

Attachment 7.5.4
Tables

Table A.7.5.4-1
Water Level Elevations - March 26 and 27, 2012
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

[1]Well	[1]Easting	[1]Northing	[1]GL Elevation (ft msl)	[1]MP Elevation (ft msl)	[1]Well Diameter and Material	[1]Top Screen	[1]Base Screen	[4]Depth to Water (bTOC)	Water Level Elevation March 2012 (ft msl)
AMW568-1	--	--	339.03	338.44	--	--	--	21.73	316.71
AMW568-2	--	--	343.16	342.85	--	--	--	15.23	327.62
AMW568-3	--	--	345.60	345.21	--	--	--	26.32	318.89
AMW568-4	--	--	350.71	350.47	--	--	--	19.94	330.53
AMW568-6	--	--	339.09	338.80	--	--	--	37.32	301.48
AMW568-07	--	--	344.70	344.48	4" PVC	164.02	184.02	29.11	315.37
AMW568-8	--	--	339.73	339.52	--	--	--	10.36	329.16
AMW568-9A	--	--	341.82	341.43	--	--	--	13.10	328.33
AMW568-9B	--	--	342.31	341.98	--	--	--	24.64	317.34
AMW568-10	--	--	328.29	327.69	--	--	--	10.26	317.43
AMW568-11	--	--	336.09	335.57	--	--	--	11.41	324.16
AMW568-12	--	--	342.73	342.25	--	--	--	10.97	331.28
AMW568-13A	--	--	323.29	322.94	--	--	--	12.63	310.31
AMW568-13B	--	--	323.80	323.48	4" PVC	176.82	196.82	9.40	314.08
AMW568-14	--	--	327.73	327.31	--	--	--	12.02	315.29
AMW568-15A	--	--	318.77	318.36	4" PVC	45.41	65.41	9.64	308.72
AMW568-15B	--	--	318.75	318.54	4" PVC	127.21	147.21	12.44	306.10
AMW568-16	--	--	327.02	326.50	--	--	--	11.17	315.33
AMW568-17	--	--	347.64	347.21	--	--	--	9.71	337.50
AMW568-18	--	--	349.81	349.31	--	--	--	16.27	333.04
AMW568-19A	--	--	322.08	321.59	4" PVC	25.49	45.49	9.64	311.95
AMW568-19B	--	--	322.31	321.87	4" PVC	87.44	107.44	8.44	313.43
AMW568-20A	--	--	323.04	322.47	4" PVC	45.57	65.57	10.85	311.62
AMW568-20B	--	--	323.47	322.96	4" PVC	165.51	185.51	13.99	308.97
AMW568-21	--	--	329.12	328.64	--	--	--	11.28	317.36
AMW568-22	--	--	315.67	315.27	4" PVC	40	60	8.62	306.65
AMW190-12	--	--		324.32	--	--	--	12.59	311.73

Key
GL - Ground Level
MP - Monitoring Point
italics - wells not projected for use in the up-coming investigation per the Area B Groundwater RIWP, section 5.4
1 - Data provided in Table 2-1 of the Area B Groundwater RIWP

Table A.7.5.4-1
Water Level Elevations - March 26 and 27, 2012
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

[1]Well	[1]Easting	[1]Northing	[1]GL Elevation (ft msl)	[1]MP Elevation (ft msl)	[1]Well Diameter and Material	[1]Top Screen	[1]Base Screen	[4]Depth to Water (bTOC)	Water Level Elevation March 2012 (ft msl)
BMW1	1183484.2	646258.02	385.00	387.00	6" Steel	85.00	180.00	--	--
BMW2	1183694.49	646525.11	373.50	374.70	4" PVC	25.00	35.00	25.50	349.20
BMW3	1184264.21	646558.8	364.90	367.49	4" PVC	25.00	35.00	21.26	346.23
BMW4	1184702.77	646532.81	359.00	362.76	4" PVC	25.00	35.00	22.29	340.47
BMW5	1185046.4	646266.09	358.90	360.10	4" PVC	25.00	35.00	20.45	339.65
BMW5D	1185054.19	646262.48	360.48	363.52	2" PVC	108.50	118.50	22.03	341.49
BMW6	1185084.94	645798.72	379.00	380.90	4" PVC	25.00	35.00	Dry	--
BMW7	1184623.22	644976.54	375.00	377.10	4" PVC	25.00	35.00	33.09	344.01
BMW8	1184100.55	644771.33	365.80	367.52	4" PVC	25.00	35.00	21.23	346.29
BMW9	1183404.3	645588.75	383.00	386.76	4" PVC	25.00	35.00	Dry	--
BMW9D	1183415.65	645539.55	385.03	387.88	4" PVC	91.00	106.00	32.95	354.93
BMW10	1186571.64	645134.44	347.00	349.40	6" Steel	45.00	180.00	14.92	334.48
BMW11	1185749.06	645350.1	355.00	357.20	4" PVC	25.00	35.00	17.73	339.47
BMW11D	1185724	645321.15	354.73	357.28	4" PVC	153.80	163.80	17.41	339.87
BMW12	1184438.22	644646.2	366.00	367.90	4" PVC	25.00	35.00	22.83	345.07
BMW13	1184855.37	644637.73	363.00	364.70	4" PVC	25.00	35.00	--	--
BMW14	1182648.34	645048.82	387.80	388.79	4" Unknown	24.60	54.60	34.07	354.72
BMW15	1182426.46	644798.67	395.20	396.93	4" PVC	25.00	35.00	30.22	366.71
BMW16	1182193.63	644297.58	389.00	390.70	4" PVC	25.00	35.00	34.17	356.53
BMW17	1182230.83	644019.24	393.30	396.08	4" PVC	25.00	35.00	Dry	--
BMW18	1182509.72	643832.1	387.10	390.16	4" PVC	25.00	35.00	36.99	353.17
BMW19	1182702.07	643612.99	389.80	392.80	4" PVC	25.00	35.00	Dry	--
BMW20	1182905.96	643208.6	367.00	368.70	4" PVC	25.00	35.00	12.02	356.68
BMW20D	1182923.29	643215.33	366.17	368.31	4" PVC	118.00	138.00	13.29	355.02
BMW21	1183560.03	642901.1	356.00	357.94	4" PVC	25.00	35.00	7.11	350.83
BMW21D	1183576.77	642948.83	357.85	360.88	2" PVC	114.82	124.82	8.88	352.00
BMW22	1184096.29	642653.47	353.00	354.70	4" PVC	25.00	35.00	--	--
BMW23	1184319.66	643089.15	351.30	353.04	4" PVC	25.00	35.00	7.95	345.09
BMW24	1183586.88	643503.47	366.00	368.34	4" PVC	25.00	35.00	16.52	351.82
BMW24D	1183606.54	643484.64	365.47	368.16	4" PVC	164.25	174.45	16.31	351.85

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Table A.7.5.4-1
Water Level Elevations - March 26 and 27, 2012
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

[1]Well	[1]Easting	[1]Northing	[1]GL Elevation (ft msl)	[1]MP Elevation (ft msl)	[1]Well Diameter and Material	[1]Top Screen	[1]Base Screen	[4]Depth to Water (bTOC)	Water Level Elevation March 2012 (ft msl)
BMW25	1183244.43	643963.76	367.40	369.40	4" PVC	25.00	35.00	20.54	348.86
BMW26	1183201.88	644319.26	369.00	371.30	4" PVC	25.00	35.00	--	--
BMW27	1183184.39	644700.13	370.00	371.50	4" PVC	25.00	35.00	22.14	349.36
BMW28	1182810.14	644827.89	379.10	380.59	4" PVC	25.00	35.00	17.74	362.85
BMW29A	1185128.36	645995.50	369.10	371.03	2" PVC	48.00	58.00	31.42	339.61
BMW29B	1185128.42	645995.26	369.10	371.27	2" PVC	73.00	78.00	32.77	338.50
BMW30	1186599.62	643114.5	328.00	329.80	4" Unknown	10.00	40.00	--	--
BMW31	1185661.62	643042.09	336.00	339.94	4" Unknown	18.00	38.00	4.55	335.39
BMW31D	1185679.97	643040.24	337.81	340.29	4" PVC	164.90	174.83	2.51	337.78
BMW32	1184105.13	642578.47	354.00	356.01	4" Unknown	23.00	38.00	5.31	350.70
BMW32D	1184100.08	642638.46	353.46	356.21	4" Unknown	75.00	85.00	5.27	350.94
BMW33	1186276.53	645492.29	348.60	351.60	4" Unknown	8.00	38.00	12.73	338.87
BMW34	1185417.2	646322.43	369.30	371.30	4" Unknown	28.00	53.00	29.25	342.05
BMW35	1187067.45	644100.2	350.00	352.50	4" PVC	86.77	96.77	25.90	326.60
BMW35D	1187061.27	644066.46	348.11	351.05	4" PVC	155.00	165.00	24.45	326.60
BMW36	1184221.42	646732.52	366.30	369.84	4" PVC	52.00	62.00	21.77	348.07
BMW36D	1184201.62	646732.52	366.79	369.62	4" PVC	145.00	155.00	23.29	346.33
BMW37	1183144.62	644251.82	371.21	373.70	4" PVC	39.50	59.50	24.50	349.20
BMW37D	1183150.96	644240.7	371.25	374.07	4" PVC	112.74	122.75	25.07	349.00
BMW38	1183287.53	643960.85	366.58	368.38	4" PVC	50.60	80.60	19.56	348.82
BMW39	1183625.95	643312.74	368.55	370.45	4" PVC	21.10	51.10	19.50	350.95
BMW40	1184131.17	644438.25	359.16	362.06	4" PVC	29.40	59.40	14.73	347.33
BMW41	1184462.2	645755.09	396.35	399.02	4" PVC	49.00	69.00	17.36	381.66
BMW41D	1184465.18	645742.21	396.19	398.93	4" PVC	144.82	164.82	25.65	373.28
BMW42	1184595.93	645939.72	395.08	397.78	4" PVC	48.50	68.50	21.97	375.81
BMW43	1185318.77	644722.9	353.77	353.77	4" PVC	21.80	41.80	14.47	339.30
BMW44	1184988.82	645693.36	398.04	400.14	4" PVC	58.60	88.60	57.58	342.56
BMW45	1186780.41	644990.95	342.41	345.01	4" PVC	7.40	27.40	13.62	331.39
BMW46	1187218.2	645023.2	341.85	343.95	4" PVC	14.70	34.70	--	--
BMW47	1181914.63	644198.46	405.30	408.04	4" PVC	41.90	71.90	52.39	355.65

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Table A.7.5.4-1
Water Level Elevations - March 26 and 27, 2012
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

[1]Well	[1]Easting	[1]Northing	[1]GL Elevation (ft msl)	[1]MP Elevation (ft msl)	[1]Well Diameter and Material	[1]Top Screen	[1]Base Screen	[4]Depth to Water (bTOC)	Water Level Elevation March 2012 (ft msl)
BMW47D	1181947.65	644186.39	404.69	407.58	4" PVC	92.00	102.00	50.11	357.47
BMW48	1183427.25	645659.34	389.60	--	4" Unknown	40.00	70.00	35.89	--
BMW49	1184089.9	645484.18	389.60	--	4" Unknown	30.00	50.00	36.59	--
BMW50D	1183503.42	645161.96	372.49	374.68	4" Steel	120.00	131.00	23.59	351.09
BMW52D	1183861.72	643873.82	355.34	357.50	4" Steel	170.00	175.00	10.46	347.04
BMW53A	1184240.21	643725.06	349.10	351.47	2" PVC	48.00	56.00	6.41	345.06
BMW53B	1184239.84	643725.10	349.10	351.90	2" SS	77.00	87.00	6.80	345.10
BMW53D	1184261.21	643751.42	350.53	352.86	4" PVC	145.50	155.50	6.42	346.44
BMW53E	1184268.79	643693.68	349.10	351.56	2" PVC	145.00	160.00	6.45	345.11
BMW53F	1184268.90	643693.52	349.10	351.69	2" PVC	295.00	305.00	7.71	343.98
BMW54D	1185273.65	643642.32	341.91	343.96	2" PVC	147.08	177.08	2.06	341.90
BMW55D	1182077.71	644614.45	401.68	402.57	4" PVC	70.00	90.00	37.15	365.42
BMW56D	1182439.83	644189.83	384.20	387.21	4" PVC	71.00	91.00	33.32	353.89
BMW57D	1182841.15	644261.55	373.36	375.39	4" PVC	97.00	123.00	26.72	348.67
BMW58D	1182359.93	643852.74	387.40	388.65	4" PVC	109.50	129.50	33.31	355.34
BMW59D	1182667.71	643576.16	389.91	391.65	4" PVC	163.00	183.00	38.42	353.23
BMW60	1185674	645777	0.00	0.00	2" PVC	20.50	40.50	--	--
BMW61	1186952.98	643331.21	329.30	330.92	4" PVC	60.00	80.00	9.44	321.48
BMW62	1184094.78	645093.69	371.95	374.50	4" PVC	39.59	59.59	27.84	346.66
BMW63	1183883.42	645346.68	0.00	380.29	4" PVC	35.50	55.50	32.44	347.85
BMW64	1183867.79	645045.24	0.00	373.01	4" PVC	30.00	50.00	25.85	347.16
BMW65A	1182392.49	644493.57	385.58	388.47	4" PVC	112.00	127.00	33.68	354.79
BMW65B	1182392.43	644493.52	385.58	388.53	4" PVC	298.00	313.00	24.05	364.48
BMW66A	1186977.05	643398.9	332.10	334.48	4" PVC	75.00	85.00	13.54	320.94
BMW66B	1186977.05	643398.88	332.10	335.10	4" PVC	135.00	150.00	13.62	321.48
BMW66D	1186963.52	643406.73	332.10	335.05	4" PVC	270.00	275.00	10.60	324.45
BMW67A	1182170.53	644061.31	393.40	395.91	2" SS	50.00	55.00	40.68	355.23
BMW67B	1182193.80	644042.33	392.40	394.89	2" SS	133.00	148.00	39.74	355.15
BMW67C	1182146.49	644080.87	394.60	397.47	2" SS	140.00	155.00	42.42	355.05
BMW67D	1182119.99	644099.19	395.80	398.49	2" SS	220.00	235.00	43.55	354.94

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Table A.7.5.4-1
Water Level Elevations - March 26 and 27, 2012
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

[1]Well	[1]Easting	[1]Northing	[1]GL Elevation (ft msl)	[1]MP Elevation (ft msl)	[1]Well Diameter and Material	[1]Top Screen	[1]Base Screen	[4]Depth to Water (bTOC)	Water Level Elevation March 2012 (ft msl)
BMW68A	1182826.33	644233.35	372.00	374.35	2" SS	32.00	42.00	26.53	347.82
BMW68B	1182826.55	644233.21	372.00	374.51	2" SS	51.00	61.00	26.52	347.99
BMW68C	1182872.66	644176.28	371.70	374.04	2" SS	126.00	136.00	24.76	349.28
BMW68D	1182872.83	644176.40	371.70	374.22	2" SS	167.00	177.00	24.81	349.41
BMW68E	1182846.89	644213.09	371.60	374.35	2" SS	313.00	328.00	22.56	351.79
BMW69A	1185351.41	642773.11	337.90	340.51	2" SS	22.00	32.00	4.95	335.56
BMW70A	1186386.74	643041.62	327.50	330.06	2" PVC	31.00	36.00	3.89	326.17
BMW70B	1186386.59	643041.89	327.50	330.25	2" PVC	41.00	46.00	4.07	326.18
BMW70C	1186411.36	643032.93	327.50	330.44	2" PVC	221.00	231.00	4.51	325.93
BMW71A	1187592.31	644178.55	331.60	333.93	2" PVC	82.00	97.00	14.37	319.56
BMW71B	1187586.97	644146.55	332.90	335.16	2" PVC	170.00	180.00	16.05	319.11
BMW71C	1187586.76	644146.41	332.90	335.32	2" PVC	222.00	232.00	16.80	318.52
BMW72	1185481.98	645129.91	352.40	355.04	2" PVC	85.00	95.00	17.48	337.56
BMW73	1183018.79	644542.89	367.80	370.80	2" SS	22.50	37.50	23.29	347.51
BMW74	1183798.76	643199.07	364.10	366.65	2" PVC	59.00	69.00	17.34	349.31
BMW76	1183496.93	646056.49	386.00	388.32	2" PVC	98.00	108.00	35.64	352.68
BMW77	1184476.18	646302.18	363.30	366.26	2" PVC	56.00	71.00	20.02	346.24
BMW78A	1184626.10	644690.57	363.00	365.09	2" PVC	68.00	78.00	23.62	341.47
BMW78B	1184631.35	644651.68	362.40	364.98	2" PVC	140.00	150.00	22.92	342.06

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Water Level Elevations - March 26 and 27, 2012
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

[1]Well	[1]Easting	[1]Northing	[1]GL Elevation (ft msl)	[1]MP Elevation (ft msl)	[1]Well Diameter and Material	[1]Top Screen	[1]Base Screen	[4]Depth to Water (bTOC)	Water Level Elevation March 2012 (ft msl)
PZ -14	1187524.308	643278.559	318.7	318.34	1" PVC	5.20	10.20	2.96	315.38
PZ-16	1187881.945	644005.986	319.2	322.37	1" PVC	7.00	10.00	6.24	316.13
PZ-20	1188582.322	643626.65	329.6	329.47	1" PVC	13.90	18.90	15.45	314.02
PZ -21	1188980.53	643521.108	321.4	321.25	1" PVC	9.70	14.70	11.41	309.84
PZ-22	1186550.857	642979.304	327.1	329.55	1" PVC	16.50	21.50	4.11	325.44
PZ-23	1186729.453	643115.796	327	329.62	1" PVC	10.60	15.60	5.63	323.99
PZ-27	1187503.418	643110.291	323.9	323.44	1" PVC	5.20	10.20	8.12	315.32
PZ-29	1187864.494	643221.897	316.7	319.56	1" PVC	4.50	9.50	6.26	313.30
PZ- 30	1187992.468	643276.678	315.1	317.8	1" PVC	5.30	7.30	5.55	312.25
PZ-31	1188192.088	643305.383	321.9	324.48	1" PVC	5.30	10.30	10.52	313.96
PZ-33	1189055.347	643275.137	319.9	319.61	1" PVC	10.30	15.30	11.62	307.99
PZ-34	1189489.498	643270.601	316.2	315.8	1" PVC	7.80	12.80	7.55	308.25
PZ-36	1187493.162	642835.935	322.6	322.39	1" PVC	10.20	15.20	6.31	316.08
PZ-37	1187733.282	642888.601	325.1	327.48	1" PVC	28.30	33.30	13.81	313.67
PZ- 38	1187885.666	642953.7	317.4	320.08	1" PVC	4.70	9.70	7.94	312.14
PZ-39	1187879.005	643115.596	314.8	317.78	1" PVC	8.10	13.10	4.53	313.25
PZ-40	1188067.298	643129.822	314.2	316.96	1" PVC	4.90	7.90	3.77	313.19
PZ -41	1186596.533	642724.05	--	--	--	--	--	--	--
PZ-44	1187768.542	642577.926	324.8	327.56	1" PVC	19.10	24.10	13.76	313.80
PZ-45	1188061.527	642719.595	315.6	318.53	1" PVC	5.30	8.30	6.44	312.09
PZ-46	1188142.397	642912.539	312.3	315.21	1" PVC	4.70	9.70	3.03	312.18
PZ-49	1189450.154	643012.851	315.1	314.88	1" PVC	4.90	8.90	7.12	307.76
PZ-52	1188340.839	642513.938	310.1	313.47	1" PVC	4.10	9.10	5.04	308.43
PZ-54	1189372.111	642717.348	307.5	310.39	1" PVC	5.30	8.30	4.6	305.79
PZ-55A	1188000.059	641812.843	323	322.76	1" PVC	20.90	25.90	10.18	312.58
PZ-55B	1187911.743	642102.067	316.2	315.97	1" PVC	14.50	19.50	3.96	312.01
PZ-56	1188458.091	642050.34	320.4	322.88	1" PVC	8.10	13.10	11.92	310.96
PZ- 58	1189325.924	642582	306.7	312.33	1" PVC	5.10	8.10	4.56	307.77
PZ-59	1188472.669	643109.699	337.4	337.19	1" PVC	23.20	28.20	24.4	312.79

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Fort Detrick, Maryland

[1]Well	[1]Easting	[1]Northing	[1]GL Elevation (ft msl)	[1]MP Elevation (ft msl)	[1]Well Diameter and Material	[1]Top Screen	[1]Base Screen	[4]Depth to Water (bTOC)	Water Level Elevation March 2012 (ft msl)
SG -1	1183412.713	646699.083	374.40	377.22	--	--	--	2.90	374.32
SG-2	1186003.096	646291.259	340.90	344.74	--	--	--	3.25	341.49
SG-3	1182521.566	642432.4	368.70	372.38	--	--	--	3.19	369.19
SG-4	1183947.924	642584.32	350.40	352.47	--	--	--	3.51	348.96
SG-5	1186518.211	642918.374	322.50	325.6	--	--	--	1.79	323.81
SG -6	1187963.427	644799.814	318.90	322.51	--	--	--	2.55	319.96
SG-7	1187726.431	644288.254	315.80	319.85	--	--	--	3.00	316.85
SG -8	1187739.883	644201.087	316.30	319.63	--	--	--	2.82	316.81
SG-9	1187444.31	643316.073	316.40	320.01	--	--	--	2.16	317.85
SG -10	1187647.15	643378.678	314.20	317.93	--	--	--	2.90	315.03
SG -11	1187814.352	643251.43	311.20	313.71	--	--	--	1.44	312.27
SG -12	1188076.021	642790.229	308.40	312.6	--	--	--	2.88	309.72
SG -13	1188218.776	642909.683	310.50	315.01	--	--	--	3.88	311.13
SG -14	1188650.758	642343.275	305.70	309.51	--	--	--	3.03	306.48
SG -15	1189473.029	642614.511	303.90	307.45	--	--	--	2.96	304.49
SG -16	1190086.843	641613.126	297.20	300.48	--	--	--	1.77	298.71
SG -17	1187696.79	643856.578	317.10	321.17	--	--	--	2.68	318.49
SG -18	1187828.955	643846.171	314.60	317.25	--	--	--	1.99	315.26
SG -19	1186470.81	643034.673	325.50	330.26	--	--	--	4.29	325.97
SG-20	1188084.02	642290.395	310.10	312.91	--	--	--	2.81	310.10

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Water Level Elevations - March 26 and 27, 2012
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

[1]Well	[1]Easting	[1]Northing	[1]GL Elevation (ft msl)	[1]TOC Elevation (ft msl)	[1]Well Diameter and Material	[1]Top Screen	[1]Base Screen	[3]Notes
PZ -14	1187524.308	643278.559	318.7	318.34	1" PVC			
PZ-16	1187881.945	644005.986	319.2	322.37	1" PVC			
PZ-20	1188582.322	643626.65	329.6	329.47	1" PVC			
PZ -21	1188980.53	643521.108	321.4	321.25	1" PVC			
PZ-22	1186550.857	642979.304	327.1	329.55	1" PVC			
PZ-23	1186729.453	643115.796	327	329.62	1" PVC			
PZ-27	1187503.418	643110.291	323.9	323.44	1" PVC			
PZ-29	1187864.494	643221.897	316.7	319.56	1" PVC			
PZ- 30	1187992.468	643276.678	315.1	317.8	1" PVC			
PZ-31	1188192.088	643305.383	321.9	324.48	1" PVC			
PZ-33	1189055.347	643275.137	319.9	319.61	1" PVC			
PZ-34	1189489.498	643270.601	316.2	315.8	1" PVC			
PZ-36	1187493.162	642835.935	322.6	322.39	1" PVC			
PZ-37	1187733.282	642888.601	325.1	327.48	1" PVC			
PZ- 38	1187885.666	642953.7	317.4	320.08	1" PVC			
PZ-39	1187879.005	643115.596	314.8	317.78	1" PVC			
PZ-40	1188067.298	643129.822	314.2	316.96	1" PVC			
PZ -41	1186596.533	642724.05		**	1" PVC			
PZ-44	1187768.542	642577.926	324.8	327.56	1" PVC			
PZ-45	1188061.527	642719.595	315.6	318.53	1" PVC			
PZ-46	1188142.397	642912.539	312.3	315.21	1" PVC			
PZ-49	1189450.154	643012.851	315.1	314.88	1" PVC			
PZ-52	1188340.839	642513.938	310.1	313.47	1" PVC			
PZ-54	1189372.111	642717.348	307.5	310.39	1" PVC			
PZ-55A	1188000.059	641812.843	323	322.76	1" PVC			
PZ-55B	1187911.743	642102.067	316.2	315.97	1" PVC			
PZ-56	1188458.091	642050.34	320.4	322.88	1" PVC			
PZ- 58	1189325.924	642582	306.7	312.33	1" PVC			
PZ-59	1188472.669	643109.699	337.4	337.19	1" PVC			

Key:
GL - Ground Level
TOC - Top of Casing

Table A.7.5.4-1
Water Level Elevations - March 26 and 27, 2012
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

[1]Well	[1]Easting	[1]Northing	[1]GL Elevation (ft msl)	[1]MP Elevation (ft msl)	[4]Depth to Water (bTOC)	Surface Water Elevation March 2012 (ft msl)	[3]Notes
SG -1	1183412.713	646699.083	374.40	377.22	2.90	374.32	
SG-2	1186003.096	646291.259	340.90	344.74	3.25	341.49	
SG-3	1182521.566	642432.4	368.70	372.38	3.19	369.19	
SG-4	1183947.924	642584.32	350.40	352.47	3.51	348.96	
SG-5	1186518.211	642918.374	322.50	325.6	1.79	323.81	
SG -6	1187963.427	644799.814	318.90	322.51	2.55	319.96	
SG-7	1187726.431	644288.254	315.80	319.85	3.00	316.85	
SG -8	1187739.883	644201.087	316.30	319.63	2.82	316.81	
SG-9	1187444.31	643316.073	316.40	320.01	2.16	317.85	
SG -10	1187647.15	643378.678	314.20	317.93	2.90	315.03	
SG -11	1187814.352	643251.43	311.20	313.71	1.44	312.27	
SG -12	1188076.021	642790.229	308.40	312.6	2.88	309.72	
SG -13	1188218.776	642909.683	310.50	315.01	3.88	311.13	
SG -14	1188650.758	642343.275	305.70	309.51	3.03	306.48	
SG -15	1189473.029	642614.511	303.90	307.45	2.96	304.49	
SG -16	1190086.843	641613.126	297.20	300.48	1.77	298.71	
SG -17	1187696.79	643856.578	317.10	321.17	2.68	318.49	
SG -18	1187828.955	643846.171	314.60	317.25	1.99	315.26	
SG -19	1186470.81	643034.673	325.50	330.26	4.29	325.97	
SG-20	1188084.02	642290.395	310.10	312.91	2.81	310.10	

Key:
GL - Ground Level
MP - Monitoring Point

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW4 03/30/12 Area B Monitoring wells	BMW5 03/30/12 Area B Monitoring wells	BMW5D 03/30/12 Area B Monitoring wells	BMW9D 04/03/12 Area B Monitoring wells	BMW11 03/29/12 Area B Monitoring wells	BMW11 04/13/12 Area B Monitoring wells	BMW11D 03/30/12 Area B Monitoring wells	BMW16 04/06/12 Area B Monitoring wells	BMW018 11/15/11 Area B Monitoring wells	BMW18 04/05/12 Area B Monitoring wells
PCBs													
Aroclor-1016	- -	0.96	ug/L	0.096 U	0.097 U	0.097 U	0.1 U	0.11 U	NA	0.097 U	0.096 U	NA	0.099 U
Aroclor-1221	- -	0.0043	ug/L	0.096 U	0.097 U	0.097 U	0.1 U	0.11 U	NA	0.097 U	0.096 U	NA	0.099 U
Aroclor-1232	- -	0.0043	ug/L	0.096 U	0.097 U	0.097 U	0.1 U	0.11 U	NA	0.097 U	0.096 U	NA	0.099 U
Aroclor-1242	- -	0.034	ug/L	0.096 U	0.097 U	0.097 U	0.1 U	0.11 U	NA	0.097 U	0.096 U	NA	0.099 U
Aroclor-1248	- -	0.034	ug/L	0.096 U	0.097 U	0.097 U	0.1 U	0.11 U	NA	0.097 U	0.096 U	NA	0.099 U
Aroclor-1254	- -	0.034	ug/L	0.096 U	0.097 U	0.097 U	0.1 U	0.11 U	NA	0.097 U	0.096 U	NA	0.099 U
Aroclor-1260	- -	0.034	ug/L	0.096 U	0.097 U	0.097 U	0.1 U	0.11 U	NA	0.097 U	0.096 U	NA	0.099 U
Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.2 J	1	1.6
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.6	0.2 J	0.3 J
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	**3**	**2.5**
1,1-Dichloroethene	7	260	ug/L	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.3 J	0.4 J	14	17
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	**0.07 J**
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	NA	0.5 U	0.5 U	0.1 J	0.2 J
1,2,4-Trimethylbenzene	- -	15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA	0.5 U
1,2-Dibromo-3-chloropropane	0.2	0.00032	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.05	0.0065	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	**1**	**1.2**
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.1 J	0.1 J
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
2-Hexanone	- -	34	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	- -	1,000	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	**0.4 J**	0.2 J
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	- -	7	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.1 J
Chloroform	70	0.19	ug/L	**0.3 J**	0.1 J	**0.2 J**	**0.4 J**	0.5 U	NA	**0.6**	**3.6**	**5.7**	**5.4**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.8	16	20
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	- -	13,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.2 J	0.5 U	0.1 J
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	390	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	- -	16,000	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.2 J	0.5 U	0.5 U
Methylcyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	1.3	0.3 J
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	100	1,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	1	0.4 J	0.5 J	3.1	0.5 U	NA	0.2 J	4.5	2.6	3.7
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	NA	0.2 J	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.2 J	0.3 J
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	**3.8**	**150**	**150**
Trichlorofluoromethane	- -	1,100	ug/L	0.1 J	2.8	75	0.5 U	0.5 U	NA	1.5	16	3.6	7.5
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	**3**	**4.1**

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW4	BMW5	BMW5D	BMW9D	BMW11	BMW11	BMW11D	BMW16	BMW018	BMW18
Sample Depth(ft):													
Date Collected:				03/30/12	03/30/12	03/30/12	04/03/12	03/29/12	04/13/12	03/30/12	04/06/12	11/15/11	04/05/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Semivolatile Organics													
1,1'-Biphenyl	- -	0.83	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
1,2-Dichlorobenzene	600	280	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
1,3-Dichlorobenzene	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
1,4-Dichlorobenzene	75	0.42	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
1,4-Dioxane	- -	0.67	ug/L	5 U	5 U	5 U	5 U	6 U	NA	5 U	5 U	NA	**43**
1,4-Naphthoquinone	- -	- -	ug/L	29 U	29 U	31 U	30 U	34 U	NA	31 U	31 U	NA	30 U
2,2'-Oxybis(1-Chloropropane)	- -	0.31	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
2,4,5-Trichlorophenol	- -	890	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
2,4,6-Trichlorophenol	- -	3.5	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
2,4-Dichlorophenol	- -	35	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
2,4-Dimethylphenol	- -	270	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
2,4-Dinitrophenol	- -	30	ug/L	29 U	29 U	31 U	30 U	34 U	NA	31 U	31 U	NA	30 U
2,4-Dinitrotoluene	- -	0.2	ug/L	5 U	5 U	5 U	5 U	6 U	NA	5 U	5 U	NA	5 U
2,6-Dinitrotoluene	- -	15	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
2-Chloronaphthalene	- -	550	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
2-Chlorophenol	- -	71	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
2-Methylnaphthalene	- -	27	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
2-Methylphenol	- -	720	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
2-Nitroaniline	- -	150	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
2-Nitrophenol	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
3,3'-Dichlorobenzidine	- -	0.11	ug/L	5 U	5 U	5 U	5 U	6 U	NA	5 U	5 U	NA	5 U
3-Nitroaniline	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
4,6-Dinitro-2-methylphenol	- -	1.2	ug/L	15 U	15 U	16 U	15 U	17 U	NA	15 U	15 U	NA	15 U
4-Bromophenyl-phenylether	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
4-Chloro-3-Methylphenol	- -	1,100	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
4-Chloroaniline	- -	0.32	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
4-Chlorophenyl-phenylether	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
4-Methylphenol	- -	1,400	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
4-Nitroaniline	- -	3.3	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
4-Nitrophenol	- -	- -	ug/L	29 U	29 U	31 U	30 U	34 U	NA	31 U	31 U	NA	30 U
Acenaphthene	- -	400	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
Acenaphthylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
Acetophenone	- -	1,500	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
Anthracene	- -	1,300	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
Atrazine	3	0.26	ug/L	5 U	5 U	5 U	5 U	6 U	NA	5 U	5 U	NA	5 U
Benzaldehyde	- -	1,500	ug/L	5 U	5 U	5 U	5 U	6 U	NA	5 U	5 U	NA	5 U
Benzo(a)anthracene	- -	0.029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
Benzo(a)pyrene	0.2	0.0029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
Benzo(b)fluoranthene	- -	0.029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
Benzo(g,h,i)perylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
Benzo(k)fluoranthene	- -	0.29	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
Benzoic Acid	- -	58,000	ug/L	15 U	15 U	16 U	15 U	17 U	NA	15 U	15 U	NA	15 U
Benzyl Alcohol	- -	1,500	ug/L	15 U	15 U	16 U	15 U	17 U	NA	15 U	15 U	NA	15 U
bis(2-Chloroethoxy)methane	- -	47	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
bis(2-Chloroethyl)ether	- -	0.012	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
bis(2-Chloroisopropyl)ether	- -	- -	ug/L	1 U	1 U	1 U	NA	1 U	NA	1 U	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	5 U	5 U	5 U	5 U	6 U	NA	5 U	5 U	NA	5 U
Butylbenzylphthalate	- -	14	ug/L	5 U	5 U	5 U	5 U	6 U	NA	5 U	5 U	NA	5 U
Caprolactam	- -	7,700	ug/L	15 U	15 U	16 U	15 U	17 U	NA	15 U	15 U	NA	15 U
Carbazole	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
Chrysene	- -	2.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
Dibenzo(a,h)anthracene	- -	0.0029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
Dibenzofuran	- -	5.8	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
Diethylphthalate	- -	11,000	ug/L	5 U	5 U	5 U	5 U	6 U	NA	5 U	5 U	NA	5 U
Dimethylphthalate	- -	- -	ug/L	5 U	5 U	5 U	5 U	6 U	NA	5 U	5 U	NA	5 U
Di-n-Butylphthalate	- -	670	ug/L	5 U	5 U	5 U	5 U	6 U	NA	5 U	5 U	NA	5 U
Di-n-Octylphthalate	- -	- -	ug/L	5 U	5 U	5 U	5 U	6 U	NA	5 U	5 U	NA	5 U
Fluoranthene	- -	630	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
Fluorene	- -	220	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
Hexachlorobenzene	1	0.042	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
Hexachlorobutadiene	- -	0.26	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
Hexachlorocyclopentadiene	50	22	ug/L	15 U	15 U	16 U	15 U	17 U	NA	15 U	15 U	NA	15 U
Hexachloroethane	- -	0.79	ug/L	5 U	5 U	5 U	5 U	6 U	NA	5 U	5 U	NA	5 U
Indeno(1,2,3-cd)pyrene	- -	0.029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
Isophorone	- -	67	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
Naphthalene	- -	0.14	ug/L	0.5 U	0.1 J	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	**0.2 J**
Nitrobenzene	- -	0.12	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
N-Nitroso-di-n-propylamine	- -	0.0093	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
N-Nitrosodiphenylamine	- -	10	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
Pentachlorophenol	1	0.17	ug/L	5 U	5 U	5 U	5 U	6 U	NA	5 U	5 U	NA	5 U
Phenanthrene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
Phenol	- -	4,500	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
Pyrene	- -	87	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW4 03/30/12 Area B Monitoring wells	BMW5 03/30/12 Area B Monitoring wells	BMW5D 03/30/12 Area B Monitoring wells	BMW9D 04/03/12 Area B Monitoring wells	BMW11 03/29/12 Area B Monitoring wells	BMW11 04/13/12 Area B Monitoring wells	BMW11D 03/30/12 Area B Monitoring wells	BMW16 04/06/12 Area B Monitoring wells	BMW018 11/15/11 Area B Monitoring wells	BMW18 04/05/12 Area B Monitoring wells
Inorganics													
Aluminum	- -	16,000	ug/L	86.4 J	200 U	87.2 J	120 J	200 U	NA	771	200 U	NA	200 U
Antimony	6	6	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1	1 U	NA	1 U
Arsenic	10	0.045	ug/L	2 U	2 U	2 U	**16.1**	2 U	NA	2 U	2 U	NA	**2 J**
Barium	2,000	2,900	ug/L	34.4	34	84.7	125	63.3	NA	204	44.6	NA	109
Beryllium	4	16	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA	0.5 U
Boron	- -	3,100	ug/L	36 J	41.2 J	42.3 J	162	34.1 J	NA	17.5 J	6.1 J	NA	7.3 J
Cadmium	5	- -	ug/L	5 U	5 U	5 U	5 U	5 U	NA	1.7 J	5 U	NA	0.38 J
Calcium	- -	- -	ug/L	56,600	63,900	65,900	26,300	48,200	NA	60,700	60,700	NA	47,700
Chromium	100	- -	ug/L	15 U	15 U	15 U	2.3 J	1.3 J	NA	18.5	1.5 J	NA	1.4 J
Cobalt	- -	4.7	ug/L	5 U	5 U	5 U	5 U	5 U	NA	0.89 J	1.2 J	NA	**69.6**
Copper	1,300	620	ug/L	10 U	10 U	10 U	10 U	1.7 J	NA	19.3	10 U	NA	10 U
Cyanide	200	9.3	ug/L	NA	NA	NA	NA	NA	NA	10 U	10 U	NA	10 U
Iron	- -	11,000	ug/L	200 U	200 U	200 U	108 J	200 U	NA	1,520	200 U	NA	4,370
Lead	15	- -	ug/L	7.1 J	4.7 J	5.8 J	12.5 J	4.4 J	NA	15.1	6.2 J	NA	3.8 J
Magnesium	- -	- -	ug/L	16,000	17,500	19,700	18,800	14,400	NA	22,500	12,800	NA	21,100
Manganese	- -	- -	ug/L	5 U	5 U	5 U	1.9 J	0.49 J	NA	32.4	4.2 J	NA	8,230
Mercury	2	0.63	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	NA	0.2 U	0.2 U	NA	0.027 J
Nickel	- -	300	ug/L	10 U	10 U	10 U	10 U	10 U	NA	12.3	2.3 J	NA	54.5
Potassium	- -	- -	ug/L	2,680	1,940	1,670	1,980	1,640	NA	1,420	2,110	NA	11,700
Selenium	50	78	ug/L	20 U	20 U	20 U	20 U	20 U	NA	20 U	20 U	NA	20 U
Silver	- -	71	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	NA	1.4 J
Sodium	- -	- -	ug/L	14,900	10,200	10,200	31,500	2,440	NA	7,020	12,400	NA	12,400
Thallium	2	0.16	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA	0.5 U
Vanadium	- -	- -	ug/L	5 U	5 U	5 U	11.4	5 U	NA	1.5 J	5 U	NA	5 U
Zinc	- -	4,700	ug/L	20 U	20 U	20 U	20 U	4.4 J	NA	165	4.4 J	NA	77.2
Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	50	78	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW4 03/30/12 Area B Monitoring wells	BMW5 03/30/12 Area B Monitoring wells	BMW5D 03/30/12 Area B Monitoring wells	BMW9D 04/03/12 Area B Monitoring wells	BMW11 03/29/12 Area B Monitoring wells	BMW11 04/13/12 Area B Monitoring wells	BMW11D 03/30/12 Area B Monitoring wells	BMW16 04/06/12 Area B Monitoring wells	BMW018 11/15/11 Area B Monitoring wells	BMW18 04/05/12 Area B Monitoring wells
Miscellaneous													
Bromate	10	0.096	ug/L	NA	NA	NA	NA	NA	NA	5 U	NA	NA	NA
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	2,500 U	2,500 U	NA	2,500 U
Chloride	- -	- -	ug/L	NA	20,400	23,800	NA	15,600	NA	25,700	22,200	NA	38,100
Nitrate-N	10,000	25,000	ug/L	NA	1,400	1,300	NA	NA	920	5,100	3,900	NA	280 J
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Simazine	4	0.52	ug/L	NA	NA	NA	NA	NA	NA	1 U	1 U	NA	1 U
Sulfate	- -	- -	ug/L	NA	24,400	16,300	NA	10,600	NA	10,700	14,500	NA	40,800
Total Dissolved Solids	- -	- -	ug/L	NA	273,000	291,000	NA	205,000	NA	251,000	252,000	NA	306,000
Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA	NA	NA	NA	0.25 U	0.24 U	NA	0.25 U
2,4,5-T	- -	120	ug/L	NA	NA	NA	NA	NA	NA	0.0099 U	0.0044 J	NA	0.01 U
2,4,5-TP	50	84	ug/L	NA	NA	NA	NA	NA	NA	0.0099 U	0.0096 U	NA	0.06
2,4-D	70	130	ug/L	NA	NA	NA	NA	NA	NA	0.099 U	0.096 U	NA	0.1 U
2,4-DB	- -	91	ug/L	NA	NA	NA	NA	NA	NA	0.2 U	0.19 U	NA	0.2 U
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA	NA	NA	NA	200 U	190 U	NA	200 U
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA	NA	NA	NA	0.99 U	0.96 U	NA	1 U
Dicamba	- -	440	ug/L	NA	NA	NA	NA	NA	NA	0.059 U	0.058 U	NA	0.06 U
Dichlorprop	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	0.099 U	0.096 U	NA	0.1 U
Dinoseb	7	11	ug/L	NA	NA	NA	NA	NA	NA	0.099 U	0.096 U	NA	0.1 U
Diquat	20	34	ug/L	NA	NA	NA	NA	NA	NA	0.4 U	NA	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	0.015 U	0.015 U	NA	0.009 J
Endothall	100	300	ug/L	NA	NA	NA	NA	NA	NA	9 U	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	0.01 U	0.01 U	NA	0.022
MCPP	- -	12	ug/L	NA	NA	NA	NA	NA	NA	40 U	39 U	NA	40 U
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	0.01 U	0.006 J	NA	0.063
Pesticides													
4,4'-DDD	- -	0.28	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA	0.019 U	0.02 U	NA	0.02 U
4,4'-DDE	- -	0.2	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA	0.019 U	0.02 U	NA	0.02 U
4,4'-DDT	- -	0.2	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA	0.019 U	0.02 U	NA	0.02 U
Aldrin	- -	0.00021	ug/L	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0098 U	NA	0.0097 U	0.01 U	NA	0.01 U
Alpha-BHC	- -	0.0062	ug/L	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0098 U	NA	0.0097 U	0.01 U	NA	0.01 U
Alpha-Chlordane	- -	- -	ug/L	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0098 U	NA	0.0097 U	0.01 U	NA	0.01 U
Beta-BHC	- -	0.022	ug/L	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0098 U	NA	0.0097 U	0.01 U	NA	0.01 U
Delta-BHC	- -	- -	ug/L	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0098 U	NA	0.0097 U	0.01 U	NA	0.01 U
Dieldrin	- -	0.0015	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA	0.019 U	0.02 U	NA	0.02 U
Endosulfan I	- -	- -	ug/L	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0098 U	NA	0.0097 U	0.01 U	NA	0.01 U
Endosulfan II	- -	- -	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA	0.019 U	0.02 U	NA	0.02 U
Endosulfan Sulfate	- -	- -	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA	0.019 U	0.02 U	NA	0.02 U
Endrin	2	1.7	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA	0.019 U	0.02 U	NA	0.02 U
Endrin Aldehyde	- -	- -	ug/L	0.098 U	0.098 U	0.1 U	0.1 U	0.098 U	NA	0.097 U	0.1 U	NA	0.1 U
Endrin Ketone	- -	- -	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA	0.019 U	0.02 U	NA	0.02 U
Gamma-BHC (Lindane)	0.2	0.036	ug/L	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0098 U	NA	0.0097 U	0.01 U	NA	0.01 U
Gamma-Chlordane	- -	- -	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA	0.019 U	0.02 U	NA	0.02 U
Heptachlor	0.4	0.0018	ug/L	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0098 U	NA	0.0097 U	0.01 U	NA	0.01 U
Heptachlor Epoxide	0.2	0.0033	ug/L	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0098 U	NA	0.0097 U	0.01 U	NA	0.01 U
Methoxychlor	40	27	ug/L	0.098 U	0.098 U	0.1 U	0.1 U	0.098 U	NA	0.097 U	0.1 U	NA	0.1 U
Toxaphene	3	0.013	ug/L	2.9 U	3 U	3 U	3.1 U	2.9 U	NA	2.9 U	3 U	NA	3 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				BMW4	BMW5	BMW5D	BMW9D	BMW11	BMW11	BMW11D	BMW16	BMW018	BMW18
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				03/30/12	03/30/12	03/30/12	04/03/12	03/29/12	04/13/12	03/30/12	04/06/12	11/15/11	04/05/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	3.66 BJ	2.96 BJ	NA	3.37 BJ
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	1.29 BJ	0.925 BJ	NA	0.912 BJQ
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	0.281 BJQ	0.295 BJ	NA	0.398 BJ
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	9.62 U	0.252 BJ	NA	10.3 U
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	0.442 BJ	0.354 BJ	NA	0.434 BJ
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	0.448 BJ	0.173 BJ	NA	0.316 BJQ
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	0.331 BJQ	0.236 BJ	NA	0.281 BJ
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	0.485 BJQ	0.338 BJ	NA	0.288 BJ
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	0.368 BJ	0.294 BJ	NA	0.198 BJ
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	0.349 BJQ	0.146 BJQ	NA	10.3 U
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	0.342 BJQ	0.286 BJ	NA	0.179 BJQ
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	0.527 BJQ	0.182 BJ	NA	0.47 BJQ
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	0.577 BJQ	0.496 BJQ	NA	0.566 BJ
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	1.92 U	0.211 BJQ	NA	2.06 U
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	1.92 U	2.03 U	NA	2.06 U
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	1.74 BJ	0.986 BJ	NA	0.952 BJ
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	7.68 BJ	9.51 BJ	NA	38.4 B
Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	1.5	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	2.9	NA	NA	NA
SVOC TIC													
1-Methylnaphthalene	- -	0.97	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UNKNOWN PAH1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs TICs													
2-Cyclohexen-1-ol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diacetone Alcohol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	36 J	NA	18 J
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	6 JAB	NA	NA	NA	9 BJ	NA	NA
N-(3-Methylbutyl)acetamide	- -	- -	ug/L	NA	NA	82 J	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	24 J	0	82 J	83 JAB	0	NA	0	54 BJ	NA	91 J
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	77 J	NA	NA	NA	NA	NA	NA
Unknown Semivoloatile TIC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	24 J	NA	NA	NA	NA	NA	NA	6 J	NA	5 J
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOCs TICs													
2-Ethyl-1-Hexanol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorodifluoromethane	- -	100,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromonofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	9 J
Ethyl Ether	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorofluoro-	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOC TICs	- -	- -	ug/L	0	0	0	0	0	NA	0	0	NA	9 J
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				BMW20	BMW20D	BMW21	BMW21D	BMW24	BMW24D	BMW24D	BMW29A	BMW29B	BMW31
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				04/05/12	04/05/12	04/05/12	04/06/12	04/05/12	11/17/11	04/05/12	03/30/12	03/30/12	04/04/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
PCBs													
Aroclor-1016	- -	0.96	ug/L	0.1 U	0.1 U	0.098 U	0.1 U	0.097 U	NA	0.096 U	0.1 U	0.1 U	0.096 U
Aroclor-1221	- -	0.0043	ug/L	0.1 U	0.1 U	0.098 U	0.1 U	0.097 U	NA	0.096 U	0.1 U	0.1 U	0.096 U
Aroclor-1232	- -	0.0043	ug/L	0.1 U	0.1 U	0.098 U	0.1 U	0.097 U	NA	0.096 U	0.1 U	0.1 U	0.096 U
Aroclor-1242	- -	0.034	ug/L	0.1 U	0.1 U	0.098 U	0.1 U	0.097 U	NA	0.096 U	0.1 U	0.1 U	0.096 U
Aroclor-1248	- -	0.034	ug/L	0.1 U	0.1 U	0.098 U	0.1 U	0.097 U	NA	0.096 U	0.1 U	0.1 U	0.096 U
Aroclor-1254	- -	0.034	ug/L	0.1 U	0.1 U	0.098 U	0.1 U	0.097 U	NA	0.096 U	0.1 U	0.1 U	0.096 U
Aroclor-1260	- -	0.034	ug/L	0.1 U	0.1 U	0.098 U	0.1 U	0.097 U	NA	0.096 U	0.1 U	0.1 U	0.096 U
Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.3 J	0.5 J	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.7	1	1.5	0.5 U	0.1 J	0.5 U
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	- -	15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.2	0.00032	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.05	0.0065	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	**0.2 J**	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	- -	34	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	- -	1,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	- -	7	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	**3**	**4.1**	**6.4**	0.5 U	**0.3 J**	**0.2 J**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.5	0.6	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	- -	13,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	390	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	- -	16,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylcyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	100	1,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.5 U	**23**	0.5 U	2.7	0.4 J	**110**	**180**	0.1 J	0.5	0.5 U
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	0.5 U	0.1 J	0.5 U	0.5 U	**9.6**	**12**	**20**	0.5 U	**0.5**	0.5 U
Trichlorofluoromethane	- -	1,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	3.8	3.4	7.3	140	130	0.3 J
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				BMW20	BMW20D	BMW21	BMW21D	BMW24	BMW24D	BMW24D	BMW29A	BMW29B	BMW31
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				04/05/12	04/05/12	04/05/12	04/06/12	04/05/12	11/17/11	04/05/12	03/30/12	03/30/12	04/04/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Semivolatile Organics													
1,1'-Biphenyl	- -	0.83	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
1,2-Dichlorobenzene	600	280	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
1,3-Dichlorobenzene	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
1,4-Dichlorobenzene	75	0.42	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
1,4-Dioxane	- -	0.67	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
1,4-Naphthoquinone	- -	- -	ug/L	30 U	31 U	30 U	31 U	30 U	NA	29 U	29 U	30 U	28 U
2,2'-Oxybis(1-Chloropropane)	- -	0.31	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
2,4,5-Trichlorophenol	- -	890	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
2,4,6-Trichlorophenol	- -	3.5	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
2,4-Dichlorophenol	- -	35	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
2,4-Dimethylphenol	- -	270	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
2,4-Dinitrophenol	- -	30	ug/L	30 U	31 U	30 U	31 U	30 U	NA	29 U	29 U	30 U	28 U
2,4-Dinitrotoluene	- -	0.2	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	- -	15	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
2-Chloronaphthalene	- -	550	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
2-Chlorophenol	- -	71	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
2-Methylnaphthalene	- -	27	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
2-Methylphenol	- -	720	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
2-Nitroaniline	- -	150	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
2-Nitrophenol	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
3,3'-Dichlorobenzidine	- -	0.11	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
3-Nitroaniline	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
4,6-Dinitro-2-methylphenol	- -	1.2	ug/L	15 U	16 U	15 U	15 U	15 U	NA	15 U	15 U	15 U	14 U
4-Bromophenyl-phenylether	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
4-Chloro-3-Methylphenol	- -	1,100	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
4-Chloroaniline	- -	0.32	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
4-Chlorophenyl-phenylether	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
4-Methylphenol	- -	1,400	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
4-Nitroaniline	- -	3.3	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
4-Nitrophenol	- -	- -	ug/L	30 U	31 U	30 U	31 U	30 U	NA	29 U	29 U	30 U	28 U
Acenaphthene	- -	400	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Acenaphthylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Acetophenone	- -	1,500	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
Anthracene	- -	1,300	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Atrazine	3	0.26	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
Benzaldehyde	- -	1,500	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
Benzo(a)anthracene	- -	0.029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(a)pyrene	0.2	0.0029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(b)fluoranthene	- -	0.029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(g,h,i)perylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(k)fluoranthene	- -	0.29	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Benzoic Acid	- -	58,000	ug/L	15 U	16 U	15 U	15 U	15 U	NA	15 U	15 U	15 U	14 U
Benzyl Alcohol	- -	1,500	ug/L	15 U	16 U	15 U	15 U	15 U	NA	15 U	15 U	15 U	14 U
bis(2-Chloroethoxy)methane	- -	47	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
bis(2-Chloroethyl)ether	- -	0.012	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
bis(2-Chloroisopropyl)ether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	1 U	1 U	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
Butylbenzylphthalate	- -	14	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
Caprolactam	- -	7,700	ug/L	15 U	16 U	15 U	15 U	15 U	NA	15 U	15 U	15 U	14 U
Carbazole	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
Chrysene	- -	2.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Dibenzo(a,h)anthracene	- -	0.0029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Dibenzofuran	- -	5.8	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
Diethylphthalate	- -	11,000	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
Dimethylphthalate	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
Di-n-Butylphthalate	- -	670	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
Di-n-Octylphthalate	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
Fluoranthene	- -	630	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Fluorene	- -	220	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobenzene	1	0.042	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene	- -	0.26	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
Hexachlorocyclopentadiene	50	22	ug/L	15 U	16 U	15 U	15 U	15 U	NA	15 U	15 U	15 U	14 U
Hexachloroethane	- -	0.79	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
Indeno(1,2,3-cd)pyrene	- -	0.029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Isophorone	- -	67	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
Naphthalene	- -	0.14	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Nitrobenzene	- -	0.12	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
N-Nitroso-di-n-propylamine	- -	0.0093	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
N-Nitrosodiphenylamine	- -	10	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
Pentachlorophenol	1	0.17	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
Phenanthrene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Phenol	- -	4,500	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
Pyrene	- -	87	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW20 04/05/12 Area B Monitoring wells	BMW20D 04/05/12 Area B Monitoring wells	BMW21 04/05/12 Area B Monitoring wells	BMW21D 04/06/12 Area B Monitoring wells	BMW24 04/05/12 Area B Monitoring wells	BMW24D 11/17/11 Area B Monitoring wells	BMW24D 04/05/12 Area B Monitoring wells	BMW29A 03/30/12 Area B Monitoring wells	BMW29B 03/30/12 Area B Monitoring wells	BMW31 04/04/12 Area B Monitoring wells
Inorganics													
Aluminum	- -	16,000	ug/L	200 U	200 U	656	200 U	200 U	NA	200 U	200 U	290	200 U
Antimony	6	6	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U
Arsenic	10	0.045	ug/L	2 U	**1.3 J**	2 U	2 U	2 U	NA	2 U	2 U	**2.7**	2 U
Barium	2,000	2,900	ug/L	38.4	335	154	192	50	NA	58.9	57.8	79.4	59.6
Beryllium	4	16	ug/L	0.5 U	0.5 U	0.23 J	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Boron	- -	3,100	ug/L	2.7 J	50 U	50 U	50 U	3.1 J	NA	5.3 J	72.5	51.5	7.7 J
Cadmium	5	- -	ug/L	5 U	5 U	0.87 J	5 U	5 U	NA	5 U	5 U	5 U	5 U
Calcium	- -	- -	ug/L	29,700	25,900	19,800	39,900	60,300	NA	51,300	62,800	89,200	78,700
Chromium	100	- -	ug/L	15 U	2.3 J	5 J	15 U	1.3 J	NA	15 U	15 U	7 J	15 U
Cobalt	- -	4.7	ug/L	5 U	5 U	**40.3**	5 U	5 U	NA	1.5 J	5 U	5 U	5 U
Copper	1,300	620	ug/L	10 U	10 U	10 U	1 J	10 U	NA	10 U	10 U	10 U	10 U
Cyanide	200	9.3	ug/L	10 U	10 U	NA	NA	10 U	NA	10 U	10 U	10 U	NA
Iron	- -	11,000	ug/L	123 J	33 J	5,980	200 U	34.7 J	NA	200 U	200 U	200 U	29.4 J
Lead	15	- -	ug/L	5.3 J	5.1 J	15.1	6.3 J	9.1 J	NA	5.1 J	4.3 J	7.5 J	6.3 J
Magnesium	- -	- -	ug/L	13,000	21,200	2,720	31,500	14,800	NA	22,100	17,100	11,100	10,600
Manganese	- -	- -	ug/L	2.9 J	9.7	2,610	1.4 J	1.5 J	NA	5 U	5 U	0.96 J	9.8
Mercury	2	0.63	ug/L	0.2 U	0.2 U	0.041 J	0.2 U	0.039 J	NA	0.036 J	0.2 U	0.2 U	0.2 U
Nickel	- -	300	ug/L	10 U	1.7 J	10.5	10 U	10 U	NA	10 U	10 U	10 U	10 U
Potassium	- -	- -	ug/L	1,730	12,700	2,920	2,070	4,240	NA	1,350	1,350	3,570	1,600
Selenium	50	78	ug/L	20 U	20 U	20 U	20 U	20 U	NA	20 U	20 U	20 U	20 U
Silver	- -	71	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
Sodium	- -	- -	ug/L	26,700	14,000	7,070	12,500	10,500	NA	20,600	12,100	24,500	15,000
Thallium	2	0.16	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	5 U	5 U	1.6 J	5 U	5 U	NA	5 U	5 U	5.6	5 U
Zinc	- -	4,700	ug/L	20 U	20 U	16.3 J	6.7 J	20 U	NA	20 U	20 U	20 U	20 U
Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	200 U	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	2 U	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	152	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	50 U	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	0.66 J	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	20,100	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	15 U	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	**36.8**	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	10 U	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	3,770	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	11.9 J	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	2,700	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	2,500	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	0.2 U	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	7.6 J	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	2,620	NA	NA	NA	NA	NA	NA	NA
Selenium	50	78	ug/L	NA	NA	20 U	NA	NA	NA	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	7,230	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	8.5 J	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW20 04/05/12 Area B Monitoring wells	BMW20D 04/05/12 Area B Monitoring wells	BMW21 04/05/12 Area B Monitoring wells	BMW21D 04/06/12 Area B Monitoring wells	BMW24 04/05/12 Area B Monitoring wells	BMW24D 11/17/11 Area B Monitoring wells	BMW24D 04/05/12 Area B Monitoring wells	BMW29A 03/30/12 Area B Monitoring wells	BMW29B 03/30/12 Area B Monitoring wells	BMW31 04/04/12 Area B Monitoring wells
Miscellaneous													
Bromate	10	0.096	ug/L	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	NA
Bromide	- -	- -	ug/L	2,500 U	2,500 U	NA	NA	2,500 U	NA	2,500 U	2,500 U	2,500 U	NA
Chloride	- -	- -	ug/L	52,900	41,800	12,400	41,900	23,500	NA	45,400	34,000	61,100	NA
Nitrate-N	10,000	25,000	ug/L	3,600	1,900	360 J	2,100	3,500	NA	4,100	2,100	1,800	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Simazine	4	0.52	ug/L	1.1 U	1 U	NA	NA	1 U	NA	1 U	1 U	0.99 U	NA
Sulfate	- -	- -	ug/L	18,500	15,500	22,500	25,200	5,200	NA	10,000	15,900	38,800	NA
Total Dissolved Solids	- -	- -	ug/L	226,000	214,000	122,000	281,000	253,000	NA	281,000	268,000	209,000	NA
Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	0.1 J	0.26 U	NA	NA	0.25 U	NA	0.24 U	0.24 U	0.25 U	0.24 U
2,4,5-T	- -	120	ug/L	0.0099 U	0.0063 J	NA	NA	0.0099 U	NA	0.0096 U	0.0098 U	0.008 J	0.0097 U
2,4,5-TP	50	84	ug/L	0.0099 U	0.01 U	NA	NA	0.0099 U	NA	0.0096 U	0.0098 U	0.01 U	0.0097 U
2,4-D	70	130	ug/L	0.099 U	0.1 U	NA	NA	0.099 U	NA	0.096 U	0.098 U	0.1 U	0.097 U
2,4-DB	- -	91	ug/L	0.2 U	0.21 U	NA	NA	0.2 U	NA	0.19 U	0.2 U	0.2 U	0.19 U
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	200 U	210 U	NA	NA	200 U	NA	190 U	200 U	200 U	190 U
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	0.99 U	1 U	NA	NA	0.99 U	NA	0.96 U	0.98 U	1 U	0.97 U
Dicamba	- -	440	ug/L	0.06 U	0.062 U	NA	NA	0.059 U	NA	0.058 U	0.059 U	0.061 U	0.058 U
Dichlorprop	- -	- -	ug/L	0.099 U	0.1 U	NA	NA	0.099 U	NA	0.096 U	0.098 U	0.1 U	0.097 U
Dinoseb	7	11	ug/L	0.099 U	0.1 U	NA	NA	0.099 U	NA	0.096 U	0.098 U	0.1 U	0.097 U
Diquat	20	34	ug/L	NA	NA	NA	NA	NA	NA	NA	0.4 U	0.4 U	NA
Diuron	- -	28	ug/L	0.015 U	0.015 U	NA	NA	0.015 U	NA	0.015 U	0.015 U	0.015 U	NA
Endothall	100	300	ug/L	NA	NA	NA	NA	NA	NA	NA	9 U	9 U	NA
Fenuron	- -	- -	ug/L	0.01 U	0.01 U	NA	NA	0.01 U	NA	0.01 U	0.056	0.064	NA
MCPP	- -	12	ug/L	40 U	41 U	NA	NA	39 U	NA	38 U	39 U	40 U	39 U
Monuron	- -	- -	ug/L	0.01 U	0.01 U	NA	NA	0.006 J	NA	0.006 J	0.061	0.1	NA
Pesticides													
4,4'-DDD	- -	0.28	ug/L	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.019 U
4,4'-DDE	- -	0.2	ug/L	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.019 U
4,4'-DDT	- -	0.2	ug/L	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.019 U
Aldrin	- -	0.00021	ug/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U	0.0098 U	0.01 U	0.0097 U
Alpha-BHC	- -	0.0062	ug/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U	0.0098 U	0.01 U	0.0097 U
Alpha-Chlordane	- -	- -	ug/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U	0.0023 J	0.01 U	0.0097 U
Beta-BHC	- -	0.022	ug/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U	0.0098 U	0.01 U	0.0097 U
Delta-BHC	- -	- -	ug/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U	0.0098 U	0.01 U	0.0097 U
Dieldrin	- -	0.0015	ug/L	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.019 U
Endosulfan I	- -	- -	ug/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U	0.0098 U	0.01 U	0.0097 U
Endosulfan II	- -	- -	ug/L	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.019 U
Endosulfan Sulfate	- -	- -	ug/L	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.019 U
Endrin	2	1.7	ug/L	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.019 U
Endrin Aldehyde	- -	- -	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.098 U	0.1 U	0.097 U
Endrin Ketone	- -	- -	ug/L	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.019 U
Gamma-BHC (Lindane)	0.2	0.036	ug/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U	0.0098 U	0.01 U	0.0097 U
Gamma-Chlordane	- -	- -	ug/L	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.019 U
Heptachlor	0.4	0.0018	ug/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U	0.0098 U	0.01 U	0.0097 U
Heptachlor Epoxide	0.2	0.0033	ug/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U	0.0098 U	0.01 U	0.0097 U
Methoxychlor	40	27	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.098 U	0.1 U	0.097 U
Toxaphene	3	0.013	ug/L	3 U	3.1 U	3.1 U	3 U	3 U	NA	3.1 U	2.9 U	3 U	2.9 U

Table A.7.5.4-2
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Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW20 04/05/12 Area B Monitoring wells	BMW20D 04/05/12 Area B Monitoring wells	BMW21 04/05/12 Area B Monitoring wells	BMW21D 04/06/12 Area B Monitoring wells	BMW24 04/05/12 Area B Monitoring wells	BMW24D 11/17/11 Area B Monitoring wells	BMW24D 04/05/12 Area B Monitoring wells	BMW29A 03/30/12 Area B Monitoring wells	BMW29B 03/30/12 Area B Monitoring wells	BMW31 04/04/12 Area B Monitoring wells
Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	2.86 BJ	2.57 BJ	NA	NA	2.97 BJ	NA	2.44 BJ	2.97 BJ	3.4 BJ	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	1.18 BJ	0.79 BJ	NA	NA	1.01 BJ	NA	0.825 BJ	1.08 BJQ	2.04 BJQ	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	0.249 BJQ	0.368 BJ	NA	NA	0.506 BJ	NA	0.856 BJ	0.461 BJQ	0.304 BJQ	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	0.31 BJ	0.473 BJ	NA	NA	0.551 BJ	NA	0.245 BJ	0.387 BJQ	0.255 BJQ	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	0.297 BJ	0.466 BJ	NA	NA	0.599 BJ	NA	0.435 BJQ	0.543 BJQ	0.749 BJQ	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	0.364 BJ	0.578 BJ	NA	NA	0.629 BJ	NA	0.22 BJ	0.387 BJQ	0.452 BJQ	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	0.23 BJ	0.627 BJ	NA	NA	0.442 BJ	NA	0.374 BJ	0.211 BJQ	0.266 BJQ	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	0.781 BJ	0.456 BJ	NA	NA	0.488 BJQ	NA	0.32 BJ	9.74 U	0.658 BJQ	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	0.535 BJ	0.505 BJ	NA	NA	0.658 BJ	NA	0.565 BJ	9.74 U	10.5 U	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	0.241 BJQ	10.3 U	NA	NA	0.41 BJ	NA	0.187 BJQ	0.333 BJQ	0.303 BJQ	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	0.453 BJ	0.538 BJ	NA	NA	0.537 BJQ	NA	0.42 BJQ	0.205 BJQ	0.541 BJQ	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	0.363 BJ	0.45 BJQ	NA	NA	0.373 BJ	NA	0.354 BJ	0.458 BJQ	0.532 BJQ	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	0.655 BJ	0.641 BJ	NA	NA	0.777 BJ	NA	0.747 BJ	0.655 BJQ	0.732 BJQ	NA
2,3,7,8-TCDD	30	0.52	pg/L	2.06 U	**0.64 BJ**	NA	NA	**0.653 BJ**	NA	**1.07 BJQ**	0.24 JQ	2.1 U	NA
2,3,7,8-TCDF	- -	- -	pg/L	2.06 U	1.47 J	NA	NA	1.97 U	NA	1.94 U	0.262 BJQ	0.314 BJQ	NA
Octachlorodibenzofuran	- -	- -	pg/L	1.06 BJ	0.825 BJ	NA	NA	0.988 BJ	NA	0.864 BJ	1.46 BJQ	1.33 BJQ	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	6.62 BJ	5.45 BJ	NA	NA	6.79 BJ	NA	4.75 BJ	6.35 BJQ	7.94 BJ	NA
Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	-0.06000	0.04	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	0.6	3	NA
SVOC TIC													
1-Methylnaphthalene	- -	0.97	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UNKNOWN PAH1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs TICs													
2-Cyclohexen-1-ol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diacetone Alcohol	- -	- -	ug/L	22 J	53 J	26 J	30 J	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	6 BJ	8 BJ	NA	7 BJ	NA	NA	NA	NA	NA	NA
N-(3-Methylbutyl)acetamide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	56 BJ	180 BJ	77 J	71 BJ	0	NA	130 J	0	0	0
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown Semivoloatile TIC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	20 J	26 J	9 J	7 J	NA	NA	120 J	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOCs TICs													
2-Ethyl-1-Hexanol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorodifluoromethane	- -	100,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromonofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl Ether	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorofluoro-	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOC TICs	- -	- -	ug/L	0	0	0	0	0	NA	0	0	0	0
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				BMW31D	BMW31D	BMW32D	BMW32D	BMW33	BMW34	BMW35	BMW35D	BMW36	BMW36D
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				11/17/11	04/05/12	11/21/11	04/05/12	03/29/12	03/30/12	03/29/12	03/29/12	03/30/12	03/30/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
PCBs													
Aroclor-1016	- -	0.96	ug/L	NA	0.099 U	NA	0.1 U	0.097 U	0.099 U	0.098 U	0.1 U	0.099 U	0.1 U
Aroclor-1221	- -	0.0043	ug/L	NA	0.099 U	NA	0.1 U	0.097 U	0.099 U	0.098 U	0.1 U	0.099 U	0.1 U
Aroclor-1232	- -	0.0043	ug/L	NA	0.099 U	NA	0.1 U	0.097 U	0.099 U	0.098 U	0.1 U	0.099 U	0.1 U
Aroclor-1242	- -	0.034	ug/L	NA	0.099 U	NA	0.1 U	0.097 U	0.099 U	0.098 U	0.1 U	0.099 U	0.1 U
Aroclor-1248	- -	0.034	ug/L	NA	0.099 U	NA	0.1 U	0.097 U	0.099 U	0.098 U	0.1 U	0.099 U	0.1 U
Aroclor-1254	- -	0.034	ug/L	NA	0.099 U	NA	0.1 U	0.097 U	0.099 U	0.098 U	0.1 U	0.099 U	0.1 U
Aroclor-1260	- -	0.034	ug/L	NA	0.099 U	NA	0.1 U	0.097 U	0.099 U	0.098 U	0.1 U	0.099 U	0.1 U
Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.1 J	0.5 U	0.1 J
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.5 U	0.5 J	0.5	0.2 J	2
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	NA	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	- -	15	ug/L	NA	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.2	0.00032	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.05	0.0065	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	2.5 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	- -	34	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	- -	1,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	41 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	- -	7	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.4 J**	0.5 U	**1.2**	**1.3**	0.1 J	**0.5 J**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	22	1.1	0.5 U	0.5 U	0.5 U	0.5 U	0.6	0.7	0.5 U	0.5 U
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	- -	13,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	390	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	- -	16,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylcyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	100	1,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	**25**	3.9	0.4 J	0.5 U	0.1 J	0.5 U	0.5 J	0.5	0.1 J	0.2 J
Toluene	1,000	860	ug/L	0.1 J	0.3 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**2.9**	0.2 J	0.1 J	0.5 U	0.5 U	0.5 U	**5.6**	**6.1**	0.5 U	0.1 J
Trichlorofluoromethane	- -	1,100	ug/L	0.2 J	0.5 U	0.5 U	0.5 U	3.9	3.8	3.7	4.2	0.1 J	0.8
Vinyl Chloride	2	0.015	ug/L	**5.1**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				BMW31D	BMW31D	BMW32D	BMW32D	BMW33	BMW34	BMW35	BMW35D	BMW36	BMW36D
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				11/17/11	04/05/12	11/21/11	04/05/12	03/29/12	03/30/12	03/29/12	03/29/12	03/30/12	03/30/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Semivolatile Organics													
1,1'-Biphenyl	- -	0.83	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	600	280	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	- -	- -	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	75	0.42	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	- -	0.67	ug/L	NA	5 U	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Naphthoquinone	- -	- -	ug/L	NA	29 U	NA	NA	30 U	32 U	31 U	30 U	31 U	30 U
2,2'-Oxybis(1-Chloropropane)	- -	0.31	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
2,4,5-Trichlorophenol	- -	890	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
2,4,6-Trichlorophenol	- -	3.5	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dichlorophenol	- -	35	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dimethylphenol	- -	270	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dinitrophenol	- -	30	ug/L	NA	29 U	NA	NA	30 U	32 U	31 U	30 U	31 U	30 U
2,4-Dinitrotoluene	- -	0.2	ug/L	NA	5 U	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	- -	15	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
2-Chloronaphthalene	- -	550	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorophenol	- -	71	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
2-Methylnaphthalene	- -	27	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Methylphenol	- -	720	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
2-Nitroaniline	- -	150	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
2-Nitrophenol	- -	- -	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
3,3'-Dichlorobenzidine	- -	0.11	ug/L	NA	5 U	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U
3-Nitroaniline	- -	- -	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
4,6-Dinitro-2-methylphenol	- -	1.2	ug/L	NA	14 U	NA	NA	15 U	16 U	15 U	15 U	15 U	15 U
4-Bromophenyl-phenylether	- -	- -	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
4-Chloroaniline	- -	0.32	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
4-Chlorophenyl-phenylether	- -	- -	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
4-Methylphenol	- -	1,400	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
4-Nitroaniline	- -	3.3	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
4-Nitrophenol	- -	- -	ug/L	NA	29 U	NA	NA	30 U	32 U	31 U	30 U	31 U	30 U
Acenaphthene	- -	400	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acenaphthylene	- -	- -	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetophenone	- -	1,500	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
Anthracene	- -	1,300	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Atrazine	3	0.26	ug/L	NA	5 U	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U
Benzaldehyde	- -	1,500	ug/L	NA	5 U	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(a)anthracene	- -	0.029	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	0.5 U	NA	NA	0.5 U	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(b)fluoranthene	- -	0.029	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(g,h,i)perylene	- -	- -	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(k)fluoranthene	- -	0.29	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzoic Acid	- -	58,000	ug/L	NA	14 U	NA	NA	15 U	16 U	15 U	15 U	15 U	15 U
Benzyl Alcohol	- -	1,500	ug/L	NA	14 U	NA	NA	15 U	16 U	15 U	15 U	15 U	15 U
bis(2-Chloroethoxy)methane	- -	47	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
bis(2-Chloroethyl)ether	- -	0.012	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
bis(2-Chloroisopropyl)ether	- -	- -	ug/L	NA	NA	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	5 U	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U
Butylbenzylphthalate	- -	14	ug/L	NA	5 U	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U
Caprolactam	- -	7,700	ug/L	NA	14 U	NA	NA	15 U	16 U	15 U	15 U	15 U	15 U
Carbazole	- -	- -	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
Chrysene	- -	2.9	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibenzo(a,h)anthracene	- -	0.0029	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibenzofuran	- -	5.8	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
Diethylphthalate	- -	11,000	ug/L	NA	5 U	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U
Dimethylphthalate	- -	- -	ug/L	NA	5 U	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U
Di-n-Butylphthalate	- -	670	ug/L	NA	5 U	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U
Di-n-Octylphthalate	- -	- -	ug/L	NA	5 U	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U
Fluoranthene	- -	630	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Fluorene	- -	220	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobenzene	1	0.042	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene	- -	0.26	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorocyclopentadiene	50	22	ug/L	NA	14 U	NA	NA	15 U	16 U	15 U	15 U	15 U	15 U
Hexachloroethane	- -	0.79	ug/L	NA	5 U	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U
Indeno(1,2,3-cd)pyrene	- -	0.029	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isophorone	- -	67	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
Naphthalene	- -	0.14	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	0.5 U
Nitrobenzene	- -	0.12	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
N-Nitroso-di-n-propylamine	- -	0.0093	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
N-Nitrosodiphenylamine	- -	10	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
Pentachlorophenol	1	0.17	ug/L	NA	5 U	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U
Phenanthrene	- -	- -	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Phenol	- -	4,500	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
Pyrene	- -	87	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				BMW31D	BMW31D	BMW32D	BMW32D	BMW33	BMW34	BMW35	BMW35D	BMW36	BMW36D
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				11/17/11	04/05/12	11/21/11	04/05/12	03/29/12	03/30/12	03/29/12	03/29/12	03/30/12	03/30/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Inorganics													
Aluminum	- -	16,000	ug/L	NA	200 U	NA	200 U	200 U	151 J	483	200 U	200 U	287
Antimony	6	6	ug/L	NA	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	10	0.045	ug/L	NA	2 U	NA	**2 J**	2 U	2 U	2 U	2 U	2 U	2 U
Barium	2,000	2,900	ug/L	NA	183	NA	171	71.6	77.7	80.2	67.2	30.7	43.6
Beryllium	4	16	ug/L	NA	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Boron	- -	3,100	ug/L	NA	15.4 J	NA	6.1 J	28.1 J	22.9 J	10.6 J	12 J	44.9 J	33.2 J
Cadmium	5	- -	ug/L	NA	5 U	NA	0.27 J	5 U	5 U	5 U	5 U	5 U	5 U
Calcium	- -	- -	ug/L	NA	47,200	NA	77,900	60,900	67,300	66,900	63,900	39,800	47,300
Chromium	100	- -	ug/L	NA	15 U	NA	15 U	15 U	15 U	3.1 J	15 U	15 U	15 U
Cobalt	- -	4.7	ug/L	NA	5 U	NA	3.2 J	0.94 J	0.79 J	5 U	0.82 J	5 U	5 U
Copper	1,300	620	ug/L	NA	2 J	NA	10 U	10 U	0.96 J	10 U	10 U	10 U	10 U
Cyanide	200	9.3	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	200 U	NA	**11,900**	200 U	122 J	929	19.8 J	51.3 J	127 J
Lead	15	- -	ug/L	NA	8.9 J	NA	7.8 J	4.9 J	5.2 J	8.4 J	5 J	6.1 J	4.7 J
Magnesium	- -	- -	ug/L	NA	26,000	NA	4,930	13,400	20,300	16,100	15,800	12,800	15,000
Manganese	- -	- -	ug/L	NA	5.2	NA	729	5 U	7.4	149	1.3 J	1.5 J	2.4 J
Mercury	2	0.63	ug/L	NA	0.035 J	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	- -	300	ug/L	NA	1.7 J	NA	10 U	10 U	10 U	3.4 J	10 U	10 U	10 U
Potassium	- -	- -	ug/L	NA	2,280	NA	1,540	1,610	1,550	1,690	1,740	2,620	2,150
Selenium	50	78	ug/L	NA	20 U	NA	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Silver	- -	71	ug/L	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Sodium	- -	- -	ug/L	NA	15,800	NA	12,600	10,900	8,700	10,500	10,600	18,400	15,600
Thallium	2	0.16	ug/L	NA	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	NA	5 U	NA	5 U	5 U	5 U	0.97 J	5 U	5 U	5 U
Zinc	- -	4,700	ug/L	NA	140	NA	20 U	20 U	20 U	5.1 J	20 U	20 U	20 U
Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	200 U	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	1 U	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	2 U	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	72.4	NA	NA	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	NA	NA	0.5 U	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	9.3 J	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	5 U	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	64,100	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	15 U	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	5 U	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	10 U	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	200 U	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	7.2 J	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	15,800	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	10.2	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	0.2 U	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	1.6 J	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	1,640	NA	NA	NA
Selenium	50	78	ug/L	NA	NA	NA	NA	NA	NA	20 U	NA	NA	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	NA	NA	5 U	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	10,500	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	0.5 U	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	5 U	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	20 U	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				BMW31D	BMW31D	BMW32D	BMW32D	BMW33	BMW34	BMW35	BMW35D	BMW36	BMW36D
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				11/17/11	04/05/12	11/21/11	04/05/12	03/29/12	03/30/12	03/29/12	03/29/12	03/30/12	03/30/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Miscellaneous													
Bromate	10	0.096	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Simazine	4	0.52	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	0.096 J	NA	0.26 U	0.25 U	0.24 U	0.24 U	0.26 U	0.25 U	0.26 U
2,4,5-T	- -	120	ug/L	NA	0.0039 J	NA	0.0066 J	0.01 U	0.0097 U	0.0097 U	0.01 U	0.0076 J	0.01 U
2,4,5-TP	50	84	ug/L	NA	0.0098 U	NA	0.01 U	0.01 U	0.0097 U	0.0097 U	0.01 U	0.01 U	0.01 U
2,4-D	70	130	ug/L	NA	0.098 U	NA	0.1 U	0.1 U	0.097 U	0.097 U	0.1 U	0.1 U	0.1 U
2,4-DB	- -	91	ug/L	NA	0.2 U	NA	0.21 U	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	0.2 U
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	200 U	NA	210 U	200 U	190 U	190 U	210 U	200 U	200 U
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	0.98 U	NA	1 U	1 U	0.97 U	0.97 U	1 U	1 U	1 U
Dicamba	- -	440	ug/L	NA	0.059 U	NA	0.063 U	0.06 U	0.058 U	0.058 U	0.062 U	0.06 U	0.061 U
Dichlorprop	- -	- -	ug/L	NA	0.098 U	NA	0.1 U	0.1 U	0.097 U	0.097 U	0.1 U	0.1 U	0.1 U
Dinoseb	7	11	ug/L	NA	0.098 U	NA	0.1 U	0.1 U	0.097 U	0.097 U	0.1 U	0.1 U	0.1 U
Diquat	20	34	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endothall	100	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	- -	12	ug/L	NA	39 U	NA	42 U	40 U	39 U	39 U	41 U	40 U	41 U
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	0.019 U	NA	0.02 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U
4,4'-DDE	- -	0.2	ug/L	NA	0.019 U	NA	0.02 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U
4,4'-DDT	- -	0.2	ug/L	NA	0.019 U	NA	0.02 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U
Aldrin	- -	0.00021	ug/L	NA	0.0096 U	NA	0.0099 U	0.01 U	0.0096 U	0.0099 U	0.0096 U	0.01 U	0.01 U
Alpha-BHC	- -	0.0062	ug/L	NA	0.0096 U	NA	0.0099 U	0.01 U	0.0096 U	0.0099 U	0.0096 U	0.01 U	0.01 U
Alpha-Chlordane	- -	- -	ug/L	NA	0.0096 U	NA	0.0099 U	0.01 U	0.0096 U	0.0099 U	0.0096 U	0.01 U	0.01 U
Beta-BHC	- -	0.022	ug/L	NA	0.0096 U	NA	0.0099 U	0.01 U	0.0096 U	0.0099 U	0.0096 U	0.01 U	0.01 U
Delta-BHC	- -	- -	ug/L	NA	0.0096 U	NA	0.0099 U	0.01 U	0.0096 U	0.0099 U	0.0096 U	0.01 U	0.01 U
Dieldrin	- -	0.0015	ug/L	NA	0.019 U	NA	0.02 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U
Endosulfan I	- -	- -	ug/L	NA	0.0096 U	NA	0.0099 U	0.01 U	0.0096 U	0.0099 U	0.0096 U	0.01 U	0.01 U
Endosulfan II	- -	- -	ug/L	NA	0.019 U	NA	0.02 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U
Endosulfan Sulfate	- -	- -	ug/L	NA	0.019 U	NA	0.02 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U
Endrin	2	1.7	ug/L	NA	0.019 U	NA	0.02 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U
Endrin Aldehyde	- -	- -	ug/L	NA	0.096 U	NA	0.099 U	0.1 U	0.096 U	0.099 U	0.096 U	0.1 U	0.1 U
Endrin Ketone	- -	- -	ug/L	NA	0.019 U	NA	0.02 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	0.0096 U	NA	0.0099 U	0.01 U	0.0096 U	0.0099 U	0.0096 U	0.01 U	0.01 U
Gamma-Chlordane	- -	- -	ug/L	NA	0.019 U	NA	0.02 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U
Heptachlor	0.4	0.0018	ug/L	NA	0.0096 U	NA	0.0099 U	0.01 U	0.0096 U	0.0099 U	0.0096 U	0.01 U	0.01 U
Heptachlor Epoxide	0.2	0.0033	ug/L	NA	0.0096 U	NA	0.0099 U	0.01 U	0.0096 U	0.0099 U	0.0096 U	0.01 U	0.01 U
Methoxychlor	40	27	ug/L	NA	0.096 U	NA	0.099 U	0.1 U	0.096 U	0.099 U	0.096 U	0.1 U	0.1 U
Toxaphene	3	0.013	ug/L	NA	2.9 U	NA	3 U	3 U	2.9 U	3 U	2.9 U	3 U	3 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW31D 11/17/11 Area B Monitoring wells	BMW31D 04/05/12 Area B Monitoring wells	BMW32D 11/21/11 Area B Monitoring wells	BMW32D 04/05/12 Area B Monitoring wells	BMW33 03/29/12 Area B Monitoring wells	BMW34 03/30/12 Area B Monitoring wells	BMW35 03/29/12 Area B Monitoring wells	BMW35D 03/29/12 Area B Monitoring wells	BMW36 03/30/12 Area B Monitoring wells	BMW36D 03/30/12 Area B Monitoring wells
Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOC TIC													
1-Methylnaphthalene	- -	0.97	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UNKNOWN PAH1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs TICs													
2-Cyclohexen-1-ol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diacetone Alcohol	- -	- -	ug/L	NA	13 J	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	9 BJ	NA	NA	NA	NA	NA	NA	NA	NA
N-(3-Methylbutyl)acetamide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	21 BJ	NA	14 J	0	0	0	0	0	24 J
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown Semivoloatile TIC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	14 J	NA	NA	NA	NA	NA	24 J
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOCs TICs													
2-Ethyl-1-Hexanol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorodifluoromethane	- -	100,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromonofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl Ether	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorofluoro-	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOC TICs	- -	- -	ug/L	NA	0	NA	0	0	0	0	0	0	0
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				BMW37	BMW37D	BMW38	BMW40	BMW41D	BMW42	BMW43	BMW44	BMW45	BMW47D
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				04/09/12	04/09/12	04/05/12	04/03/12	04/02/12	04/02/12	04/02/12	03/30/12	03/29/12	04/06/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
PCBs													
Aroclor-1016	- -	0.96	ug/L	0.097 U	0.099 U	0.098 U	0.1 U	0.096 U	0.096 U	0.099 U	0.1 U	0.097 U	0.1 U
Aroclor-1221	- -	0.0043	ug/L	0.097 U	0.099 U	0.098 U	0.1 U	0.096 U	0.096 U	0.099 U	0.1 U	0.097 U	0.1 U
Aroclor-1232	- -	0.0043	ug/L	0.097 U	0.099 U	0.098 U	0.1 U	0.096 U	0.096 U	0.099 U	0.1 U	0.097 U	0.1 U
Aroclor-1242	- -	0.034	ug/L	0.097 U	0.099 U	0.098 U	0.1 U	0.096 U	0.096 U	0.099 U	0.1 U	0.097 U	0.1 U
Aroclor-1248	- -	0.034	ug/L	0.097 U	0.099 U	0.098 U	0.1 U	0.096 U	0.096 U	0.099 U	0.1 U	0.097 U	0.1 U
Aroclor-1254	- -	0.034	ug/L	0.097 U	0.099 U	0.098 U	0.1 U	0.096 U	0.096 U	0.099 U	0.1 U	0.097 U	0.1 U
Aroclor-1260	- -	0.034	ug/L	0.097 U	0.099 U	0.098 U	0.1 U	0.096 U	0.096 U	0.099 U	0.1 U	0.097 U	0.1 U
Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	1.3	3	0.3 J	0.5 U	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.2 J	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.4 J	0.8 J	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	4.8	10	0.9	0.2 J	0.5 U	0.5 U	1.2	0.5 U	0.3 J	0.5 U
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	- -	15	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.2	0.00032	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.05	0.0065	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	**0.5**	**1.2 J**	0.1 J	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	- -	34	ug/L	5 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	- -	1,000	ug/L	5 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	- -	7	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**13**	**27**	**4.4**	**0.6**	0.5 U	0.5 U	**3.3**	0.5 U	**0.4 J**	**0.3 J**
Chloromethane	- -	190	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	6.4	14	0.6	0.5 J	0.5 U	0.5 U	2.4	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	- -	13,000	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.1 J	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	390	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	- -	16,000	ug/L	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylcyclohexane	- -	- -	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	100	1,100	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	2.7	**320**	0.5 J	0.4 J	0.5 U	0.5 U	1.4	0.5 U	0.1 J	0.1 J
Toluene	1,000	860	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**59**	**160**	**14**	**4**	0.5 U	0.5 U	**20**	0.5 U	0.5 U	0.2 J
Trichlorofluoromethane	- -	1,100	ug/L	9.7	20	4	0.3 J	0.5 U	0.5 U	2.1	0.5 U	3.4	0.3 J
Vinyl Chloride	2	0.015	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				BMW37	BMW37D	BMW38	BMW40	BMW41D	BMW42	BMW43	BMW44	BMW45	BMW47D
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				04/09/12	04/09/12	04/05/12	04/03/12	04/02/12	04/02/12	04/02/12	03/30/12	03/29/12	04/06/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Semivolatile Organics													
1,1'-Biphenyl	- -	0.83	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	600	280	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	75	0.42	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	- -	0.67	ug/L	**1 J**	**3 J**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Naphthoquinone	- -	- -	ug/L	29 U	31 U	29 U	32 U	30 U	29 U	32 U	30 U	29 U	30 U
2,2'-Oxybis(1-Chloropropane)	- -	0.31	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4,5-Trichlorophenol	- -	890	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4,6-Trichlorophenol	- -	3.5	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dichlorophenol	- -	35	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dimethylphenol	- -	270	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dinitrophenol	- -	30	ug/L	29 U	31 U	29 U	32 U	30 U	29 U	32 U	30 U	29 U	30 U
2,4-Dinitrotoluene	- -	0.2	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	- -	15	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chloronaphthalene	- -	550	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorophenol	- -	71	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Methylnaphthalene	- -	27	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Methylphenol	- -	720	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Nitroaniline	- -	150	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Nitrophenol	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
3,3'-Dichlorobenzidine	- -	0.11	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
3-Nitroaniline	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4,6-Dinitro-2-methylphenol	- -	1.2	ug/L	15 U	15 U	15 U	16 U	15 U	15 U	16 U	15 U	15 U	15 U
4-Bromophenyl-phenylether	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Chloro-3-Methylphenol	- -	1,100	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Chloroaniline	- -	0.32	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Chlorophenyl-phenylether	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Methylphenol	- -	1,400	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Nitroaniline	- -	3.3	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Nitrophenol	- -	- -	ug/L	29 U	31 U	29 U	32 U	30 U	29 U	32 U	30 U	29 U	30 U
Acenaphthene	- -	400	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acenaphthylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetophenone	- -	1,500	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Anthracene	- -	1,300	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Atrazine	3	0.26	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzaldehyde	- -	1,500	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(a)anthracene	- -	0.029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(a)pyrene	0.2	0.0029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(b)fluoranthene	- -	0.029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(g,h,i)perylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(k)fluoranthene	- -	0.29	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzoic Acid	- -	58,000	ug/L	15 U	15 U	15 U	16 U	15 U	15 U	16 U	15 U	15 U	15 U
Benzyl Alcohol	- -	1,500	ug/L	15 U	15 U	15 U	16 U	15 U	15 U	16 U	15 U	15 U	15 U
bis(2-Chloroethoxy)methane	- -	47	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
bis(2-Chloroethyl)ether	- -	0.012	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
bis(2-Chloroisopropyl)ether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	1 U	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Butylbenzylphthalate	- -	14	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Caprolactam	- -	7,700	ug/L	15 U	15 U	15 U	16 U	15 U	15 U	16 U	15 U	15 U	15 U
Carbazole	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chrysene	- -	2.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibenzo(a,h)anthracene	- -	0.0029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibenzofuran	- -	5.8	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Diethylphthalate	- -	11,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dimethylphthalate	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Di-n-Butylphthalate	- -	670	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Di-n-Octylphthalate	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Fluoranthene	- -	630	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Fluorene	- -	220	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobenzene	1	0.042	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene	- -	0.26	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorocyclopentadiene	50	22	ug/L	15 U	15 U	15 U	16 U	15 U	15 U	16 U	15 U	15 U	15 U
Hexachloroethane	- -	0.79	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Indeno(1,2,3-cd)pyrene	- -	0.029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isophorone	- -	67	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Naphthalene	- -	0.14	ug/L	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U
Nitrobenzene	- -	0.12	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
N-Nitroso-di-n-propylamine	- -	0.0093	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
N-Nitrosodiphenylamine	- -	10	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Pentachlorophenol	1	0.17	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Phenanthrene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Phenol	- -	4,500	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Pyrene	- -	87	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW37	BMW37D	BMW38	BMW40	BMW41D	BMW42	BMW43	BMW44	BMW45	BMW47D
Sample Depth(ft):													
Date Collected:				04/09/12	04/09/12	04/05/12	04/03/12	04/02/12	04/02/12	04/02/12	03/30/12	03/29/12	04/06/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Inorganics													
Aluminum	- -	16,000	ug/L	200 U	200 U	157 J	200 U	103 J	200 U	151 J	200 U	189 J	13,200
Antimony	6	6	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	10	0.045	ug/L	2 U	2 U	2 U	2 U	2 U	**1.2 J**	2 U	**1.2 J**	2 U	**3.9**
Barium	2,000	2,900	ug/L	60.6	74.1	51.3	46.1	44.4	40.1	41.3	72.1	73.4	120
Beryllium	4	16	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.1
Boron	- -	3,100	ug/L	6.7 J	4.6 J	50 U	6.7 J	8.5 J	9.2 J	9.4 J	22.1 J	27.1 J	50 U
Cadmium	5	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.1 J
Calcium	- -	- -	ug/L	66,900	71,800	53,000	54,100	61,100	71,600	65,000	60,400	64,300	67,200
Chromium	100	- -	ug/L	15 U	15 U	15 U	15 U	15 U	15 U	1.3 J	15 U	15 U	17.3
Cobalt	- -	4.7	ug/L	5 U	2.1 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**7.9**
Copper	1,300	620	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1.5 J	10.7
Cyanide	200	9.3	ug/L	10 U	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	NA
Iron	- -	11,000	ug/L	119 J	47.4 J	291	200 U	129 J	200 U	279	200 U	96.5 J	**21,700**
Lead	15	- -	ug/L	10.4 J	8.3 J	7.3 J	8.5 J	15.1	8.4 J	7.5 J	9.3 J	8 J	53.2
Magnesium	- -	- -	ug/L	22,900	26,200	21,600	17,600	7,010	8,260	15,700	8,870	15,800	24,900
Manganese	- -	- -	ug/L	5.2	1.8 J	5.7	5 U	4.9 J	5 U	9.3	5 U	1.9 J	493
Mercury	2	0.63	ug/L	0.2 U	0.033 J	0.029 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.082 J
Nickel	- -	300	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	25.6
Potassium	- -	- -	ug/L	2,630	2,540	1,460	1,560	660	569	1,800	546	1,620	2,470
Selenium	50	78	ug/L	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Silver	- -	71	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Sodium	- -	- -	ug/L	15,100	14,200	17,700	7,270	7,920	7,230	7,660	6,790	12,400	7,970
Thallium	2	0.16	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**
Vanadium	- -	- -	ug/L	5 U	5 U	5 U	5 U	2.8 J	5.8	5 U	4.5 J	5 U	25.5
Zinc	- -	4,700	ug/L	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	146
Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	200 U
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	1 U
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	2 U
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	51.7
Beryllium	4	16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.5 U
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	50 U
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	57,400
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.1 J
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	200 U
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	13 J
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	22,600
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.7 J
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.2 U
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.8 J
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,280
Selenium	50	78	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	20 U
Silver	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	8,210
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.5 U
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	20 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW37 04/09/12 Area B Monitoring wells	BMW37D 04/09/12 Area B Monitoring wells	BMW38 04/05/12 Area B Monitoring wells	BMW40 04/03/12 Area B Monitoring wells	BMW41D 04/02/12 Area B Monitoring wells	BMW42 04/02/12 Area B Monitoring wells	BMW43 04/02/12 Area B Monitoring wells	BMW44 03/30/12 Area B Monitoring wells	BMW45 03/29/12 Area B Monitoring wells	BMW47D 04/06/12 Area B Monitoring wells
Miscellaneous													
Bromate	10	0.096	ug/L	NA	NA	NA	NA	NA	5 U	NA	5 U	NA	NA
Bromide	- -	- -	ug/L	2,500 U	2,500 U	2,500 U	NA	2,500 U	2,500 U	NA	2,500 U	NA	NA
Chloride	- -	- -	ug/L	38,600	39,100	43,600	NA	10,600	4,600	NA	10,500	NA	34,300
Nitrate-N	10,000	25,000	ug/L	3,800	3,600	4,000	NA	4,100	1,300	NA	2,500	NA	3,900
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Simazine	4	0.52	ug/L	1 U	0.99 U	1 U	NA	1.1 U	1 U	NA	1 U	NA	NA
Sulfate	- -	- -	ug/L	10,200	10,100	9,000	NA	20,000	30,200	NA	21,400	NA	10,400
Total Dissolved Solids	- -	- -	ug/L	342,000	351,000	278,000	NA	242,000	258,000	NA	240,000	NA	293,000
Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	0.25 U	0.25 U	0.068 J	0.25 U	0.25 U	0.25 U	0.26 U	0.25 U	0.24 U	0.19 J
2,4,5-T	- -	120	ug/L	0.0098 U	0.0098 U	0.0098 U	0.0031 J	0.01 U	0.0098 U	0.01 U	0.0067 J	0.0098 U	0.01 U
2,4,5-TP	50	84	ug/L	0.0098 U	0.0098 U	0.0098 U	0.0099 U	0.01 U	0.0098 U	0.01 U	0.01 U	0.0098 U	0.01 U
2,4-D	70	130	ug/L	0.098 U	0.098 U	0.098 U	0.099 U	0.1 U	0.098 U	0.1 U	0.1 U	0.098 U	0.1 U
2,4-DB	- -	91	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	0.2 U	0.21 U
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	200 U	200 U	200 U	200 U	200 U	200 U	210 U	200 U	200 U	210 U
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	0.31 J	0.79 J	0.98 U	0.99 U	1 U	0.98 U	1 U	1 U	0.98 U	1 U
Dicamba	- -	440	ug/L	0.059 U	0.059 U	0.059 U	0.06 U	0.06 U	0.059 U	0.063 U	0.061 U	0.059 U	0.063 U
Dichlorprop	- -	- -	ug/L	0.098 U	0.098 U	0.098 U	0.099 U	0.1 U	0.098 U	0.1 U	0.1 U	0.098 U	0.1 U
Dinoseb	7	11	ug/L	0.098 U	0.098 U	0.098 U	0.099 U	0.1 U	0.098 U	0.1 U	0.1 U	0.098 U	0.1 U
Diquat	20	34	ug/L	NA	NA	NA	NA	NA	0.4 U	NA	0.4 U	NA	NA
Diuron	- -	28	ug/L	0.015 U	0.015 U	0.015 U	NA	0.015 U	0.015 U	NA	0.015 U	NA	NA
Endothall	100	300	ug/L	NA	NA	NA	NA	NA	9 U	NA	9 U	NA	NA
Fenuron	- -	- -	ug/L	0.008 J	0.016	0.01 U	NA	0.01 U	0.01 U	NA	0.01 U	NA	NA
MCPP	- -	12	ug/L	39 U	39 U	39 U	40 U	40 U	39 U	42 U	41 U	39 U	42 U
Monuron	- -	- -	ug/L	0.041	0.077	0.008 J	NA	0.01 U	0.01 U	NA	0.01 U	NA	NA
Pesticides													
4,4'-DDD	- -	0.28	ug/L	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.019 U	0.02 U	0.02 U	0.019 U	0.02 U
4,4'-DDE	- -	0.2	ug/L	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.019 U	0.02 U	0.02 U	0.019 U	0.02 U
4,4'-DDT	- -	0.2	ug/L	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.019 U	0.02 U	0.02 U	0.019 U	0.02 U
Aldrin	- -	0.00021	ug/L	0.01 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0096 U	0.01 U	0.01 U	0.0096 U	0.01 U
Alpha-BHC	- -	0.0062	ug/L	0.01 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0096 U	0.01 U	0.01 U	0.0096 U	0.01 U
Alpha-Chlordane	- -	- -	ug/L	0.01 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0096 U	0.01 U	0.01 U	0.0096 U	0.01 U
Beta-BHC	- -	0.022	ug/L	0.01 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0096 U	0.01 U	0.01 U	0.0096 U	0.01 U
Delta-BHC	- -	- -	ug/L	0.01 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0096 U	0.01 U	0.01 U	0.0096 U	0.01 U
Dieldrin	- -	0.0015	ug/L	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.019 U	0.02 U	0.02 U	0.019 U	0.02 U
Endosulfan I	- -	- -	ug/L	0.01 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0096 U	0.01 U	0.01 U	0.0096 U	0.01 U
Endosulfan II	- -	- -	ug/L	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.019 U	0.02 U	0.02 U	0.019 U	0.02 U
Endosulfan Sulfate	- -	- -	ug/L	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.019 U	0.02 U	0.02 U	0.019 U	0.02 U
Endrin	2	1.7	ug/L	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.019 U	0.02 U	0.02 U	0.019 U	0.02 U
Endrin Aldehyde	- -	- -	ug/L	0.1 U	0.098 U	0.098 U	0.1 U	0.1 U	0.096 U	0.1 U	0.1 U	0.096 U	0.1 U
Endrin Ketone	- -	- -	ug/L	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.019 U	0.02 U	0.02 U	0.019 U	0.02 U
Gamma-BHC (Lindane)	0.2	0.036	ug/L	0.01 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0096 U	0.01 U	0.01 U	0.0096 U	0.01 U
Gamma-Chlordane	- -	- -	ug/L	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.019 U	0.02 U	0.02 U	0.019 U	0.02 U
Heptachlor	0.4	0.0018	ug/L	0.01 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0096 U	0.01 U	0.01 U	0.0096 U	0.01 U
Heptachlor Epoxide	0.2	0.0033	ug/L	0.01 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0096 U	0.01 U	0.01 U	0.0096 U	0.01 U
Methoxychlor	40	27	ug/L	0.1 U	0.098 U	0.098 U	0.1 U	0.1 U	0.096 U	0.1 U	0.1 U	0.096 U	0.1 U
Toxaphene	3	0.013	ug/L	3 U	2.9 U	2.9 U	3.1 U	3 U	2.9 U	3 U	3 U	2.9 U	3 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				BMW37	BMW37D	BMW38	BMW40	BMW41D	BMW42	BMW43	BMW44	BMW45	BMW47D
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				04/09/12	04/09/12	04/05/12	04/03/12	04/02/12	04/02/12	04/02/12	03/30/12	03/29/12	04/06/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	2.76 BJ	2.63 BJ	2.85 BJ	NA	2.89 BJ	3.89 BJQ	NA	4.41 BJ	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	1.08 BJ	1.25 BJ	1.01 BJQ	NA	1.42 BJ	2.05 BJ	NA	2.36 BJQ	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	0.189 BJQ	0.513 BJ	0.367 BJ	NA	0.626 BJ	1.47 BJ	NA	0.443 BJQ	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	0.305 BJ	0.361 BJ	0.283 BJQ	NA	0.452 BJ	1.29 BJ	NA	0.494 BJQ	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	0.411 BJ	0.481 BJQ	0.47 BJ	NA	0.484 BJ	1.58 BJ	NA	0.649 BJQ	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	0.312 BJ	0.478 BJ	0.361 BJ	NA	0.511 BJQ	1.38 BJ	NA	0.773 BJQ	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	0.418 BJ	0.445 BJQ	0.312 BJ	NA	0.426 BJQ	0.971 BJQ	NA	0.526 BJQ	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	0.292 BJ	0.721 BJQ	0.493 BJQ	NA	0.367 BJQ	1.26 BJ	NA	0.659 BJQ	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	0.147 BJ	0.599 BJ	0.156 BJ	NA	0.472 BJQ	1.87 BJ	NA	0.359 BJQ	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	0.3 BJ	0.428 BJQ	9.93 U	NA	0.412 BJQ	1.58 BJQ	NA	10.5 U	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	0.598 BJ	0.309 BJ	0.332 BJ	NA	0.378 BJQ	1.57 BJ	NA	0.49 BJQ	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	0.268 BJ	0.423 BJ	0.322 BJQ	NA	0.641 BJQ	1.74 BJ	NA	0.695 BJQ	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	0.468 BJQ	0.864 BJ	0.677 BJQ	NA	0.953 BJQ	1.46 BJ	NA	0.773 BJQ	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	0.326 BJQ	**0.919 BJ**	1.99 U	NA	2.02 U	1.94 U	NA	2.1 U	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	0.194 BJ	0.209 BJ	0.317 J	NA	0.411 J	0.461 BJQ	NA	0.288 BJQ	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	0.849 BJ	1.3 BJ	0.9 BJ	NA	1.14 BJQ	2.62 BJ	NA	0.966 BJQ	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	8.21 BJ	4.98 BJ	5.65 BJ	NA	5.06 BJ	8.1 BJ	NA	7.28 BJQ	NA	NA
Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	1.2	NA	0.41	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	-0.9200	NA	0.2	NA	NA
SVOC TIC													
1-Methylnaphthalene	- -	0.97	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	4 J	100 J	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UNKNOWN PAH1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	4 J	100 J	NA	NA	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs TICs													
2-Cyclohexen-1-ol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diacetone Alcohol	- -	- -	ug/L	NA	NA	27 J	NA	NA	NA	NA	NA	NA	38 J
Mesityl Oxide	- -	- -	ug/L	NA	NA	8 BJ	NA	6 JAB	NA	NA	NA	NA	9 BJ
N-(3-Methylbutyl)acetamide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	70 BJ	0	6 JAB	0	0	0	0	60 BJ
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown Semivoloatile TIC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	26 J	NA	NA	NA	NA	NA	NA	7 J
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOCs TICs													
2-Ethyl-1-Hexanol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorodifluoromethane	- -	100,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromonofluoromethane	- -	- -	ug/L	2 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl Ether	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorofluoro-	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOC TICs	- -	- -	ug/L	2 J	0	0	0	0	0	0	0	0	0
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				BMW49	BMW52D	BMW53A	BMW53B	BMW53B	BMW53D	BMW53E	BMW53F	BMW54D	BMW55D
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				04/02/12	04/03/12	04/03/12	11/17/11	04/03/12	04/03/12	04/03/12	04/03/12	04/04/12	04/05/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
PCBs													
Aroclor-1016	- -	0.96	ug/L	0.098 U	0.098 U [0.1 U]	0.1 U	NA	0.1 U	0.1 U	0.097 U	0.097 U	0.1 U	0.1 U
Aroclor-1221	- -	0.0043	ug/L	0.098 U	0.098 U [0.1 U]	0.1 U	NA	0.1 U	0.1 U	0.097 U	0.097 U	0.1 U	0.1 U
Aroclor-1232	- -	0.0043	ug/L	0.098 U	0.098 U [0.1 U]	0.1 U	NA	0.1 U	0.1 U	0.097 U	0.097 U	0.1 U	0.1 U
Aroclor-1242	- -	0.034	ug/L	0.098 U	0.098 U [0.1 U]	0.1 U	NA	0.1 U	0.1 U	0.097 U	0.097 U	0.1 U	0.1 U
Aroclor-1248	- -	0.034	ug/L	0.098 U	0.098 U [0.1 U]	0.1 U	NA	0.1 U	0.1 U	0.097 U	0.097 U	0.1 U	0.1 U
Aroclor-1254	- -	0.034	ug/L	0.098 U	0.098 U [0.1 U]	0.1 U	NA	0.1 U	0.1 U	0.097 U	0.097 U	0.1 U	0.1 U
Aroclor-1260	- -	0.034	ug/L	0.098 U	0.098 U [0.1 U]	0.1 U	NA	0.1 U	0.1 U	0.097 U	0.097 U	0.1 U	0.1 U
Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.7 [0.7]	0.5 J	0.4 J	0.7	0.7	0.7	1.1	0.5	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.4 J	0.1 J [0.1 J]	0.1 J	0.5 U	0.1 J	0.2 J	0.2 J	0.1 J	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.5 U	2.2 [2.1]	1.3	1.1	2	2.3	2.3	2.8	0.7	0.5 U
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	- -	15	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.2	0.00032	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.05	0.0065	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	**0.2 J [0.2 J]**	**0.2 J**	0.1 J	**0.2 J**	**0.3 J**	**0.3 J**	**0.3 J**	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U [5 U]	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	- -	34	ug/L	5 U	5 U [5 U]	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	- -	1,000	ug/L	5 U	5 U [5 U]	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U [5 U]	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.2 J	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	- -	7	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.3 J	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.3 J	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**0.5**	**7.1 [6.9]**	**6.2**	**4.1**	**6.2**	**7.1**	**7**	**9.3**	**3**	0.5 U
Chloromethane	- -	190	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	1	2.2 [2.1]	1.5	1.6	2.5	3	2.9	1.6	0.5	0.5 U
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	- -	13,000	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.2 J	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	390	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	- -	16,000	ug/L	1 U	1 U [1 U]	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	- -	12	ug/L	0.1 J	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylcyclohexane	- -	- -	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.2 J	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	100	1,100	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.6	1.6 [1.5]	1.2	0.9	1.8	8.7	2	0.8	0.4 J	0.5 U
Toluene	1,000	860	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	0.2 J	**26 [26]**	**22**	**24**	**31**	**31**	**32**	**41 E**	**12**	0.5 U
Trichlorofluoromethane	- -	1,100	ug/L	2	7.5 [7.2]	4.5	3	5.9	6.7	6.7	11	3.8	0.5 U
Vinyl Chloride	2	0.015	ug/L	**0.1 J**	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW49 04/02/12 Area B Monitoring wells	BMW52D 04/03/12 Area B Monitoring wells	BMW53A 04/03/12 Area B Monitoring wells	BMW53B 11/17/11 Area B Monitoring wells	BMW53B 04/03/12 Area B Monitoring wells	BMW53D 04/03/12 Area B Monitoring wells	BMW53E 04/03/12 Area B Monitoring wells	BMW53F 04/03/12 Area B Monitoring wells	BMW54D 04/04/12 Area B Monitoring wells	BMW55D 04/05/12 Area B Monitoring wells
Semivolatile Organics													
1,1'-Biphenyl	- -	0.83	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	600	280	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	- -	- -	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	75	0.42	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	- -	0.67	ug/L	5 U	5 U [5 U]	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Naphthoquinone	- -	- -	ug/L	29 U	30 U [30 U]	30 U	NA	30 U	30 U	30 U	29 U	31 U	30 U
2,2'-Oxybis(1-Chloropropane)	- -	0.31	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
2,4,5-Trichlorophenol	- -	890	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
2,4,6-Trichlorophenol	- -	3.5	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dichlorophenol	- -	35	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dimethylphenol	- -	270	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dinitrophenol	- -	30	ug/L	29 U	30 U [30 U]	30 U	NA	30 U	30 U	30 U	29 U	31 U	30 U
2,4-Dinitrotoluene	- -	0.2	ug/L	5 U	5 U [5 U]	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	- -	15	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
2-Chloronaphthalene	- -	550	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorophenol	- -	71	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
2-Methylnaphthalene	- -	27	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Methylphenol	- -	720	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
2-Nitroaniline	- -	150	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
2-Nitrophenol	- -	- -	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
3,3'-Dichlorobenzidine	- -	0.11	ug/L	5 U	5 U [5 U]	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
3-Nitroaniline	- -	- -	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
4,6-Dinitro-2-methylphenol	- -	1.2	ug/L	15 U	15 U [15 U]	15 U	NA	15 U	15 U	15 U	14 U	15 U	15 U
4-Bromophenyl-phenylether	- -	- -	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
4-Chloro-3-Methylphenol	- -	1,100	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
4-Chloroaniline	- -	0.32	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
4-Chlorophenyl-phenylether	- -	- -	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
4-Methylphenol	- -	1,400	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
4-Nitroaniline	- -	3.3	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
4-Nitrophenol	- -	- -	ug/L	29 U	30 U [30 U]	30 U	NA	30 U	30 U	30 U	29 U	31 U	30 U
Acenaphthene	- -	400	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acenaphthylene	- -	- -	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetophenone	- -	1,500	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
Anthracene	- -	1,300	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Atrazine	3	0.26	ug/L	5 U	5 U [5 U]	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Benzaldehyde	- -	1,500	ug/L	5 U	5 U [5 U]	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(a)anthracene	- -	0.029	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(a)pyrene	0.2	0.0029	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(b)fluoranthene	- -	0.029	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(g,h,i)perylene	- -	- -	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(k)fluoranthene	- -	0.29	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzoic Acid	- -	58,000	ug/L	15 U	15 U [15 U]	15 U	NA	15 U	15 U	15 U	14 U	15 U	15 U
Benzyl Alcohol	- -	1,500	ug/L	15 U	15 U [15 U]	15 U	NA	15 U	15 U	15 U	14 U	15 U	15 U
bis(2-Chloroethoxy)methane	- -	47	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
bis(2-Chloroethyl)ether	- -	0.012	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
bis(2-Chloroisopropyl)ether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	5 U	5 U [5 U]	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Butylbenzylphthalate	- -	14	ug/L	5 U	5 U [5 U]	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Caprolactam	- -	7,700	ug/L	15 U	15 U [15 U]	15 U	NA	15 U	15 U	15 U	14 U	15 U	15 U
Carbazole	- -	- -	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
Chrysene	- -	2.9	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibenzo(a,h)anthracene	- -	0.0029	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibenzofuran	- -	5.8	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
Diethylphthalate	- -	11,000	ug/L	5 U	5 U [5 U]	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Dimethylphthalate	- -	- -	ug/L	5 U	5 U [5 U]	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Di-n-Butylphthalate	- -	670	ug/L	5 U	5 U [5 U]	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Di-n-Octylphthalate	- -	- -	ug/L	5 U	5 U [5 U]	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Fluoranthene	- -	630	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Fluorene	- -	220	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobenzene	1	0.042	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene	- -	0.26	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorocyclopentadiene	50	22	ug/L	15 U	15 U [15 U]	15 U	NA	15 U	15 U	15 U	14 U	15 U	15 U
Hexachloroethane	- -	0.79	ug/L	5 U	5 U [5 U]	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Indeno(1,2,3-cd)pyrene	- -	0.029	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isophorone	- -	67	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
Naphthalene	- -	0.14	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Nitrobenzene	- -	0.12	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
N-Nitroso-di-n-propylamine	- -	0.0093	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
N-Nitrosodiphenylamine	- -	10	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
Pentachlorophenol	1	0.17	ug/L	5 U	5 U [5 U]	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Phenanthrene	- -	- -	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Phenol	- -	4,500	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
Pyrene	- -	87	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW49 04/02/12 Area B Monitoring wells	BMW52D 04/03/12 Area B Monitoring wells	BMW53A 04/03/12 Area B Monitoring wells	BMW53B 11/17/11 Area B Monitoring wells	BMW53B 04/03/12 Area B Monitoring wells	BMW53D 04/03/12 Area B Monitoring wells	BMW53E 04/03/12 Area B Monitoring wells	BMW53F 04/03/12 Area B Monitoring wells	BMW54D 04/04/12 Area B Monitoring wells	BMW55D 04/05/12 Area B Monitoring wells
Inorganics													
Aluminum	- -	16,000	ug/L	200 U	200 U [200 U]	526	NA	200 U	292	127 J	235	200 U	1,540
Antimony	6	6	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	10	0.045	ug/L	2 U	2 U [2 U]	**4.1**	NA	2 U	2 U	2 U	2 U	2 U	2 U
Barium	2,000	2,900	ug/L	73.8	55.8 [55.6]	25.5	NA	44.4	48.2	53.1	57.8	78.2	48.3
Beryllium	4	16	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.18 J
Boron	- -	3,100	ug/L	11.2 J	6.1 J [6.3 J]	6.9 J	NA	6.4 J	6.8 J	5.8 J	4 J	5.2 J	50 U
Cadmium	5	- -	ug/L	5 U	5 U [5 U]	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Calcium	- -	- -	ug/L	131,000	55,300 [57,300]	59,100	NA	60,600	64,500	57,700	47,100	55,400	58,300
Chromium	100	- -	ug/L	15 U	15 U [15 U]	4.6 J	NA	3.3 J	1.9 J	3 J	2.7 J	2.6 J	6.1 J
Cobalt	- -	4.7	ug/L	1.1 J	5 U [5 U]	5 U	NA	0.91 J	5 U	5 U	5 U	5 U	1.3 J
Copper	1,300	620	ug/L	10 U	10 U [10 U]	10 U	NA	1.1 J	0.94 J	10 U	1.3 J	10 U	1.2 J
Cyanide	200	9.3	ug/L	10 U	NA	NA	NA	NA	10 U	NA	NA	NA	NA
Iron	- -	11,000	ug/L	106 J	1,030 [835]	53 J	NA	97.9 J	861	20.6 J	424	200 U	3,030
Lead	15	- -	ug/L	13 J	4.9 J [4.3 J]	6.4 J	NA	5.8 J	7 J	5.8 J	7 J	7.4 J	14 J
Magnesium	- -	- -	ug/L	19,100	20,000 [20,100]	3,150	NA	18,200	18,200	14,900	15,700	17,400	27,400
Manganese	- -	- -	ug/L	368	4.4 J [3.8 J]	1.2 J	NA	6.6	33.2	0.91 J	8.4	5 U	109
Mercury	2	0.63	ug/L	0.2 U	0.2 U [0.2 U]	0.2 U	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.027 J
Nickel	- -	300	ug/L	3.8 J	10 U [10 U]	0.98 J	NA	17.9	1.3 J	10 U	1.3 J	10 U	5.1 J
Potassium	- -	- -	ug/L	3,080	1,650 [1,610]	5,750	NA	1,620	1,660	2,550	1,990	1,680	5,620
Selenium	50	78	ug/L	20 U	20 U [20 U]	20 U	NA	20 U	20 U	20 U	20 U	20 U	20 U
Silver	- -	71	ug/L	5 U	5 U [5 U]	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Sodium	- -	- -	ug/L	7,250	14,700 [14,700]	10,900	NA	12,000	11,700	12,100	8,950	12,900	12,600
Thallium	2	0.16	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	5 U	5 U [5 U]	7.3	NA	5 U	1.6 J	5 U	2.4 J	5 U	3.2 J
Zinc	- -	4,700	ug/L	7.5 J	20 U [20 U]	20 U	NA	20 U	4 J	20 U	3.9 J	20 U	12.6 J
Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	200 U	NA	NA	NA	200 U
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	1 U	NA	NA	NA	1 U
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	2 U	NA	NA	NA	2 U
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	45.2	NA	NA	NA	39.5
Beryllium	4	16	ug/L	NA	NA	NA	NA	NA	0.5 U	NA	NA	NA	0.5 U
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	6.5 J	NA	NA	NA	50 U
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	5 U	NA	NA	NA	5 U
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	60,400	NA	NA	NA	54,200
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	15 U	NA	NA	NA	15 U
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	5 U	NA	NA	NA	5 U
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	10 U	NA	NA	NA	10 U
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	200 U	NA	NA	NA	200 U
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	5.7 J	NA	NA	NA	10 J
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	18,000	NA	NA	NA	25,100
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	5 U	NA	NA	NA	3.7 J
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	0.2 U	NA	NA	NA	0.2 U
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	10 U	NA	NA	NA	0.97 J
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	1,590	NA	NA	NA	5,420
Selenium	50	78	ug/L	NA	NA	NA	NA	NA	20 U	NA	NA	NA	20 U
Silver	- -	71	ug/L	NA	NA	NA	NA	NA	5 U	NA	NA	NA	5 U
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	11,700	NA	NA	NA	12,400
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	0.5 U	NA	NA	NA	0.5 U
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	5 U	NA	NA	NA	5 U
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	20 U	NA	NA	NA	20 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW49 04/02/12 Area B Monitoring wells	BMW52D 04/03/12 Area B Monitoring wells	BMW53A 04/03/12 Area B Monitoring wells	BMW53B 11/17/11 Area B Monitoring wells	BMW53B 04/03/12 Area B Monitoring wells	BMW53D 04/03/12 Area B Monitoring wells	BMW53E 04/03/12 Area B Monitoring wells	BMW53F 04/03/12 Area B Monitoring wells	BMW54D 04/04/12 Area B Monitoring wells	BMW55D 04/05/12 Area B Monitoring wells
Miscellaneous													
Bromate	10	0.096	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	- -	- -	ug/L	2,500 U	NA	NA	NA	NA	2,500 U	NA	NA	NA	NA
Chloride	- -	- -	ug/L	13,900	34,100	21,200	NA	28,400	28,600	26,700	27,600	33,900	24,100
Nitrate-N	10,000	25,000	ug/L	2,100	3,700	2,700	NA	3,600	3,600	3,700	3,800	3,500	5,600
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Simazine	4	0.52	ug/L	1 U	NA	NA	NA	NA	0.99 U	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	13,900	10,200	16,600	NA	26,100	21,500	25,700	7,100	12,600	13,900
Total Dissolved Solids	- -	- -	ug/L	460,000	280,000	150,000	NA	267,000	273,000	202,000	224,000	255,000	297,000
Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	0.25 U	0.26 U [0.25 U]	0.25 U	NA	0.25 U	0.24 U	0.24 U	0.24 U	0.25 U	0.24 U
2,4,5-T	- -	120	ug/L	0.0056 J	0.011 U [0.01 U]	0.0031 J	NA	0.0099 U	0.0098 U	0.0096 U	0.003 J	0.0099 U	0.0032 J
2,4,5-TP	50	84	ug/L	0.0099 U	0.011 U [0.01 U]	0.01 U	NA	0.0099 U	0.0098 U	0.0096 U	0.0096 U	0.0099 U	0.0097 U
2,4-D	70	130	ug/L	0.099 U	0.11 U [0.1 U]	0.1 U	NA	0.099 U	0.098 U	0.096 U	0.096 U	0.099 U	0.097 U
2,4-DB	- -	91	ug/L	0.2 U	0.21 U [0.2 U]	0.2 U	NA	0.2 U	0.2 U	0.19 U	0.19 U	0.2 U	0.19 U
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	200 U	210 U [200 U]	200 U	NA	200 U	200 U	190 U	190 U	200 U	190 U
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	0.99 U	1.1 U [1 U]	1 U	NA	0.99 U	0.98 U	0.96 U	0.96 U	0.99 U	0.97 U
Dicamba	- -	440	ug/L	0.059 U	0.063 U [0.061 U]	0.061 U	NA	0.059 U	0.059 U	0.057 U	0.058 U	0.06 U	0.058 U
Dichlorprop	- -	- -	ug/L	0.099 U	0.11 U [0.1 U]	0.1 U	NA	0.099 U	0.098 U	0.096 U	0.096 U	0.099 U	0.097 U
Dinoseb	7	11	ug/L	0.099 U	0.11 U [0.1 U]	0.1 U	NA	0.099 U	0.098 U	0.096 U	0.096 U	0.099 U	0.097 U
Diquat	20	34	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	0.11	NA	NA	NA	NA	0.015 U	NA	NA	NA	NA
Endothall	100	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	0.01 U	NA	NA	NA	NA	0.01 U	NA	NA	NA	NA
MCPP	- -	12	ug/L	40 U	42 U [40 U]	41 U	NA	39 U	39 U	38 U	39 U	40 U	39 U
Monuron	- -	- -	ug/L	0.01 U	NA	NA	NA	NA	0.009 J	NA	NA	NA	NA
Pesticides													
4,4'-DDD	- -	0.28	ug/L	0.02 U	0.021 U [0.02 U]	0.021 U	NA	0.021 U	0.02 U	0.019 U	0.019 U	0.022 U	0.019 U
4,4'-DDE	- -	0.2	ug/L	0.02 U	0.021 U [0.02 U]	0.021 U	NA	0.021 U	0.02 U	0.019 U	0.019 U	0.022 U	0.019 U
4,4'-DDT	- -	0.2	ug/L	0.02 U	0.021 U [0.02 U]	0.021 U	NA	0.021 U	0.02 U	0.019 U	0.019 U	0.022 U	0.019 U
Aldrin	- -	0.00021	ug/L	0.0099 U	0.01 U [0.01 U]	0.011 U	NA	0.01 U	0.0099 U	0.0097 U	0.0096 U	0.011 U	0.0096 U
Alpha-BHC	- -	0.0062	ug/L	0.0099 U	0.01 U [0.01 U]	0.011 U	NA	0.01 U	0.0099 U	0.0097 U	0.0096 U	0.011 U	0.0096 U
Alpha-Chlordane	- -	- -	ug/L	0.0099 U	0.01 U [0.01 U]	0.011 U	NA	0.01 U	0.0099 U	0.0097 U	0.0096 U	0.011 U	0.0096 U
Beta-BHC	- -	0.022	ug/L	0.0099 U	0.01 U [0.01 U]	0.011 U	NA	0.01 U	0.0099 U	0.0097 U	0.0096 U	0.011 U	0.0096 U
Delta-BHC	- -	- -	ug/L	0.0099 U	0.01 U [0.01 U]	0.011 U	NA	0.01 U	0.0099 U	0.0097 U	0.0096 U	0.011 U	0.0096 U
Dieldrin	- -	0.0015	ug/L	0.02 U	0.021 U [0.02 U]	0.021 U	NA	0.021 U	0.02 U	0.019 U	0.019 U	0.022 U	0.019 U
Endosulfan I	- -	- -	ug/L	0.0099 U	0.01 U [0.01 U]	0.011 U	NA	0.01 U	0.0099 U	0.0097 U	0.0096 U	0.011 U	0.0096 U
Endosulfan II	- -	- -	ug/L	0.02 U	0.021 U [0.02 U]	0.021 U	NA	0.021 U	0.02 U	0.019 U	0.019 U	0.022 U	0.019 U
Endosulfan Sulfate	- -	- -	ug/L	0.02 U	0.021 U [0.02 U]	0.021 U	NA	0.021 U	0.02 U	0.019 U	0.019 U	0.022 U	0.019 U
Endrin	2	1.7	ug/L	0.02 U	0.021 U [0.02 U]	0.021 U	NA	0.021 U	0.02 U	0.019 U	0.019 U	0.022 U	0.019 U
Endrin Aldehyde	- -	- -	ug/L	0.099 U	0.1 U [0.1 U]	0.11 U	NA	0.1 U	0.099 U	0.097 U	0.096 U	0.11 U	0.096 U
Endrin Ketone	- -	- -	ug/L	0.02 U	0.021 U [0.02 U]	0.021 U	NA	0.021 U	0.02 U	0.019 U	0.019 U	0.022 U	0.019 U
Gamma-BHC (Lindane)	0.2	0.036	ug/L	0.0099 U	0.01 U [0.01 U]	0.011 U	NA	0.01 U	0.0099 U	0.0097 U	0.0096 U	0.011 U	0.0096 U
Gamma-Chlordane	- -	- -	ug/L	0.02 U	0.021 U [0.02 U]	0.021 U	NA	0.021 U	0.02 U	0.019 U	0.019 U	0.022 U	0.019 U
Heptachlor	0.4	0.0018	ug/L	0.0099 U	0.01 U [0.01 U]	0.011 U	NA	0.01 U	0.0099 U	0.0097 U	0.0096 U	0.011 U	0.0096 U
Heptachlor Epoxide	0.2	0.0033	ug/L	0.0099 U	0.01 U [0.01 U]	0.011 U	NA	0.01 U	0.0099 U	0.0097 U	0.0096 U	0.011 U	0.0096 U
Methoxychlor	40	27	ug/L	0.099 U	0.1 U [0.1 U]	0.11 U	NA	0.1 U	0.099 U	0.097 U	0.096 U	0.11 U	0.096 U
Toxaphene	3	0.013	ug/L	3 U	3.1 U [3.1 U]	3.2 U	NA	3.1 U	3 U	2.9 U	2.9 U	3.3 U	2.9 U

Table A.7.5.4-2
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Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW49 04/02/12 Area B Monitoring wells	BMW52D 04/03/12 Area B Monitoring wells	BMW53A 04/03/12 Area B Monitoring wells	BMW53B 11/17/11 Area B Monitoring wells	BMW53B 04/03/12 Area B Monitoring wells	BMW53D 04/03/12 Area B Monitoring wells	BMW53E 04/03/12 Area B Monitoring wells	BMW53F 04/03/12 Area B Monitoring wells	BMW54D 04/04/12 Area B Monitoring wells	BMW55D 04/05/12 Area B Monitoring wells
Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	4.28 BJ	NA	NA	NA	NA	2.78 BJ	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	1.25 BJQ	NA	NA	NA	NA	1.41 BJ	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	0.456 BJQ	NA	NA	NA	NA	0.449 BJ	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	0.295 BJ	NA	NA	NA	NA	0.206 BJQ	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	0.553 BJQ	NA	NA	NA	NA	0.291 BJQ	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	0.34 BJQ	NA	NA	NA	NA	0.498 BJQ	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	0.294 BJQ	NA	NA	NA	NA	0.365 BJQ	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	0.635 BJ	NA	NA	NA	NA	9.88 U	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	0.296 BJQ	NA	NA	NA	NA	0.458 BJQ	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	0.429 BJ	NA	NA	NA	NA	0.508 BJQ	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	0.266 BJQ	NA	NA	NA	NA	0.543 BJQ	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	0.402 BJ	NA	NA	NA	NA	0.403 BJ	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	0.618 BJ	NA	NA	NA	NA	0.526 BJQ	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	0.321 BJQ	NA	NA	NA	NA	1.98 U	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	1.98 U	NA	NA	NA	NA	1.98 U	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	1.48 BJQ	NA	NA	NA	NA	1.42 BJ	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	40.9 B	NA	NA	NA	NA	6.1 BJ	NA	NA	NA	NA
Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOC TIC													
1-Methylnaphthalene	- -	0.97	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UNKNOWN PAH1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs TICs													
2-Cyclohexen-1-ol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diacetone Alcohol	- -	- -	ug/L	NA	9 JA	21 JA	NA	15 JA	14 JA	14 JA	14 JA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	7 JAB	NA	8 JAB	7 JAB	7 JAB	7 JAB	5 J	8 BJ
N-(3-Methylbutyl)acetamide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	88 J	23 JA [11 JAB]	28 JAB	NA	23 JAB	70 JAB	21 JAB	29 JAB	5 J	57 BJ
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown Semivoloatile TIC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	84 J	14 J [6 J]	NA	NA	NA	48 J	NA	7 J	NA	35 J
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOCs TICs													
2-Ethyl-1-Hexanol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorodifluoromethane	- -	100,000	ug/L	2 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromonofluoromethane	- -	- -	ug/L	7 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl Ether	- -	3,100	ug/L	2 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorofluoro-	- -	- -	ug/L	1 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOC TICs	- -	- -	ug/L	12 J	0 [0]	0	NA	0	0	0	0	0	0
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW56D 11/21/11 Area B Monitoring wells	BMW56D 04/09/12 Area B Monitoring wells	BMW57D 11/18/11 Area B Monitoring wells	BMW57D 04/10/12 Area B Monitoring wells	BMW58D 11/18/11 Area B Monitoring wells	BMW58D 04/06/12 Area B Monitoring wells	BMW59D 11/18/11 Area B Monitoring wells	BMW59D 04/06/12 Area B Monitoring wells	BMW61 04/04/12 Area B Monitoring wells	BMW62 04/02/12 Area B Monitoring wells
PCBs													
Aroclor-1016	- -	0.96	ug/L	NA	0.1 U	NA	0.097 U	NA	0.096 U	NA	0.099 U [0.1 U]	0.099 U	0.1 U
Aroclor-1221	- -	0.0043	ug/L	NA	0.1 U	NA	0.097 U	NA	0.096 U	NA	0.099 U [0.1 U]	0.099 U	0.1 U
Aroclor-1232	- -	0.0043	ug/L	NA	0.1 U	NA	0.097 U	NA	0.096 U	NA	0.099 U [0.1 U]	0.099 U	0.1 U
Aroclor-1242	- -	0.034	ug/L	NA	0.1 U	NA	0.097 U	NA	0.096 U	NA	0.099 U [0.1 U]	0.099 U	0.1 U
Aroclor-1248	- -	0.034	ug/L	NA	0.1 U	NA	0.097 U	NA	0.096 U	NA	0.099 U [0.1 U]	0.099 U	0.1 U
Aroclor-1254	- -	0.034	ug/L	NA	0.1 U	NA	0.097 U	NA	0.096 U	NA	0.099 U [0.1 U]	0.099 U	0.1 U
Aroclor-1260	- -	0.034	ug/L	NA	0.1 U	NA	0.097 U	NA	0.096 U	NA	0.099 U [0.1 U]	0.099 U	0.1 U
Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	17	59	21	24	1.2	8.2	0.7	0.7 [0.7]	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	**0.9 J**	**2.9 J**	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	2.1 J	25 U	3.9 J	4.6 J	0.3 J	1.1	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	**1 J**	25 U	**1.2 J**	10 U	0.5 U	**0.4 J**	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	**4.6**	**13 J**	**8.5**	**7.9 J**	0.2 J	1 J	0.1 J	0.5 U [0.5 U]	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	59	220	90	100	4.6	30	2.5	2.3 [2.3]	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	5.2	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	NA	50 U	NA	**1.8 J**	NA	**0.1 J**	NA	1 U [1 U]	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	**9.9**	**69**	**26**	**37**	0.2 J	1 U	0.2 J	0.5 U [0.5 U]	0.5 U	0.5 U
1,2,4-Trimethylbenzene	- -	15	ug/L	NA	25 U	NA	10 U	NA	1 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.2	0.00032	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
1,2-Dibromoethane	0.05	0.0065	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	2.5 U	25 U	1.4 J	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	**6.1**	**22 J**	**14**	**16**	**0.5 J**	**2.6**	**0.3 J**	**0.3 J [0.3 J]**	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	**0.5 J**	25 U	**2.3 J**	**2.3 J**	0.5 U	0.2 J	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	**0.6 J**	25 U	**1.1 J**	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	25 U	250 U	50 U	100 U	5 U	10 U	5 U	5 U [5 U]	5 U	5 U
2-Hexanone	- -	34	ug/L	25 U	250 U	50 U	100 U	5 U	10 U	5 U	5 U [5 U]	5 U	5 U
4-Methyl-2-pentanone	- -	1,000	ug/L	25 U	250 U	50 U	100 U	5 U	10 U	5 U	5 U [5 U]	5 U	5 U
Acetone	- -	12,000	ug/L	25 U	250 U	50 U	100 U	5 U	10 U	5 U	5 U [5 U]	5 U	5 U
Benzene	5	0.39	ug/L	**10**	**40**	**25**	**26**	0.1 J	0.2 J	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Bromomethane	- -	7	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	1 J	25 U	2.4 J	2.8 J	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**90**	**380**	**200**	**230**	**17**	**100**	**9.9**	**9.9 [10]**	**0.5**	0.5 U
Chloromethane	- -	190	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	**130**	**440**	**230**	**270**	4	14	1.5	1.3 [1.4]	0.5 U	0.5 U
cis-1,3-Dichloropropene	- -	- -	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Cyclohexane	- -	13,000	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.7 J	25 U	1.8 J	2.4 J	0.5 U	0.3 J	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	**2.8**	**14 J**	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Isopropylbenzene	- -	390	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Methyl acetate	- -	16,000	ug/L	5 U	50 U	10 U	20 U	1 U	2 U	1 U	1 U [1 U]	1 U	1 U
Methyl tert-butyl ether	- -	12	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Methylcyclohexane	- -	- -	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	2.9	9.8 J	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Styrene	100	1,100	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	**25**	**110**	**72**	**93**	1.9	7.2	0.9	0.9 [0.9]	0.5 U	0.5 U
Toluene	1,000	860	ug/L	0.5 J	25 U	5 U	10 U	0.5 U	1 U	0.1 J	0.5 U [0.5 U]	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
trans-1,3-Dichloropropene	- -	- -	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**840**	**3,300**	**1,500**	**1,900**	**54**	**360**	**26**	**25 [26]**	**2.9**	0.5 U
Trichlorofluoromethane	- -	1,100	ug/L	27	150	81	110	12	68	8.2	9.7 [9.8]	0.3 J	0.5 U
Vinyl Chloride	2	0.015	ug/L	**4.3**	**16 J**	**12**	**11**	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				BMW56D	BMW56D	BMW57D	BMW57D	BMW58D	BMW58D	BMW59D	BMW59D	BMW61	BMW62
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				11/21/11	04/09/12	11/18/11	04/10/12	11/18/11	04/06/12	11/18/11	04/06/12	04/04/12	04/02/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Semivolatile Organics													
1,1'-Biphenyl	- -	0.83	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	**72**	NA	**32**	NA	1 U	NA	1 U [1 U]	1 U	1 U
1,2-Dichlorobenzene	600	280	ug/L	NA	2	NA	2	NA	1 U	NA	1 U [1 U]	1 U	1 U
1,3-Dichlorobenzene	- -	- -	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
1,4-Dichlorobenzene	75	0.42	ug/L	NA	**2**	NA	**1**	NA	1 U	NA	1 U [1 U]	1 U	1 U
1,4-Dioxane	- -	0.67	ug/L	NA	**33**	NA	**53**	NA	**7**	NA	5 U [5 U]	5 U	5 U
1,4-Naphthoquinone	- -	- -	ug/L	NA	36 U	NA	30 U	NA	29 U	NA	31 U [30 U]	30 U	30 U
2,2'-Oxybis(1-Chloropropane)	- -	0.31	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
2,4,5-Trichlorophenol	- -	890	ug/L	NA	7	NA	2	NA	1 U	NA	1 U [1 U]	1 U	1 U
2,4,6-Trichlorophenol	- -	3.5	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
2,4-Dichlorophenol	- -	35	ug/L	NA	8	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
2,4-Dimethylphenol	- -	270	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
2,4-Dinitrophenol	- -	30	ug/L	NA	36 U	NA	30 U	NA	29 U	NA	31 U [30 U]	30 U	30 U
2,4-Dinitrotoluene	- -	0.2	ug/L	NA	6 U	NA	5 U	NA	5 U	NA	5 U [5 U]	5 U	5 U
2,6-Dinitrotoluene	- -	15	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
2-Chloronaphthalene	- -	550	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
2-Chlorophenol	- -	71	ug/L	NA	1	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
2-Methylnaphthalene	- -	27	ug/L	NA	0.4 J	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
2-Methylphenol	- -	720	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
2-Nitroaniline	- -	150	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
2-Nitrophenol	- -	- -	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
3,3'-Dichlorobenzidine	- -	0.11	ug/L	NA	6 U	NA	5 U	NA	5 U	NA	5 U [5 U]	5 U	5 U
3-Nitroaniline	- -	- -	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
4,6-Dinitro-2-methylphenol	- -	1.2	ug/L	NA	18 U	NA	15 U	NA	14 U	NA	15 U [15 U]	15 U	15 U
4-Bromophenyl-phenylether	- -	- -	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	1	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
4-Chloroaniline	- -	0.32	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
4-Chlorophenyl-phenylether	- -	- -	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
4-Methylphenol	- -	1,400	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
4-Nitroaniline	- -	3.3	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
4-Nitrophenol	- -	- -	ug/L	NA	36 U	NA	30 U	NA	29 U	NA	31 U [30 U]	30 U	30 U
Acenaphthene	- -	400	ug/L	NA	0.6 U	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Acenaphthylene	- -	- -	ug/L	NA	0.6 U	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Acetophenone	- -	1,500	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
Anthracene	- -	1,300	ug/L	NA	0.6 U	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Atrazine	3	0.26	ug/L	NA	6 U	NA	5 U	NA	5 U	NA	5 U [5 U]	5 U	5 U
Benzaldehyde	- -	1,500	ug/L	NA	6 U	NA	5 U	NA	5 U	NA	5 U [5 U]	5 U	5 U
Benzo(a)anthracene	- -	0.029	ug/L	NA	0.6 U	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	0.6 U	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Benzo(b)fluoranthene	- -	0.029	ug/L	NA	0.6 U	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Benzo(g,h,i)perylene	- -	- -	ug/L	NA	0.6 U	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Benzo(k)fluoranthene	- -	0.29	ug/L	NA	0.6 U	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Benzoic Acid	- -	58,000	ug/L	NA	18 U	NA	15 U	NA	14 U	NA	15 U [15 U]	15 U	15 U
Benzyl Alcohol	- -	1,500	ug/L	NA	18 U	NA	15 U	NA	14 U	NA	15 U [15 U]	15 U	15 U
bis(2-Chloroethoxy)methane	- -	47	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
bis(2-Chloroethyl)ether	- -	0.012	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
bis(2-Chloroisopropyl)ether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	6 U	NA	5 U	NA	5 U	NA	5 U [5 U]	5 U	5 U
Butylbenzylphthalate	- -	14	ug/L	NA	6 U	NA	5 U	NA	5 U	NA	5 U [5 U]	5 U	5 U
Caprolactam	- -	7,700	ug/L	NA	18 U	NA	15 U	NA	14 U	NA	15 U [15 U]	15 U	15 U
Carbazole	- -	- -	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
Chrysene	- -	2.9	ug/L	NA	0.6 U	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Dibenzo(a,h)anthracene	- -	0.0029	ug/L	NA	0.6 U	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Dibenzofuran	- -	5.8	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
Diethylphthalate	- -	11,000	ug/L	NA	6 U	NA	5 U	NA	5 U	NA	5 U [5 U]	5 U	5 U
Dimethylphthalate	- -	- -	ug/L	NA	6 U	NA	5 U	NA	5 U	NA	5 U [5 U]	5 U	5 U
Di-n-Butylphthalate	- -	670	ug/L	NA	6 U	NA	5 U	NA	5 U	NA	5 U [5 U]	5 U	5 U
Di-n-Octylphthalate	- -	- -	ug/L	NA	6 U	NA	5 U	NA	5 U	NA	5 U [5 U]	5 U	5 U
Fluoranthene	- -	630	ug/L	NA	0.6 U	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Fluorene	- -	220	ug/L	NA	0.1 J	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Hexachlorobenzene	1	0.042	ug/L	NA	0.6 U	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Hexachlorobutadiene	- -	0.26	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
Hexachlorocyclopentadiene	50	22	ug/L	NA	18 U	NA	15 U	NA	14 U	NA	15 U [15 U]	15 U	15 U
Hexachloroethane	- -	0.79	ug/L	NA	6 U	NA	5 U	NA	5 U	NA	5 U [5 U]	5 U	5 U
Indeno(1,2,3-cd)pyrene	- -	0.029	ug/L	NA	0.6 U	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Isophorone	- -	67	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
Naphthalene	- -	0.14	ug/L	NA	**11**	NA	**1**	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Nitrobenzene	- -	0.12	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
N-Nitroso-di-n-propylamine	- -	0.0093	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
N-Nitrosodiphenylamine	- -	10	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
Pentachlorophenol	1	0.17	ug/L	NA	6 U	NA	5 U	NA	5 U	NA	5 U [5 U]	5 U	5 U
Phenanthrene	- -	- -	ug/L	NA	0.6 U	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Phenol	- -	4,500	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
Pyrene	- -	87	ug/L	NA	0.6 U	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW56D	BMW56D	BMW57D	BMW57D	BMW58D	BMW58D	BMW59D	BMW59D	BMW61	BMW62
Sample Depth(ft):													
Date Collected:				11/21/11	04/09/12	11/18/11	04/10/12	11/18/11	04/06/12	11/18/11	04/06/12	04/04/12	04/02/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Inorganics													
Aluminum	- -	16,000	ug/L	NA	200 U	NA	1,040	NA	200 U	NA	200 U [200 U]	200 U	109 J
Antimony	6	6	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
Arsenic	10	0.045	ug/L	NA	**3.9**	NA	**1.6 J**	NA	2 U	NA	2 U [2 U]	2 U	2 U
Barium	2,000	2,900	ug/L	NA	162	NA	350	NA	142	NA	62.3 [60.4]	89.2	20.7
Beryllium	4	16	ug/L	NA	0.5 U	NA	0.25 J	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Boron	- -	3,100	ug/L	NA	37.5 J	NA	18.1 J	NA	5.5 J	NA	50 U [50 U]	12.5 J	6.6 J
Cadmium	5	- -	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	5 U [5 U]	5 U	5 U
Calcium	- -	- -	ug/L	NA	154,000	NA	112,000	NA	58,800	NA	48,400 [47,200]	90,200	58,300
Chromium	100	- -	ug/L	NA	15 U	NA	1.6 J	NA	15 U	NA	1.7 J [1.4 J]	15 U	1.1 J
Cobalt	- -	4.7	ug/L	NA	**16.2**	NA	**7.7**	NA	5 U	NA	5 U [5 U]	5 U	5 U
Copper	1,300	620	ug/L	NA	10 U	NA	1.2 J	NA	10 U	NA	10 U [10 U]	10 U	10 U
Cyanide	200	9.3	ug/L	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA
Iron	- -	11,000	ug/L	NA	6,760	NA	**17,300**	NA	147 J	NA	63.6 J [49 J]	21.5 J	184 J
Lead	15	- -	ug/L	NA	13.5 J	NA	14.4 J	NA	8.7 J	NA	6.7 J [5.4 J]	4.2 J	11.1 J
Magnesium	- -	- -	ug/L	NA	32,500	NA	35,100	NA	23,900	NA	20,900 [20,000]	14,800	4,870
Manganese	- -	- -	ug/L	NA	1,480	NA	2,030	NA	20	NA	2.1 J [1.9 J]	2.8 J	6.3
Mercury	2	0.63	ug/L	NA	0.2 U	NA	0.2 U	NA	0.2 U	NA	0.2 U [0.033 J]	0.2 U	0.2 U
Nickel	- -	300	ug/L	NA	15.2	NA	10.4	NA	10 U	NA	10 U [10 U]	10 U	10 U
Potassium	- -	- -	ug/L	NA	6,360	NA	7,340	NA	1,580	NA	1,430 [1,340]	2,420	1,390
Selenium	50	78	ug/L	NA	20 U	NA	20 U	NA	20 U	NA	20 U [20 U]	20 U	20 U
Silver	- -	71	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	5 U [5 U]	5 U	5 U
Sodium	- -	- -	ug/L	NA	21,900	NA	15,200	NA	14,600	NA	16,800 [16,000]	22,100	3,880
Thallium	2	0.16	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	NA	5 U	NA	2.7 J	NA	5 U	NA	5 U [5 U]	5 U	5 U
Zinc	- -	4,700	ug/L	NA	6.4 J	NA	12.4 J	NA	20 U	NA	20 U [20 U]	20 U	20 U
Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	200 U	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	1 U	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	**1.1 J**	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	327	NA	NA	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	16.5 J	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	5 U	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	114,000	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	15 U	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	**6.4**	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	10 U	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	**12,500**	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	9.3 J	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	35,200	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	2,200	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	0.2 U	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	6.2 J	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	7,130	NA	NA	NA	NA	NA	NA
Selenium	50	78	ug/L	NA	NA	NA	20 U	NA	NA	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	NA	NA	5 U	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	14,800	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	5 U	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	20 U	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW56D 11/21/11 Area B Monitoring wells	BMW56D 04/09/12 Area B Monitoring wells	BMW57D 11/18/11 Area B Monitoring wells	BMW57D 04/10/12 Area B Monitoring wells	BMW58D 11/18/11 Area B Monitoring wells	BMW58D 04/06/12 Area B Monitoring wells	BMW59D 11/18/11 Area B Monitoring wells	BMW59D 04/06/12 Area B Monitoring wells	BMW61 04/04/12 Area B Monitoring wells	BMW62 04/02/12 Area B Monitoring wells
Miscellaneous													
Bromate	10	0.096	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	- -	- -	ug/L	NA	2,500 U	NA	2,500 U	NA	2,500 U	NA	2,500 U	NA	NA
Chloride	- -	- -	ug/L	NA	64,100	NA	47,800	NA	39,100	NA	42,700 [44,200]	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	500 U	NA	500 U	NA	3,200	NA	4,300 [4,000]	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Simazine	4	0.52	ug/L	NA	0.99 U	NA	1.1 U	NA	1 U	NA	1.1 U	NA	NA
Sulfate	- -	- -	ug/L	NA	62,400	NA	24,700	NA	10,600	NA	11,500 [7,600]	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	680,000	NA	519,000	NA	294,000	NA	283,000 [273,000]	NA	NA
Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	0.24 U	NA	2.6 U	NA	0.17 J	NA	0.079 J [0.079 J]	NA	0.27 U
2,4,5-T	- -	120	ug/L	NA	0.09 U	NA	0.13	NA	0.0031 J	NA	0.01 U [0.0045 J]	NA	0.011 U
2,4,5-TP	50	84	ug/L	NA	0.27 U	NA	0.49	NA	0.0099 U	NA	0.01 U [0.0099 U]	NA	0.011 U
2,4-D	70	130	ug/L	NA	0.65	NA	1 U	NA	0.099 U	NA	0.1 U [0.099 U]	NA	0.11 U
2,4-DB	- -	91	ug/L	NA	0.1 J	NA	2.1 U	NA	0.2 U	NA	0.21 U [0.2 U]	NA	0.21 U
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	**150 J**	NA	2,100 U	NA	200 U	NA	210 U [200 U]	NA	210 U
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	51	NA	31	NA	1.1 U	NA	1 U [0.99 U]	NA	1.1 U
Dicamba	- -	440	ug/L	NA	0.94	NA	0.27 J	NA	0.06	NA	0.063 U [0.06 U]	NA	0.064 U
Dichlorprop	- -	- -	ug/L	NA	0.25 U	NA	0.67 J	NA	0.099 U	NA	0.1 U [0.099 U]	NA	0.11 U
Dinoseb	7	11	ug/L	NA	0.095 U	NA	1 U	NA	0.099 U	NA	0.1 U [0.099 U]	NA	0.11 U
Diquat	20	34	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	NA	0.11	NA	0.043	NA	0.015 U	NA	0.015 U	NA	NA
Endothall	100	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	0.051	NA	0.18	NA	0.011	NA	0.01 U	NA	NA
MCPP	- -	12	ug/L	NA	**67**	NA	420 U	NA	39 U	NA	42 U [40 U]	NA	43 U
Monuron	- -	- -	ug/L	NA	1.7	NA	0.98	NA	0.072	NA	0.008 J	NA	NA
Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	0.019 U	NA	0.019 U	NA	0.02 U	NA	0.02 U [0.02 U]	0.021 U	0.021 U
4,4'-DDE	- -	0.2	ug/L	NA	0.019 U	NA	0.019 U	NA	0.02 U	NA	0.02 U [0.02 U]	0.021 U	0.021 U
4,4'-DDT	- -	0.2	ug/L	NA	0.019 U	NA	0.019 U	NA	0.02 U	NA	0.02 U [0.02 U]	0.021 U	0.021 U
Aldrin	- -	0.00021	ug/L	NA	0.0097 U	NA	0.0097 U	NA	0.0098 U	NA	0.01 U [0.01 U]	0.01 U	0.01 U
Alpha-BHC	- -	0.0062	ug/L	NA	0.0097 U	NA	0.0097 U	NA	0.0098 U	NA	0.01 U [0.01 U]	0.01 U	0.01 U
Alpha-Chlordane	- -	- -	ug/L	NA	0.0097 U	NA	0.0097 U	NA	0.0098 U	NA	0.01 U [0.01 U]	0.01 U	0.01 U
Beta-BHC	- -	0.022	ug/L	NA	0.0097 U	NA	0.0045 J	NA	0.0098 U	NA	0.01 U [0.01 U]	0.01 U	0.01 U
Delta-BHC	- -	- -	ug/L	NA	0.0063 J	NA	0.0097 U	NA	0.0098 U	NA	0.01 U [0.01 U]	0.01 U	0.01 U
Dieldrin	- -	0.0015	ug/L	NA	0.019 U	NA	0.019 U	NA	0.02 U	NA	0.02 U [0.02 U]	0.021 U	0.021 U
Endosulfan I	- -	- -	ug/L	NA	0.0097 U	NA	0.02 U	NA	0.0098 U	NA	0.01 U [0.01 U]	0.01 U	0.01 U
Endosulfan II	- -	- -	ug/L	NA	0.019 U	NA	0.019 U	NA	0.02 U	NA	0.02 U [0.02 U]	0.021 U	0.021 U
Endosulfan Sulfate	- -	- -	ug/L	NA	0.019 U	NA	0.019 U	NA	0.02 U	NA	0.02 U [0.02 U]	0.021 U	0.021 U
Endrin	2	1.7	ug/L	NA	0.019 U	NA	0.019 U	NA	0.02 U	NA	0.02 U [0.02 U]	0.021 U	0.021 U
Endrin Aldehyde	- -	- -	ug/L	NA	0.097 U	NA	0.097 U	NA	0.098 U	NA	0.1 U [0.1 U]	0.1 U	0.1 U
Endrin Ketone	- -	- -	ug/L	NA	0.019 U	NA	0.019 U	NA	0.02 U	NA	0.02 U [0.02 U]	0.021 U	0.021 U
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	0.0038 J	NA	0.0041 J	NA	0.0098 U	NA	0.01 U [0.01 U]	0.01 U	0.01 U
Gamma-Chlordane	- -	- -	ug/L	NA	0.019 U	NA	0.019 U	NA	0.02 U	NA	0.02 U [0.02 U]	0.021 U	0.021 U
Heptachlor	0.4	0.0018	ug/L	NA	**0.0051 J**	NA	0.0097 U	NA	0.0098 U	NA	0.01 U [0.01 U]	0.01 U	0.01 U
Heptachlor Epoxide	0.2	0.0033	ug/L	NA	0.0097 U	NA	0.0097 U	NA	0.0098 U	NA	0.01 U [0.01 U]	0.01 U	0.01 U
Methoxychlor	40	27	ug/L	NA	0.097 U	NA	0.097 U	NA	0.098 U	NA	0.1 U [0.1 U]	0.1 U	0.1 U
Toxaphene	3	0.013	ug/L	NA	2.9 U	NA	2.9 U	NA	2.9 U	NA	3.1 U [3 U]	3.1 U	3.1 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW56D 11/21/11 Area B Monitoring wells	BMW56D 04/09/12 Area B Monitoring wells	BMW57D 11/18/11 Area B Monitoring wells	BMW57D 04/10/12 Area B Monitoring wells	BMW58D 11/18/11 Area B Monitoring wells	BMW58D 04/06/12 Area B Monitoring wells	BMW59D 11/18/11 Area B Monitoring wells	BMW59D 04/06/12 Area B Monitoring wells	BMW61 04/04/12 Area B Monitoring wells	BMW62 04/02/12 Area B Monitoring wells
Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	3 BJ	NA	3.54 BJ	NA	2.68 BJ	NA	2.59 BJ	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	1.46 BJ	NA	1.34 BJ	NA	0.88 BJ	NA	1.02 BJ	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	0.289 BJQ	NA	0.397 BJ	NA	0.338 BJQ	NA	0.479 BJ	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	0.26 BJ	NA	0.383 BJ	NA	0.319 BJ	NA	0.348 BJ	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	0.422 BJ	NA	0.394 BJ	NA	0.326 BJ	NA	0.495 BJ	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	0.58 BJ	NA	0.848 BJQ	NA	0.551 BJ	NA	0.718 BJ	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	0.681 BJQ	NA	0.548 BJ	NA	0.329 BJ	NA	0.479 BJ	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	0.572 BJQ	NA	0.638 BJQ	NA	0.249 BJ	NA	0.512 BJ	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	0.345 BJQ	NA	0.471 BJ	NA	0.249 BJ	NA	0.646 BJ	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	0.282 BJ	NA	0.607 BJQ	NA	0.253 BJ	NA	0.793 BJ	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	0.612 BJQ	NA	0.482 BJQ	NA	0.37 BJ	NA	0.612 BJ	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	0.579 BJ	NA	0.464 BJQ	NA	0.249 BJ	NA	0.537 BJ	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	0.309 BJ	NA	0.657 BJQ	NA	0.426 BJ	NA	0.788 BJ	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	**0.557 BJ**	NA	1.9 U	NA	0.251 BJQ	NA	2.01 U	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	1.96 U	NA	0.382 BJQ	NA	0.204 J	NA	0.411 J	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	1.27 BJ	NA	1.32 BJ	NA	0.845 BJ	NA	1.05 BJQ	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	10.9 BJ	NA	28.7 B	NA	5.51 BJ	NA	5.06 BJ	NA	NA
Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOC TIC													
1-Methylnaphthalene	- -	0.97	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	270 J	NA	110 J	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UNKNOWN PAH1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	7 J	NA	16 J	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs TICs													
2-Cyclohexen-1-ol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diacetone Alcohol	- -	- -	ug/L	NA	NA	NA	NA	NA	31 J	NA	27 J [44 J]	7 J	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	6 BJ	NA	8 BJ [9 BJ]	5 J	NA
N-(3-Methylbutyl)acetamide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	120 JAB	NA	47 BJ [99 BJ]	12 J	0
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	10 J	NA	NA	NA	NA
Unknown Semivoloatile TIC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	25 J	NA	5 J [26 J] [7 J] [5 J] [9 J]	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOCs TICs													
2-Ethyl-1-Hexanol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorodifluoromethane	- -	100,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromonofluoromethane	- -	- -	ug/L	NA	NA	NA	34 J	NA	NA	NA	NA	NA	NA
Ethyl Ether	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorofluoro-	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOC TICs	- -	- -	ug/L	NA	0	NA	34 J	NA	0	NA	0 [0]	0	0
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW63 04/02/12 Area B Monitoring wells	BMW64 04/03/12 Area B Monitoring wells	BMW65A 04/11/12 Area B Monitoring wells	BMW65B 04/10/12 Area B Monitoring wells	BMW66B 04/04/12 Area B Monitoring wells	BMW66D 11/18/11 Area B Monitoring wells	BMW66D 04/04/12 Area B Monitoring wells	BMW67A 11/18/11 Area B Monitoring wells	BMW67A 04/11/12 Area B Monitoring wells	BMW67B 04/11/12 Area B Monitoring wells
PCBs													
Aroclor-1016	- -	0.96	ug/L	0.1 U	0.1 U	0.099 U	0.098 U	0.11 U	NA	0.1 U	NA	0.11 U	0.099 U [0.097 U]
Aroclor-1221	- -	0.0043	ug/L	0.1 U	0.1 U	0.099 U	0.098 U	0.11 U	NA	0.1 U	NA	0.11 U	0.099 U [0.097 U]
Aroclor-1232	- -	0.0043	ug/L	0.1 U	0.1 U	0.099 U	0.098 U	0.11 U	NA	0.1 U	NA	0.11 U	0.099 U [0.097 U]
Aroclor-1242	- -	0.034	ug/L	0.1 U	0.1 U	0.099 U	0.098 U	0.11 U	NA	0.1 U	NA	0.11 U	0.099 U [0.097 U]
Aroclor-1248	- -	0.034	ug/L	0.1 U	0.1 U	0.099 U	0.098 U	0.11 U	NA	0.1 U	NA	0.11 U	0.099 U [0.097 U]
Aroclor-1254	- -	0.034	ug/L	0.1 U	0.1 U	0.099 U	0.098 U	0.11 U	NA	0.1 U	NA	0.11 U	0.099 U [0.097 U]
Aroclor-1260	- -	0.034	ug/L	0.1 U	0.1 U	0.099 U	0.098 U	0.11 U	NA	0.1 U	NA	0.11 U	0.099 U [0.097 U]
Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.4 J	10 [20]	32	440 [570]
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.4 J [4.9 J]	14	83 [120]
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	**10 J [13 J]**
1,1-Dichloroethane	- -	2.4	ug/L	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [1.9 J]	2.3 J	**22 J [27 J]**
1,1-Dichloroethene	7	260	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.8	1	30 [60]	85	**810 [1,000]**
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
1,2,3-Trichloropropane	- -	0.00065	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	**1.1 J**	100 U [100 U]
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	**150 [170]**
1,2,4-Trimethylbenzene	- -	15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	10 U	50 U [50 U]
1,2-Dibromo-3-chloropropane	0.2	0.00032	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
1,2-Dibromoethane	0.05	0.0065	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	**25 [48]**	**67**	**55 [64]**
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.2 J [4 J]**	10 U	50 U [50 U]
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
1,4-Dichlorobenzene	75	0.42	ug/L	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
2-Butanone	- -	4,900	ug/L	5 U	5 U	3.2 J	5 U	5 U	5 U	5 U	50 U [50 U]	100 U	500 U [500 U]
2-Hexanone	- -	34	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	50 U [50 U]	100 U	500 U [500 U]
4-Methyl-2-pentanone	- -	1,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	50 U [50 U]	100 U	500 U [500 U]
Acetone	- -	12,000	ug/L	5 U	5 U	29	5 U	5 U	5 U	5 U	50 U [50 U]	100 U	500 U [500 U]
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.4 J [4.6 J]**	**3.7 J**	**45 J [55]**
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**18 [37]**	**48**	50 U [50 U]
Bromomethane	- -	7	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**5 U [1.6 J]**	**2.7 J**	50 U [50 U]
Chlorobenzene	100	72	ug/L	1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
Chloroethane	- -	21,000	ug/L	1.2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
Chloroform	70	0.19	ug/L	**0.5**	**0.2 J**	**1.6**	**0.5 J**	**0.5 J**	**2.7**	**3.1**	**1,200 [2,400]**	**3,000**	**1,500 [1,700]**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.7	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
cis-1,2-Dichloroethene	70	28	ug/L	0.6	0.5 U	0.5 U	0.5 U	0.5 U	1	1	**17 [33]**	**38**	**870 [1,100]**
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
Cyclohexane	- -	13,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.6 J [3.4 J]**	10 U	50 U [50 U]
Dichlorodifluoromethane	- -	190	ug/L	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 J [2.4 J]	3.9 J	50 U [50 U]
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	**37 J [72]**
Isopropylbenzene	- -	390	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.3 J	0.2 J	0.5 U	0.1 J	0.5 U	5 U [5 U]	10 U	120 [270]
Methyl acetate	- -	16,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U [10 U]	20 U	100 U [100 U]
Methyl tert-butyl ether	- -	12	ug/L	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
Methylcyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
Methylene Chloride	5	9.9	ug/L	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.2 J [4 J]	10 U	50 U [50 U]
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.1 J	0.1 J	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	120 [170]
Styrene	100	1,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
Tetrachloroethene	5	9.7	ug/L	0.5 U	0.5 U	6.6	1.1	0.1 J	0.5 J	0.9	**18 [36]**	**49**	**190 [210]**
Toluene	1,000	860	ug/L	0.5 U	0.5 U	2.8	0.8	0.5 U	0.3 J	0.5 U	5 U [5 U]	10 U	12 J [19 J]
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
Trichloroethene	5	0.44	ug/L	0.5 U	0.5 U	0.2 J	**0.8**	**1**	**9.5**	**14**	**990 [2,000]**	**2,500**	**11,000 [14,000]**
Trichlorofluoromethane	- -	1,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 J	2.6	5.3	500 [990]	**1,400**	**1,400 [1,800]**
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				BMW63	BMW64	BMW65A	BMW65B	BMW66B	BMW66D	BMW66D	BMW67A	BMW67A	BMW67B
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				04/02/12	04/03/12	04/11/12	04/10/12	04/04/12	11/18/11	04/04/12	11/18/11	04/11/12	04/11/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Semivolatile Organics													
1,1'-Biphenyl	- -	0.83	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
1,2,4-Trichlorobenzene	70	0.99	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	0.8 J	**150 [170]**
1,2-Dichlorobenzene	600	280	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	0.7 J	1 [1]
1,3-Dichlorobenzene	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
1,4-Dichlorobenzene	75	0.42	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	**0.5 J [0.5 J]**
1,4-Dioxane	- -	0.67	ug/L	**2 J**	5 U	5 U	5 U	5 U	NA	5 U	NA	**39**	**50 [46]**
1,4-Naphthoquinone	- -	- -	ug/L	31 U	30 U	31 U	31 U	29 U	NA	32 U	NA	31 U	29 U [29 U]
2,2'-Oxybis(1-Chloropropane)	- -	0.31	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
2,4,5-Trichlorophenol	- -	890	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	0.9 J	13 [15]
2,4,6-Trichlorophenol	- -	3.5	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
2,4-Dichlorophenol	- -	35	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	13 [15]
2,4-Dimethylphenol	- -	270	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [0.9 J]
2,4-Dinitrophenol	- -	30	ug/L	31 U	30 U	31 U	31 U	29 U	NA	32 U	NA	31 U	29 U [29 U]
2,4-Dinitrotoluene	- -	0.2	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U [5 U]
2,6-Dinitrotoluene	- -	15	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
2-Chloronaphthalene	- -	550	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
2-Chlorophenol	- -	71	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
2-Methylnaphthalene	- -	27	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.6 [0.8]
2-Methylphenol	- -	720	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
2-Nitroaniline	- -	150	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
2-Nitrophenol	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
3,3'-Dichlorobenzidine	- -	0.11	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U [5 U]
3-Nitroaniline	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
4,6-Dinitro-2-methylphenol	- -	1.2	ug/L	16 U	15 U	16 U	16 U	15 U	NA	16 U	NA	16 U	15 U [15 U]
4-Bromophenyl-phenylether	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
4-Chloro-3-Methylphenol	- -	1,100	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
4-Chloroaniline	- -	0.32	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
4-Chlorophenyl-phenylether	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
4-Methylphenol	- -	1,400	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
4-Nitroaniline	- -	3.3	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
4-Nitrophenol	- -	- -	ug/L	31 U	30 U	31 U	31 U	29 U	NA	32 U	NA	31 U	29 U [29 U]
Acenaphthene	- -	400	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.5 U [0.5 U]
Acenaphthylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.5 U [0.5 U]
Acetophenone	- -	1,500	ug/L	1 U	1 U	0.6 J	1 U	1 U	NA	1 U	NA	1 U	1 [0.8 J]
Anthracene	- -	1,300	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.5 U [0.5 U]
Atrazine	3	0.26	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U [5 U]
Benzaldehyde	- -	1,500	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U [5 U]
Benzo(a)anthracene	- -	0.029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.5 U [0.5 U]
Benzo(a)pyrene	0.2	0.0029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.5 U [0.5 U]
Benzo(b)fluoranthene	- -	0.029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.5 U [0.5 U]
Benzo(g,h,i)perylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.5 U [0.5 U]
Benzo(k)fluoranthene	- -	0.29	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.5 U [0.5 U]
Benzoic Acid	- -	58,000	ug/L	16 U	15 U	16 U	16 U	15 U	NA	16 U	NA	16 U	15 U [15 U]
Benzyl Alcohol	- -	1,500	ug/L	16 U	15 U	16 U	16 U	15 U	NA	16 U	NA	16 U	15 U [15 U]
bis(2-Chloroethoxy)methane	- -	47	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
bis(2-Chloroethyl)ether	- -	0.012	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
bis(2-Chloroisopropyl)ether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	5 U	5 U	5 U	**3 J**	5 U	NA	5 U	NA	5 U	5 U [5 U]
Butylbenzylphthalate	- -	14	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U [5 U]
Caprolactam	- -	7,700	ug/L	16 U	15 U	16 U	16 U	15 U	NA	16 U	NA	16 U	15 U [15 U]
Carbazole	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
Chrysene	- -	2.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.5 U [0.5 U]
Dibenzo(a,h)anthracene	- -	0.0029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.5 U [0.5 U]
Dibenzofuran	- -	5.8	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
Diethylphthalate	- -	11,000	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U [5 U]
Dimethylphthalate	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U [5 U]
Di-n-Butylphthalate	- -	670	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U [5 U]
Di-n-Octylphthalate	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U [5 U]
Fluoranthene	- -	630	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.5 U [0.5 U]
Fluorene	- -	220	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.5 U [0.2 J]
Hexachlorobenzene	1	0.042	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.5 U [0.5 U]
Hexachlorobutadiene	- -	0.26	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	**0.6 J**	1 U [1 U]
Hexachlorocyclopentadiene	50	22	ug/L	16 U	15 U	16 U	16 U	15 U	NA	16 U	NA	16 U	15 U [15 U]
Hexachloroethane	- -	0.79	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U [5 U]
Indeno(1,2,3-cd)pyrene	- -	0.029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.5 U [0.5 U]
Isophorone	- -	67	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
Naphthalene	- -	0.14	ug/L	0.5 U	0.5 U	**0.2 J**	0.1 J	0.5 U	NA	0.5 U	NA	0.1 J	**3 [4]**
Nitrobenzene	- -	0.12	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
N-Nitroso-di-n-propylamine	- -	0.0093	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
N-Nitrosodiphenylamine	- -	10	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
Pentachlorophenol	1	0.17	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U [5 U]
Phenanthrene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.5 U [0.5 U]
Phenol	- -	4,500	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [0.7 J]
Pyrene	- -	87	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.5 U [0.5 U]

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW63 04/02/12 Area B Monitoring wells	BMW64 04/03/12 Area B Monitoring wells	BMW65A 04/11/12 Area B Monitoring wells	BMW65B 04/10/12 Area B Monitoring wells	BMW66B 04/04/12 Area B Monitoring wells	BMW66D 11/18/11 Area B Monitoring wells	BMW66D 04/04/12 Area B Monitoring wells	BMW67A 11/18/11 Area B Monitoring wells	BMW67A 04/11/12 Area B Monitoring wells	BMW67B 04/11/12 Area B Monitoring wells
Inorganics													
Aluminum	- -	16,000	ug/L	200 U	200 U	382	1,850	2,050	NA	200 U	NA	200 U	6,890 [367]
Antimony	6	6	ug/L	1 U	1 U	0.63 J	1 U	1 U	NA	1 U	NA	1 U	0.49 J [1 U]
Arsenic	10	0.045	ug/L	2 U	2 U	2 U	2 U	**1.2 J**	NA	2 U	NA	2 U	**3.9 [2.7]**
Barium	2,000	2,900	ug/L	182	77.5	33.5	81.4	91.5	NA	63.9	NA	93.7	203 [180]
Beryllium	4	16	ug/L	0.5 U	0.5 U	0.5 U	0.21 J	0.31 J	NA	0.5 U	NA	0.5 U	1.5 [0.5 U]
Boron	- -	3,100	ug/L	52.5	14.8 J	5.1 J	13.9 J	8 J	NA	7 J	NA	23.6 J	14.9 J [18.8 J]
Cadmium	5	- -	ug/L	5 U	5 U	5 U	5 U	0.33 J	NA	5 U	NA	5 U	5 U [5 U]
Calcium	- -	- -	ug/L	132,000	90,400	64,200	26,500	79,100	NA	60,100	NA	132,000	135,000 [122,000]
Chromium	100	- -	ug/L	15 U	15 U	2 J	6.5 J	6 J	NA	1.1 J	NA	15 U	19.1 [7.8 J]
Cobalt	- -	4.7	ug/L	**9.5**	5 U	5 U	1 J	1.4 J	NA	5 U	NA	**4.8 J**	**8.9 [4.5 J]**
Copper	1,300	620	ug/L	10 U	10 U	3.5 J	4.6 J	3.7 J	NA	10 U	NA	10 U	10.2 [10 U]
Cyanide	200	9.3	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U [10 U]
Iron	- -	11,000	ug/L	3,050	15.9 J	69.9 J	2,360	5,270	NA	53.4 J	NA	579	**17,100 [2,100]**
Lead	15	- -	ug/L	14.3 J	12.6 J	12.6 J	16.5	10.3 J	NA	9.4 J	NA	9.8 J	25.9 [12.7 J]
Magnesium	- -	- -	ug/L	36,400	22,600	577	2,090	9,330	NA	15,600	NA	34,500	38,000 [35,400]
Manganese	- -	- -	ug/L	2,980	1.2 J	2.1 J	49.5	242	NA	5.4	NA	1,680	2,120 [2,760]
Mercury	2	0.63	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	NA	0.2 U	NA	0.2 U	0.12 J [0.2 U]
Nickel	- -	300	ug/L	10	10 U	3.7 J	4.1 J	5.8 J	NA	10 U	NA	13.9	26.9 [12.8]
Potassium	- -	- -	ug/L	3,110	1,930	21,500	5,650	1,860	NA	1,570	NA	3,380	5,530 [4,440]
Selenium	50	78	ug/L	20 U	20 U	20 U	20 U	20 U	NA	20 U	NA	20 U	20 U [20 U]
Silver	- -	71	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U [0.91 J]
Sodium	- -	- -	ug/L	17,400	9,530	97,500	67,800	11,800	NA	11,200	NA	9,270	9,710 [10,400]
Thallium	2	0.16	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	**0.31 J [0.17 J]**
Vanadium	- -	- -	ug/L	5 U	5 U	9.8	6.4	6	NA	5 U	NA	5 U	17.9 [1.6 J]
Zinc	- -	4,700	ug/L	5.3 J	20 U	20 U	29.8	12.9 J	NA	20 U	NA	20 U	112 [6.5 J]
Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	200 U	200 U	NA	NA	NA	NA	123 J [131 J]
Antimony	6	6	ug/L	NA	NA	NA	1 U	1 U	NA	NA	NA	NA	1 U [1 U]
Arsenic	10	0.045	ug/L	NA	NA	NA	2 U	2 U	NA	NA	NA	NA	**2.8 [3]**
Barium	2,000	2,900	ug/L	NA	NA	NA	45.5	63.7	NA	NA	NA	NA	108 [109]
Beryllium	4	16	ug/L	NA	NA	NA	0.5 U	0.5 U	NA	NA	NA	NA	0.5 U [0.5 U]
Boron	- -	3,100	ug/L	NA	NA	NA	11.8 J	6.5 J	NA	NA	NA	NA	13.5 J [13.4 J]
Cadmium	5	- -	ug/L	NA	NA	NA	5 U	5 U	NA	NA	NA	NA	5 U [5 U]
Calcium	- -	- -	ug/L	NA	NA	NA	19,800	77,600	NA	NA	NA	NA	91,100 [93,600]
Chromium	100	- -	ug/L	NA	NA	NA	15 U	15 U	NA	NA	NA	NA	3.9 J [3.7 J]
Cobalt	- -	4.7	ug/L	NA	NA	NA	5 U	5 U	NA	NA	NA	NA	0.63 J [0.66 J]
Copper	1,300	620	ug/L	NA	NA	NA	10 U	10 U	NA	NA	NA	NA	10 U [10 U]
Iron	- -	11,000	ug/L	NA	NA	NA	200 U	200 U	NA	NA	NA	NA	200 U [200 U]
Lead	15	- -	ug/L	NA	NA	NA	7.9 J	6 J	NA	NA	NA	NA	10.1 J [11.6 J]
Magnesium	- -	- -	ug/L	NA	NA	NA	1,180	8,860	NA	NA	NA	NA	28,700 [29,400]
Manganese	- -	- -	ug/L	NA	NA	NA	3.1 J	4.6 J	NA	NA	NA	NA	607 [640]
Mercury	2	0.63	ug/L	NA	NA	NA	0.029 J	0.2 U	NA	NA	NA	NA	0.2 U [0.2 U]
Nickel	- -	300	ug/L	NA	NA	NA	10 U	1.6 J	NA	NA	NA	NA	7.6 J [8.3 J]
Potassium	- -	- -	ug/L	NA	NA	NA	4,350	1,560	NA	NA	NA	NA	4,880 [4,820]
Selenium	50	78	ug/L	NA	NA	NA	20 U	20 U	NA	NA	NA	NA	20 U [20 U]
Silver	- -	71	ug/L	NA	NA	NA	5 U	5 U	NA	NA	NA	NA	5 U [5 U]
Sodium	- -	- -	ug/L	NA	NA	NA	102,000	11,600	NA	NA	NA	NA	10,000 [10,100]
Thallium	2	0.16	ug/L	NA	NA	NA	0.5 U	0.5 U	NA	NA	NA	NA	0.15 J [0.5 U]
Vanadium	- -	- -	ug/L	NA	NA	NA	1.5 J	5 U	NA	NA	NA	NA	1.8 J [1.7 J]
Zinc	- -	4,700	ug/L	NA	NA	NA	20 U	20 U	NA	NA	NA	NA	20 U [20 U]

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW63 04/02/12 Area B Monitoring wells	BMW64 04/03/12 Area B Monitoring wells	BMW65A 04/11/12 Area B Monitoring wells	BMW65B 04/10/12 Area B Monitoring wells	BMW66B 04/04/12 Area B Monitoring wells	BMW66D 11/18/11 Area B Monitoring wells	BMW66D 04/04/12 Area B Monitoring wells	BMW67A 11/18/11 Area B Monitoring wells	BMW67A 04/11/12 Area B Monitoring wells	BMW67B 04/11/12 Area B Monitoring wells
Miscellaneous													
Bromate	10	0.096	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	2,500 U	2,500 U [2,500 U]
Chloride	- -	- -	ug/L	NA	NA	26,000	9,300	30,900	NA	29,700	NA	31,600	60,300 [63,800]
Nitrate-N	10,000	25,000	ug/L	NA	NA	500 U	500 U	1,900	NA	4,100	NA	2,400	710 [730]
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Simazine	4	0.52	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	1 U	1 U [0.99 U]
Sulfate	- -	- -	ug/L	NA	NA	106,000	73,800	18,300	NA	11,800	NA	181,000	59,500 [63,500]
Total Dissolved Solids	- -	- -	ug/L	NA	NA	578,000	292,000	298,000	NA	270,000	NA	641,000	396,000 [513,000]
Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	0.26 U	0.25 U	0.25 U	0.25 U	0.25 U	NA	0.26 U	NA	1.2 U	1.2 U [2.5 U]
2,4,5-T	- -	120	ug/L	0.0081 J	0.01 U	0.0099 U	0.0099 U	0.01 U	NA	0.01 U	NA	0.37	0.32 [0.67]
2,4,5-TP	50	84	ug/L	0.014	0.01 U	0.088	0.011 U	0.01 U	NA	0.01 U	NA	0.86	0.078 [0.099 U]
2,4-D	70	130	ug/L	0.1 U	0.1 U	0.23	0.099 U	0.1 U	NA	0.1 U	NA	0.5 U	0.49 U [0.99 U]
2,4-DB	- -	91	ug/L	0.12 J	0.2 U	0.37 U	0.2 U	0.2 U	NA	0.21 U	NA	0.99 U	0.97 U [2 U]
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	200 U	200 U	200 U	200 U	200 U	NA	210 U	NA	990 U	970 U [2,000 U]
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	1 U	1 U	0.99 U	0.99 U	1 U	NA	1 U	NA	6.1	28 [27]
Dicamba	- -	440	ug/L	0.061 U	0.06 U	0.059 U	0.059 U	0.061 U	NA	0.062 U	NA	2	1.4 [1.7]
Dichlorprop	- -	- -	ug/L	0.12	0.1 U	0.099 U	0.099 U	0.1 U	NA	0.1 U	NA	0.67	0.49 U [0.99 U]
Dinoseb	7	11	ug/L	0.1 U	0.1 U	0.099 U	0.099 U	0.1 U	NA	0.1 U	NA	0.5 U	0.49 U [0.99 U]
Diquat	20	34	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	0.015 U	0.015 U [0.015 U]
Endothall	100	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	0.009 J	0.051 [0.036]
MCPP	- -	12	ug/L	41 U	40 U	**120**	**46**	41 U	NA	41 U	NA	200 U	**960 [400 U]**
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	0.6	0.52 [0.45]
Pesticides													
4,4'-DDD	- -	0.28	ug/L	0.021 U	0.02 U	0.021 U	0.02 U	0.023 U	NA	0.02 U	NA	0.021 U	0.0067 J [0.01 J]
4,4'-DDE	- -	0.2	ug/L	0.021 U	0.02 U	0.021 U	0.02 U	0.023 U	NA	0.02 U	NA	0.021 U	0.019 U [0.021 U]
4,4'-DDT	- -	0.2	ug/L	0.021 U	0.02 U	0.021 U	0.02 U	0.023 U	NA	0.02 U	NA	0.021 U	0.019 U [0.021 U]
Aldrin	- -	0.00021	ug/L	0.011 U	0.01 U	0.011 U	0.0099 U	0.012 U	NA	0.01 U	NA	0.011 U	**0.0097 U [0.0021 J]**
Alpha-BHC	- -	0.0062	ug/L	0.011 U	0.01 U	0.011 U	0.0099 U	0.012 U	NA	0.01 U	NA	0.011 U	**0.011 [0.0096 J]**
Alpha-Chlordane	- -	- -	ug/L	0.011 U	0.01 U	0.011 U	0.0099 U	0.012 U	NA	0.01 U	NA	0.011 U	0.0097 U [0.01 U]
Beta-BHC	- -	0.022	ug/L	0.011 U	0.01 U	0.011 U	0.0099 U	0.012 U	NA	0.01 U	NA	0.011 U	0.0097 U [0.004 J]
Delta-BHC	- -	- -	ug/L	0.011 U	0.01 U	0.011 U	0.0099 U	0.012 U	NA	0.01 U	NA	0.011 U	0.0049 J [0.0076 J]
Dieldrin	- -	0.0015	ug/L	0.021 U	0.02 U	0.021 U	0.02 U	0.023 U	NA	0.02 U	NA	0.021 U	0.019 U [0.021 U]
Endosulfan I	- -	- -	ug/L	0.011 U	0.01 U	0.011 U	0.0099 U	0.012 U	NA	0.01 U	NA	0.011 U	0.0097 U [0.02 U]
Endosulfan II	- -	- -	ug/L	0.021 U	0.02 U	0.021 U	0.02 U	0.023 U	NA	0.02 U	NA	0.021 U	0.019 U [0.021 U]
Endosulfan Sulfate	- -	- -	ug/L	0.021 U	0.02 U	0.021 U	0.02 U	0.023 U	NA	0.02 U	NA	0.021 U	0.019 U [0.021 U]
Endrin	2	1.7	ug/L	0.021 U	0.02 U	0.021 U	0.02 U	0.023 U	NA	0.02 U	NA	0.021 U	0.019 U [0.021 U]
Endrin Aldehyde	- -	- -	ug/L	0.11 U	0.1 U	0.11 U	0.099 U	0.12 U	NA	0.1 U	NA	0.11 U	0.097 U [0.1 U]
Endrin Ketone	- -	- -	ug/L	0.021 U	0.02 U	0.021 U	0.02 U	0.023 U	NA	0.02 U	NA	0.021 U	0.019 U [0.021 U]
Gamma-BHC (Lindane)	0.2	0.036	ug/L	0.011 U	0.01 U	0.011 U	0.0099 U	0.012 U	NA	0.01 U	NA	0.03 U	**0.029 [0.045]**
Gamma-Chlordane	- -	- -	ug/L	0.021 U	0.02 U	0.021 U	0.02 U	0.023 U	NA	0.02 U	NA	0.021 U	0.019 U [0.021 U]
Heptachlor	0.4	0.0018	ug/L	0.011 U	0.01 U	0.011 U	0.0099 U	0.012 U	NA	0.01 U	NA	0.011 U	0.0097 U [0.01 U]
Heptachlor Epoxide	0.2	0.0033	ug/L	0.011 U	0.01 U	0.011 U	0.0099 U	0.012 U	NA	0.01 U	NA	0.011 U	0.0097 U [0.01 U]
Methoxychlor	40	27	ug/L	0.11 U	0.1 U	0.11 U	0.099 U	0.12 U	NA	0.1 U	NA	0.11 U	0.097 U [0.1 U]
Toxaphene	3	0.013	ug/L	3.2 U	3 U	3.2 U	3 U	3.5 U	NA	3 U	NA	3.2 U	2.9 U [3.1 U]

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Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW63 04/02/12 Area B Monitoring wells	BMW64 04/03/12 Area B Monitoring wells	BMW65A 04/11/12 Area B Monitoring wells	BMW65B 04/10/12 Area B Monitoring wells	BMW66B 04/04/12 Area B Monitoring wells	BMW66D 11/18/11 Area B Monitoring wells	BMW66D 04/04/12 Area B Monitoring wells	BMW67A 11/18/11 Area B Monitoring wells	BMW67A 04/11/12 Area B Monitoring wells	BMW67B 04/11/12 Area B Monitoring wells
Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	3.6 BJ	4.18 BJ [3.5 BJ]
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	1.77 BJ	1.85 BJ [1.59 BJ]
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.568 BJQ	0.492 BJQ [0.656 BJQ]
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.506 BJQ	0.232 BJQ [0.425 BJ]
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.798 BJ	0.71 BJQ [0.572 BJQ]
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.651 BJQ	0.541 BJ [0.671 BJ]
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.65 BJ	0.474 BJQ [0.56 BJ]
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.698 BJ	0.933 BJ [0.546 BJ]
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.31 BJQ	0.612 BJQ [0.378 BJ]
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.472 BJQ	0.543 BJQ [0.477 BJQ]
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.653 BJQ	0.564 BJQ [0.416 BJQ]
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.841 BJ	0.657 BJ [0.597 BJQ]
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.726 BJ	1.09 BJ [0.723 BJ]
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	2 U	0.368 JQ [0.184 JQ]
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.211 BJQ	1.99 U [1.95 U]
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	1.56 BJ	1.3 BJ [1.45 BJ]
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	12.7 BJ	100 B [18.8 BJ]
Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOC TIC													
1-Methylnaphthalene	- -	0.97	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	200 J [4,600 J]
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UNKNOWN PAH1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 J
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 J [38 J] [13 J] [7 J] [6 J] [5 J] [4 J] [1,000 J] [110 J] [91 J] [67 J] [3,100 J] [15 J] [28 J] [
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs TICs													
2-Cyclohexen-1-ol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diacetone Alcohol	- -	- -	ug/L	NA	NA	NA	NA	9 J	NA	8 J	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	5 J	NA	5 J	NA	19 JA	NA
N-(3-Methylbutyl)acetamide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	0	0	590 J	380 J	19 J	NA	13 J	NA	140 JA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	6 J	NA	NA	NA	NA	NA	NA
Unknown Semivoloatile TIC	- -	- -	ug/L	NA	NA	9 J	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	51 J	11 J	4 J	NA	NA	NA	11 J	NA
Unknown16	- -	- -	ug/L	NA	NA	10 J	4 J	NA	NA	NA	NA	NA	NA
VOCs TICs													
2-Ethyl-1-Hexanol	- -	- -	ug/L	NA	NA	3 J	NA	NA	NA	NA	NA	NA	NA
Chlorodifluoromethane	- -	100,000	ug/L	3 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromonofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl Ether	- -	3,100	ug/L	1 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorofluoro-	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOC TICs	- -	- -	ug/L	4 J	0	3 J	0	0	NA	0	NA	0	0 [0]
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				BMW67C	BMW67D	BMW68A	BMW68B	BMW68C	BMW68D	BMW68E	BMW69A	BMW70A	BMW70A
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				04/11/12	04/11/12	04/10/12	04/09/12	04/10/12	04/10/12	04/09/12	04/04/12	11/17/11	04/04/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
PCBs													
Aroclor-1016	- -	0.96	ug/L	0.098 U	0.1 U	0.099 U	0.099 U	0.1 U	0.2 U	0.1 U	0.098 U	NA	0.1 U
Aroclor-1221	- -	0.0043	ug/L	0.098 U	0.1 U	0.099 U	0.099 U	0.1 U	0.2 U	0.1 U	0.098 U	NA	0.1 U
Aroclor-1232	- -	0.0043	ug/L	0.098 U	0.1 U	0.099 U	0.099 U	0.1 U	0.2 U	0.1 U	0.098 U	NA	0.1 U
Aroclor-1242	- -	0.034	ug/L	0.098 U	0.1 U	0.099 U	0.099 U	0.1 U	0.2 U	0.1 U	0.098 U	NA	0.1 U
Aroclor-1248	- -	0.034	ug/L	0.098 U	0.1 U	0.099 U	0.099 U	0.1 U	0.2 U	0.1 U	0.098 U	NA	0.1 U
Aroclor-1254	- -	0.034	ug/L	0.098 U	0.1 U	0.099 U	0.099 U	0.1 U	0.2 U	0.1 U	0.098 U	NA	0.1 U
Aroclor-1260	- -	0.034	ug/L	0.098 U	0.1 U	0.099 U	0.099 U	0.1 U	0.2 U	0.1 U	0.098 U	NA	0.1 U
Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	650	8.4	18	23	35	42	29	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	110	2.3	10 U	4 J	5.7 J	7.2 J	4.7 J	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	**32 J**	0.5 J	**6.5 J**	**9 J**	**7.6 J**	**7.2 J**	**3.6 J**	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	**1,100**	19	85	110	120	130	110	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	5.2	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	200 U	**0.1 J**	20 U	20 U	**1.5 J**	**1.4 J**	20 U	1 U	NA	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	**220**	0.2 J	**18**	**26**	**28**	**21**	10 U	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	- -	15	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	NA	0.5 U
1,2-Dibromo-3-chloropropane	0.2	0.00032	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.05	0.0065	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	**75 J**	**2**	**7.8 J**	**9.3 J**	**21**	**22**	**13**	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	100 U	0.3 J	10 U	10 U	**2.6 J**	**2.8 J**	**2.3 J**	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	1,000 U	10 U	100 U	100 U	100 U	100 U	100 U	5 U	5 U	5 U
2-Hexanone	- -	34	ug/L	1,000 U	10 U	100 U	100 U	100 U	100 U	100 U	5 U	5 U	5 U
4-Methyl-2-pentanone	- -	1,000	ug/L	1,000 U	10 U	100 U	100 U	100 U	100 U	100 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	1,000 U	10 U	100 U	100 U	100 U	100 U	100 U	5 U	5 U	5 U
Benzene	5	0.39	ug/L	**71 J**	1 U	**12**	**15**	**20**	**26**	10 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Bromomethane	- -	7	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	**2.1 J**	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	100 U	1 U	10 U	10 U	2.6 J	10 U	10 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**1,700**	**170**	**120**	**130**	**350**	**420**	**300**	0.5 U	0.1 J	0.1 J
Chloromethane	- -	190	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	**1,300**	18	**140**	**180**	**250**	**190**	**96**	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	- -	- -	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Cyclohexane	- -	13,000	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	100 U	0.7 J	10 U	10 U	2.9 J	3.4 J	2.9 J	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	**94 J**	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	390	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	290	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Methyl acetate	- -	16,000	ug/L	200 U	2 U	20 U	20 U	20 U	20 U	20 U	1 U	1 U	1 U
Methyl tert-butyl ether	- -	12	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Methylcyclohexane	- -	- -	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	**230**	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Styrene	100	1,100	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	**240**	**14**	**30**	**38**	**85**	**67**	**50**	0.5 U	0.5 U	0.5 U
Toluene	1,000	860	ug/L	27 J	0.4 J	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	100 U	1 U	10 U	10 U	10 U	2.6 J	10 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	- -	- -	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**15,000**	**360**	**1,500**	**1,800**	**2,200**	**2,700**	**1,800**	0.5 U	0.2 J	**0.7**
Trichlorofluoromethane	- -	1,100	ug/L	**1,500**	140	60	68	180	240	220	0.5 U	0.5 U	0.5 U
Vinyl Chloride	2	0.015	ug/L	100 U	1 U	**6.3 J**	**8.7 J**	**5.9 J**	**3.3 J**	10 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				BMW67C	BMW67D	BMW68A	BMW68B	BMW68C	BMW68D	BMW68E	BMW69A	BMW70A	BMW70A
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				04/11/12	04/11/12	04/10/12	04/09/12	04/10/12	04/10/12	04/09/12	04/04/12	11/17/11	04/04/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Semivolatile Organics													
1,1'-Biphenyl	- -	0.83	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	**240**	1 U	**17**	**24**	**28**	**21**	1 U	1 U	NA	1 U
1,2-Dichlorobenzene	600	280	ug/L	1	1 U	0.6 J	0.8 J	2	1	1 U	1 U	NA	1 U
1,3-Dichlorobenzene	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
1,4-Dichlorobenzene	75	0.42	ug/L	**0.6 J**	1 U	**0.8 J**	**0.9 J**	**1**	**0.8 J**	1 U	1 U	NA	1 U
1,4-Dioxane	- -	0.67	ug/L	**46**	**11**	**20**	**25**	**63**	**54**	**43**	5 U	NA	5 U
1,4-Naphthoquinone	- -	- -	ug/L	29 U	30 U	29 U	30 U	30 U	30 U	30 U	29 U	NA	31 U
2,2'-Oxybis(1-Chloropropane)	- -	0.31	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
2,4,5-Trichlorophenol	- -	890	ug/L	13	1 U	1	1	2	1 U	1 U	1 U	NA	1 U
2,4,6-Trichlorophenol	- -	3.5	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
2,4-Dichlorophenol	- -	35	ug/L	11	1 U	1 U	1	0.6 J	1 U	1 U	1 U	NA	1 U
2,4-Dimethylphenol	- -	270	ug/L	0.7 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
2,4-Dinitrophenol	- -	30	ug/L	29 U	30 U	29 U	30 U	30 U	30 U	30 U	29 U	NA	31 U
2,4-Dinitrotoluene	- -	0.2	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U
2,6-Dinitrotoluene	- -	15	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
2-Chloronaphthalene	- -	550	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
2-Chlorophenol	- -	71	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
2-Methylnaphthalene	- -	27	ug/L	1	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
2-Methylphenol	- -	720	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
2-Nitroaniline	- -	150	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
2-Nitrophenol	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
3,3'-Dichlorobenzidine	- -	0.11	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U
3-Nitroaniline	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
4,6-Dinitro-2-methylphenol	- -	1.2	ug/L	15 U	15 U	14 U	15 U	15 U	15 U	15 U	14 U	NA	15 U
4-Bromophenyl-phenylether	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
4-Chloro-3-Methylphenol	- -	1,100	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
4-Chloroaniline	- -	0.32	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
4-Chlorophenyl-phenylether	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
4-Methylphenol	- -	1,400	ug/L	0.6 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
4-Nitroaniline	- -	3.3	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
4-Nitrophenol	- -	- -	ug/L	29 U	30 U	29 U	30 U	30 U	30 U	30 U	29 U	NA	31 U
Acenaphthene	- -	400	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Acenaphthylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Acetophenone	- -	1,500	ug/L	0.6 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
Anthracene	- -	1,300	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Atrazine	3	0.26	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U
Benzaldehyde	- -	1,500	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U
Benzo(a)anthracene	- -	0.029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Benzo(a)pyrene	0.2	0.0029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.1 J**	NA	0.5 U
Benzo(b)fluoranthene	- -	0.029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Benzo(g,h,i)perylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Benzo(k)fluoranthene	- -	0.29	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Benzoic Acid	- -	58,000	ug/L	15 U	15 U	14 U	15 U	15 U	15 U	15 U	14 U	NA	15 U
Benzyl Alcohol	- -	1,500	ug/L	15 U	15 U	14 U	15 U	15 U	15 U	15 U	14 U	NA	15 U
bis(2-Chloroethoxy)methane	- -	47	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
bis(2-Chloroethyl)ether	- -	0.012	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
bis(2-Chloroisopropyl)ether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	5 U	5 U	5 U	5 U	5 U	**5 J**	5 U	5 U	NA	5 U
Butylbenzylphthalate	- -	14	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U
Caprolactam	- -	7,700	ug/L	15 U	15 U	14 U	15 U	15 U	15 U	15 U	14 U	NA	15 U
Carbazole	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
Chrysene	- -	2.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Dibenzo(a,h)anthracene	- -	0.0029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Dibenzofuran	- -	5.8	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
Diethylphthalate	- -	11,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U
Dimethylphthalate	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U
Di-n-Butylphthalate	- -	670	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U
Di-n-Octylphthalate	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U
Fluoranthene	- -	630	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Fluorene	- -	220	ug/L	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Hexachlorobenzene	1	0.042	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Hexachlorobutadiene	- -	0.26	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
Hexachlorocyclopentadiene	50	22	ug/L	15 U	15 U	14 U	15 U	15 U	15 U	15 U	14 U	NA	15 U
Hexachloroethane	- -	0.79	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U
Indeno(1,2,3-cd)pyrene	- -	0.029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Isophorone	- -	67	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
Naphthalene	- -	0.14	ug/L	**4**	0.1 J	**2**	**2**	**0.4 J**	**0.3 J**	0.1 J	0.5 U	NA	0.5 U
Nitrobenzene	- -	0.12	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
N-Nitroso-di-n-propylamine	- -	0.0093	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
N-Nitrosodiphenylamine	- -	10	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
Pentachlorophenol	1	0.17	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U
Phenanthrene	- -	- -	ug/L	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Phenol	- -	4,500	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
Pyrene	- -	87	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				BMW67C	BMW67D	BMW68A	BMW68B	BMW68C	BMW68D	BMW68E	BMW69A	BMW70A	BMW70A
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				04/11/12	04/11/12	04/10/12	04/09/12	04/10/12	04/10/12	04/09/12	04/04/12	11/17/11	04/04/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Inorganics													
Aluminum	- -	16,000	ug/L	200 U	203	200 U	200 U	139 J	**23,100**	739	200 U	NA	200 U
Antimony	6	6	ug/L	1 U	1 U	1 U	1 U	1 U	3.8	1 U	1 U	NA	1 U
Arsenic	10	0.045	ug/L	**3**	2 U	2 U	**1.6 J**	2 U	**24.9**	2 U	2 U	NA	2 U
Barium	2,000	2,900	ug/L	310	78.8	232	283	140	621	94.4	190	NA	77.4
Beryllium	4	16	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5	0.5 U	0.5 U	NA	0.5 U
Boron	- -	3,100	ug/L	26.4 J	50 U	13.7 J	17.1 J	10.5 J	45.7 J	50 U	9.8 J	NA	14.1 J
Cadmium	5	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U
Calcium	- -	- -	ug/L	123,000	60,000	132,000	129,000	75,400	398,000	57,900	92,600	NA	87,700
Chromium	100	- -	ug/L	1.8 J	10.1 J	15 U	15 U	5.5 J	74.1	4.2 J	15 U	NA	15 U
Cobalt	- -	4.7	ug/L	**10**	5 U	3.6 J	**21**	5 U	**9.9**	1 J	2.4 J	NA	5 U
Copper	1,300	620	ug/L	10 U	1.1 J	10 U	10 U	1 J	153	2.4 J	10 U	NA	10 U
Cyanide	200	9.3	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA	NA	NA
Iron	- -	11,000	ug/L	2,010	200 U	284	7,680	47.6 J	**31,300**	1,470	200 U	NA	200 U
Lead	15	- -	ug/L	13.6 J	10 J	9.5 J	11.6 J	14.6 J	138	12.4 J	6.6 J	NA	6.3 J
Magnesium	- -	- -	ug/L	44,300	11,900	25,500	33,800	34,500	46,400	30,900	6,960	NA	11,000
Manganese	- -	- -	ug/L	4,580	5 U	1,080	3,750	9	1,030	38	197	NA	1 J
Mercury	2	0.63	ug/L	0.076 J	0.2 U	0.2 U	0.035 J	0.2 U	0.091 J	0.039 J	0.047 J	NA	0.2 U
Nickel	- -	300	ug/L	25.9	10 U	6.3 J	22.1	10 U	40.8	2.2 J	1.8 J	NA	10 U
Potassium	- -	- -	ug/L	3,080	10,800	12,200	9,960	8,910	10,300	1,800	3,790	NA	1,730
Selenium	50	78	ug/L	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	NA	20 U
Silver	- -	71	ug/L	1.1 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U
Sodium	- -	- -	ug/L	11,300	9,750	24,500	17,300	15,200	12,100	6,330	36,100	NA	20,200
Thallium	2	0.16	ug/L	**0.36 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.63**	0.5 U	0.5 U	NA	0.5 U
Vanadium	- -	- -	ug/L	5 U	1.2 J	5 U	5 U	5 U	50	2.1 J	5 U	NA	5 U
Zinc	- -	4,700	ug/L	18.9 J	5.9 J	5.8 J	9.4 J	20 U	419	23.7	20 U	NA	20 U
Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	200 U	200 U	200 U	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	1 U	0.7 J	1 U	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	2 U	2 U	2 U	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	136	240	86.7	NA	NA	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	0.5 U	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	10.4 J	10.5 J	50 U	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	5 U	5 U	5 U	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	68,200	107,000	56,200	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	5.2 J	11.7 J	15 U	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	5 U	5 U	5 U	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	10 U	10 U	10 U	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	200 U	200 U	24.4 J	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	11.3 J	8.3 J	9 J	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	33,000	590	30,200	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	5.3	5 U	7.7	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	0.2 U	0.031 J	0.033 J	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	10 U	10 U	10 U	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	8,860	10,700	1,740	NA	NA	NA
Selenium	50	78	ug/L	NA	NA	NA	NA	20 U	20 U	20 U	NA	NA	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	5 U	5 U	5 U	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	14,900	12,400	6,390	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	0.5 U	0.16 J	0.5 U	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	1 J	1.2 J	5 U	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	20 U	20 U	7.8 J	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW67C 04/11/12 Area B Monitoring wells	BMW67D 04/11/12 Area B Monitoring wells	BMW68A 04/10/12 Area B Monitoring wells	BMW68B 04/09/12 Area B Monitoring wells	BMW68C 04/10/12 Area B Monitoring wells	BMW68D 04/10/12 Area B Monitoring wells	BMW68E 04/09/12 Area B Monitoring wells	BMW69A 04/04/12 Area B Monitoring wells	BMW70A 11/17/11 Area B Monitoring wells	BMW70A 04/04/12 Area B Monitoring wells
Miscellaneous													
Bromate	10	0.096	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	- -	- -	ug/L	2,500 U	2,500 U	2,500 U	2,500 U	2,500 U	2,500 U	2,500 U	NA	NA	NA
Chloride	- -	- -	ug/L	83,300	17,700	53,300	60,000	45,200	40,400	31,200	62,800	NA	41,000
Nitrate-N	10,000	25,000	ug/L	540	1,900	500 U	500 U	540	350 J	1,900	1,000	NA	980
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Simazine	4	0.52	ug/L	1 U	1 U	1 U	1.2 U	1 U	0.99 U	0.99 U	NA	NA	NA
Sulfate	- -	- -	ug/L	90,300	35,200	55,200	34,900	19,200	24,400	8,100	32,300	NA	21,900
Total Dissolved Solids	- -	- -	ug/L	669,000	163,000	538,000	557,000	248,000	392,000	311,000	366,000	NA	330,000
Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	2.5 U	0.25 J	0.25 U	1.3 U	0.26 U	0.25 U	0.085 J	0.24 U	NA	0.25 U
2,4,5-T	- -	120	ug/L	0.53	0.0097 U	0.12 U	0.14	0.014	0.045	0.01 U	0.0098 U	NA	0.01 U
2,4,5-TP	50	84	ug/L	0.12 U	0.0097 U	0.21	0.83	0.67	0.5	0.11	0.0098 U	NA	0.01 U
2,4-D	70	130	ug/L	1 U	0.043 J	0.22 U	0.51 U	0.13	0.15	0.1 U	0.098 U	NA	0.1 U
2,4-DB	- -	91	ug/L	2 U	0.19 U	0.57 U	1 U	0.21 U	0.25	0.2 U	0.2 U	NA	0.2 U
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	2,000 U	190 U	200 U	1,000 U	210 U	200 U	200 U	200 U	NA	200 U
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	28	4.9 U	8.7	12	22	15	6.7	0.98 U	NA	1 U
Dicamba	- -	440	ug/L	1.9	0.05 J	0.3	0.47	0.25	0.24	0.09	0.059 U	NA	0.06 U
Dichlorprop	- -	- -	ug/L	1 U	0.097 U	1.7	2.5	0.32	0.45	0.1 U	0.098 U	NA	0.1 U
Dinoseb	7	11	ug/L	1 U	0.097 U	0.15	0.51 U	0.11 U	0.099 U	0.1 U	0.098 U	NA	0.1 U
Diquat	20	34	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	0.015 U	0.015 U	0.042	0.056	0.075	0.055	0.017	NA	NA	NA
Endothall	100	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	0.037	0.009 J	0.17	0.19	0.34	0.34	0.078	NA	NA	NA
MCPP	- -	12	ug/L	400 U	39 U	40 U	200 U	42 U	**66**	40 U	39 U	NA	40 U
Monuron	- -	- -	ug/L	0.51	0.11	0.39	0.45	1.2	1	0.62	NA	NA	NA
Pesticides													
4,4'-DDD	- -	0.28	ug/L	0.011 J	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	NA	0.021 U
4,4'-DDE	- -	0.2	ug/L	0.011 J	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	NA	0.021 U
4,4'-DDT	- -	0.2	ug/L	0.02 U	0.0083 J	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	NA	0.021 U
Aldrin	- -	0.00021	ug/L	**0.0027 J**	0.0098 U	0.0099 U	0.01 U	0.01 U	0.01 U	0.011 U	0.0098 U	NA	0.011 U
Alpha-BHC	- -	0.0062	ug/L	**0.011**	0.0098 U	0.0099 U	0.0044 J	0.0031 J	0.0043 J	0.011 U	0.0098 U	NA	0.011 U
Alpha-Chlordane	- -	- -	ug/L	0.0098 U	0.0098 U	0.0099 U	0.01 U	0.01 U	0.01 U	0.011 U	0.0098 U	NA	0.011 U
Beta-BHC	- -	0.022	ug/L	0.0046 J	0.0098 U	0.0099 U	0.0041 J	0.01 U	0.0091 J	0.004 J	0.0098 U	NA	0.011 U
Delta-BHC	- -	- -	ug/L	0.0082 J	0.0098 U	0.0099 U	0.01 U	0.01 U	0.01 U	0.011 U	0.0098 U	NA	0.011 U
Dieldrin	- -	0.0015	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	NA	0.021 U
Endosulfan I	- -	- -	ug/L	0.03 U	0.0098 U	0.0099 U	0.01 U	0.02 U	0.01 U	0.011 U	0.0098 U	NA	0.011 U
Endosulfan II	- -	- -	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	NA	0.021 U
Endosulfan Sulfate	- -	- -	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	NA	0.021 U
Endrin	2	1.7	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	NA	0.021 U
Endrin Aldehyde	- -	- -	ug/L	0.098 U	0.098 U	0.099 U	0.1 U	0.1 U	0.1 U	0.11 U	0.098 U	NA	0.11 U
Endrin Ketone	- -	- -	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	NA	0.021 U
Gamma-BHC (Lindane)	0.2	0.036	ug/L	**0.048**	0.0098 U	0.0026 J	0.0033 J	0.0046 J	0.0023 J	0.0034 J	0.0098 U	NA	0.011 U
Gamma-Chlordane	- -	- -	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	NA	0.021 U
Heptachlor	0.4	0.0018	ug/L	0.0098 U	0.0098 U	0.0099 U	0.01 U	0.01 U	0.01 U	0.011 U	0.0098 U	NA	0.011 U
Heptachlor Epoxide	0.2	0.0033	ug/L	0.0098 U	0.0098 U	0.0099 U	0.01 U	0.01 U	0.01 U	0.011 U	0.0098 U	NA	0.011 U
Methoxychlor	40	27	ug/L	0.098 U	0.098 U	0.099 U	0.1 U	0.1 U	0.1 U	0.11 U	0.098 U	NA	0.11 U
Toxaphene	3	0.013	ug/L	2.9 U	2.9 U	3 U	3 U	3.1 U	3 U	3.2 U	2.9 U	NA	3.2 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW67C	BMW67D	BMW68A	BMW68B	BMW68C	BMW68D	BMW68E	BMW69A	BMW70A	BMW70A
Sample Depth(ft):													
Date Collected:				04/11/12	04/11/12	04/10/12	04/09/12	04/10/12	04/10/12	04/09/12	04/04/12	11/17/11	04/04/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	2.54 BJ	7.81 BJ	4.59 BJ	3.6 BJ	3.14 BJ	13 B	3.45 BJ	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	1.5 BJ	3.65 BJ	1.79 BJQ	1.18 BJ	1.57 BJ	4.78 BJ	1.36 BJ	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	0.523 BJ	1.04 BJ	0.483 BJ	0.353 BJ	0.639 BJQ	2.23 BJ	0.464 BJ	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	0.174 BJ	0.491 BJ	0.466 BJ	0.168 BJ	0.547 BJ	9.94 U	0.481 BJQ	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	0.56 BJQ	0.907 BJ	0.447 BJQ	0.414 BJ	0.649 BJ	1.1 BJ	0.492 BJ	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	0.467 BJQ	0.687 BJ	0.493 BJQ	0.375 BJQ	0.698 BJ	0.751 BJ	0.737 BJQ	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	0.447 BJ	9.75 U	0.529 BJ	0.268 BJQ	0.508 BJ	2.59 BJ	0.481 BJ	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	0.32 BJ	0.766 BJ	0.544 BJ	0.462 BJ	0.407 BJ	1.97 BJ	0.364 BJ	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	0.519 BJQ	0.536 BJ	0.68 BJ	10.2 U	0.354 BJ	0.56 BJ	9.61 U	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	0.303 BJ	9.75 U	1.03 BJQ	0.267 BJ	0.69 BJQ	0.832 BJ	9.61 U	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	0.418 BJQ	0.571 BJ	0.324 BJQ	0.162 BJ	0.549 BJQ	0.81 BJ	0.411 BJQ	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	0.702 BJ	1.21 BJ	0.777 BJ	0.398 BJ	0.769 BJ	1.76 BJ	0.495 BJQ	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	0.743 BJ	0.518 BJ	0.71 BJQ	0.456 BJ	0.742 BJ	1.08 BJ	0.857 BJ	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	2 U	0.461 J	1.97 U	0.519 BJ	0.258 JQ	1.99 U	**0.657 BJQ**	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	0.159 BJQ	1.95 U	0.232 BJQ	0.224 BJ	0.164 BJ	1.99 U	0.231 BJQ	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	1.21 BJQ	2.21 BJ	1.23 BJQ	1.12 BJ	1.4 BJ	5.68 BJ	1.32 BJ	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	8.27 BJ	18.6 BJ	12.7 BJ	20.9 B	6.78 BJ	152 B	19.7 B	NA	NA	NA
Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOC TIC													
1-Methylnaphthalene	- -	0.97	ug/L	**40 J**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	15 JA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	620 J	24 J	68 J	85 JA	65 J	160 J	100 J	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	6 J	NA	NA	NA	NA
UNKNOWN PAH1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	18 J	6 J	48 J	29 J	5 J	7 J	71 J	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	5 J	NA	NA	NA	NA
SVOCs TICs													
2-Cyclohexen-1-ol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diacetone Alcohol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-(3-Methylbutyl)acetamide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	5 J	NA	0
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown Semivoloatile TIC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	5 J	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOCs TICs													
2-Ethyl-1-Hexanol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorodifluoromethane	- -	100,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromonofluoromethane	- -	- -	ug/L	NA	NA	24 J	32 J	NA	NA	NA	NA	NA	NA
Ethyl Ether	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorofluoro-	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOC TICs	- -	- -	ug/L	0	0	24 J	32 J	30 J	29 J	27 J	0	NA	0
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	30 J	29 J	27 J	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				BMW70B	BMW70C	BMW71A	BMW71A	BMW71B	BMW71C	BMW71C	BMW72	BMW72	BMW72
Sample Depth(ft):	MCL	RSL Tapwater											0 - 27
Date Collected:				04/04/12	04/04/12	11/15/11	03/28/12	03/28/12	03/29/12	04/13/12	03/29/12	04/13/12	06/08/11
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
PCBs													
Aroclor-1016	- -	0.96	ug/L	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	NA	0.098 U [0.099 U]	NA	NA
Aroclor-1221	- -	0.0043	ug/L	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	NA	0.098 U [0.099 U]	NA	NA
Aroclor-1232	- -	0.0043	ug/L	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	NA	0.098 U [0.099 U]	NA	NA
Aroclor-1242	- -	0.034	ug/L	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	NA	0.098 U [0.099 U]	NA	NA
Aroclor-1248	- -	0.034	ug/L	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	NA	0.098 U [0.099 U]	NA	NA
Aroclor-1254	- -	0.034	ug/L	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	NA	0.098 U [0.099 U]	NA	NA
Aroclor-1260	- -	0.034	ug/L	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	NA	0.098 U [0.099 U]	NA	NA
Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.5 U	0.5 U	0.3 J	0.3 J	0.2 J	0.2 J	NA	0.5 U [0.5 U]	NA	0.5 U
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	NA	0.5 U [0.5 U]	NA	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,2,4-Trimethylbenzene	- -	15	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
1,2-Dibromo-3-chloropropane	0.2	0.00032	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,2-Dibromoethane	0.05	0.0065	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U [5 U]	NA	5 U
2-Hexanone	- -	34	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U [5 U]	NA	5 U
4-Methyl-2-pentanone	- -	1,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U [5 U]	NA	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U [5 U]	NA	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Bromomethane	- -	7	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Chloroform	70	0.19	ug/L	0.5 U	**0.3 J**	**1.2**	**1.1**	**1.1**	**0.6**	NA	**0.5 J [0.4 J]**	NA	**0.2 J**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.5 U	0.5 U	0.4 J	0.3 J	0.1 J	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Cyclohexane	- -	13,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.1 J
Isopropylbenzene	- -	390	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.6
Methyl acetate	- -	16,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U [1 U]	NA	1 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Methylcyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.2 J
Styrene	100	1,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.5 U	0.5 U	0.2 J	0.3 J	0.3 J	0.3 J	NA	0.2 J [0.2 J]	NA	0.5 U
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	1.2
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Trichloroethene	5	0.44	ug/L	0.5 U	0.5 U	**3.2**	**3.5**	**2.6**	**1.3**	NA	**0.8 [0.8]**	NA	0.5 U
Trichlorofluoromethane	- -	1,100	ug/L	0.5 U	0.2 J	1.8	2.5	1.3	1.2	NA	2.4 [2.4]	NA	0.5 U
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				BMW70B	BMW70C	BMW71A	BMW71A	BMW71B	BMW71C	BMW71C	BMW72	BMW72	BMW72
Sample Depth(ft):	MCL	RSL Tapwater											0 - 27
Date Collected:				04/04/12	04/04/12	11/15/11	03/28/12	03/28/12	03/29/12	04/13/12	03/29/12	04/13/12	06/08/11
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Semivolatile Organics													
1,1'-Biphenyl	- -	0.83	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
1,2-Dichlorobenzene	600	280	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
1,3-Dichlorobenzene	- -	- -	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
1,4-Dichlorobenzene	75	0.42	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
1,4-Dioxane	- -	0.67	ug/L	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U [5 U]	NA	NA
1,4-Naphthoquinone	- -	- -	ug/L	31 U	30 U	NA	31 U	31 U	31 U	NA	30 U [31 U]	NA	NA
2,2'-Oxybis(1-Chloropropane)	- -	0.31	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
2,4,5-Trichlorophenol	- -	890	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
2,4,6-Trichlorophenol	- -	3.5	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
2,4-Dichlorophenol	- -	35	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
2,4-Dimethylphenol	- -	270	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
2,4-Dinitrophenol	- -	30	ug/L	31 U	30 U	NA	31 U	31 U	31 U	NA	30 U [31 U]	NA	NA
2,4-Dinitrotoluene	- -	0.2	ug/L	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U [5 U]	NA	NA
2,6-Dinitrotoluene	- -	15	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
2-Chloronaphthalene	- -	550	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
2-Chlorophenol	- -	71	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
2-Methylnaphthalene	- -	27	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
2-Methylphenol	- -	720	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
2-Nitroaniline	- -	150	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
2-Nitrophenol	- -	- -	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
3,3'-Dichlorobenzidine	- -	0.11	ug/L	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U [5 U]	NA	NA
3-Nitroaniline	- -	- -	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
4,6-Dinitro-2-methylphenol	- -	1.2	ug/L	16 U	15 U	NA	15 U	15 U	15 U	NA	15 U [15 U]	NA	NA
4-Bromophenyl-phenylether	- -	- -	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
4-Chloro-3-Methylphenol	- -	1,100	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
4-Chloroaniline	- -	0.32	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
4-Chlorophenyl-phenylether	- -	- -	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
4-Methylphenol	- -	1,400	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
4-Nitroaniline	- -	3.3	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
4-Nitrophenol	- -	- -	ug/L	31 U	30 U	NA	31 U	31 U	31 U	NA	30 U [31 U]	NA	NA
Acenaphthene	- -	400	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Acenaphthylene	- -	- -	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Acetophenone	- -	1,500	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
Anthracene	- -	1,300	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Atrazine	3	0.26	ug/L	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U [5 U]	NA	NA
Benzaldehyde	- -	1,500	ug/L	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U [5 U]	NA	NA
Benzo(a)anthracene	- -	0.029	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Benzo(a)pyrene	0.2	0.0029	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Benzo(b)fluoranthene	- -	0.029	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Benzo(g,h,i)perylene	- -	- -	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Benzo(k)fluoranthene	- -	0.29	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Benzoic Acid	- -	58,000	ug/L	16 U	15 U	NA	15 U	15 U	15 U	NA	15 U [15 U]	NA	NA
Benzyl Alcohol	- -	1,500	ug/L	16 U	15 U	NA	15 U	15 U	15 U	NA	15 U [15 U]	NA	NA
bis(2-Chloroethoxy)methane	- -	47	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
bis(2-Chloroethyl)ether	- -	0.012	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
bis(2-Chloroisopropyl)ether	- -	- -	ug/L	NA	NA	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U [5 U]	NA	NA
Butylbenzylphthalate	- -	14	ug/L	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U [5 U]	NA	NA
Caprolactam	- -	7,700	ug/L	16 U	15 U	NA	15 U	15 U	15 U	NA	15 U [15 U]	NA	NA
Carbazole	- -	- -	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
Chrysene	- -	2.9	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Dibenzo(a,h)anthracene	- -	0.0029	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Dibenzofuran	- -	5.8	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
Diethylphthalate	- -	11,000	ug/L	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U [5 U]	NA	NA
Dimethylphthalate	- -	- -	ug/L	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U [5 U]	NA	NA
Di-n-Butylphthalate	- -	670	ug/L	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U [5 U]	NA	NA
Di-n-Octylphthalate	- -	- -	ug/L	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U [5 U]	NA	NA
Fluoranthene	- -	630	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Fluorene	- -	220	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Hexachlorobenzene	1	0.042	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Hexachlorobutadiene	- -	0.26	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
Hexachlorocyclopentadiene	50	22	ug/L	16 U	15 U	NA	15 U	15 U	15 U	NA	15 U [15 U]	NA	NA
Hexachloroethane	- -	0.79	ug/L	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U [5 U]	NA	NA
Indeno(1,2,3-cd)pyrene	- -	0.029	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Isophorone	- -	67	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
Naphthalene	- -	0.14	ug/L	0.5 U	0.5 U	NA	0.1 J	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Nitrobenzene	- -	0.12	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
N-Nitroso-di-n-propylamine	- -	0.0093	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
N-Nitrosodiphenylamine	- -	10	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
Pentachlorophenol	1	0.17	ug/L	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U [5 U]	NA	NA
Phenanthrene	- -	- -	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Phenol	- -	4,500	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
Pyrene	- -	87	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW70B	BMW70C	BMW71A	BMW71A	BMW71B	BMW71C	BMW71C	BMW72	BMW72	BMW72
Sample Depth(ft):													0 - 27
Date Collected:				04/04/12	04/04/12	11/15/11	03/28/12	03/28/12	03/29/12	04/13/12	03/29/12	04/13/12	06/08/11
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Inorganics													
Aluminum	- -	16,000	ug/L	423	206	NA	1,310	1,750	200 U	NA	642 [575]	NA	NA
Antimony	6	6	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	0.64 J [0.63 J]	NA	NA
Arsenic	10	0.045	ug/L	2 U	2 U	NA	**1.7 J**	**3.3**	**5.5**	NA	2 U [2 U]	NA	NA
Barium	2,000	2,900	ug/L	235	151	NA	123	303	211	NA	95.2 [91.1]	NA	NA
Beryllium	4	16	ug/L	0.5 U	0.5 U	NA	0.5 U	0.16 J	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Boron	- -	3,100	ug/L	12.6 J	8.9 J	NA	15.7 J	16.6 J	33.4 J	NA	12 J [35.9 J]	NA	NA
Cadmium	5	- -	ug/L	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U [5 U]	NA	NA
Calcium	- -	- -	ug/L	88,400	89,200	NA	76,600	36,500	39,200	NA	107,000 [96,300]	NA	NA
Chromium	100	- -	ug/L	15 U	6.4 J	NA	9 J	3.7 J	15 U	NA	34.5 [34.8]	NA	NA
Cobalt	- -	4.7	ug/L	5 U	5 U	NA	1.6 J	5 U	5 U	NA	5 U [5 U]	NA	NA
Copper	1,300	620	ug/L	10 U	10 U	NA	1.6 J	10 U	1.5 J	NA	10 U [1.9 J]	NA	NA
Cyanide	200	9.3	ug/L	NA	NA	NA	NA	NA	NA	NA	10 U [10 U]	NA	NA
Iron	- -	11,000	ug/L	238	200 U	NA	3,350	464	200 U	NA	200 U [200 U]	NA	NA
Lead	15	- -	ug/L	12.2 J	7.9 J	NA	11.7 J	10.2 J	8.6 J	NA	5.4 J [2.7 J]	NA	NA
Magnesium	- -	- -	ug/L	8,540	9,390	NA	19,400	22,500	22,100	NA	4,700 [5,330]	NA	NA
Manganese	- -	- -	ug/L	12.1	0.68 J	NA	170	5.4	5 U	NA	5 U [5 U]	NA	NA
Mercury	2	0.63	ug/L	0.2 U	0.06 J	NA	0.27 U	0.2 U	0.2 U	NA	0.2 U [0.2 U]	NA	NA
Nickel	- -	300	ug/L	10 U	10 U	NA	7.1 J	1.8 J	10 U	NA	10 U [10 U]	NA	NA
Potassium	- -	- -	ug/L	2,310	5,760	NA	1,860	3,720	1,660	NA	3,810 [3,410]	NA	NA
Selenium	50	78	ug/L	20 U	20 U	NA	20 U	20 U	20 U	NA	20 U [20 U]	NA	NA
Silver	- -	71	ug/L	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U [5 U]	NA	NA
Sodium	- -	- -	ug/L	23,100	13,200	NA	9,760	20,400	3,870	NA	3,560 [3,360]	NA	NA
Thallium	2	0.16	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Vanadium	- -	- -	ug/L	5 U	5 U	NA	6	1.1 J	5 U	NA	2.5 J [2.1 J]	NA	NA
Zinc	- -	4,700	ug/L	20 U	20 U	NA	11.3 J	3.8 J	20 U	NA	20 U [20 U]	NA	NA
Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	178 J	NA	200 U	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	2 U	NA	**1.1 J**	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	53.2	NA	116	NA	NA	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	8.7 J	NA	16.1 J	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	5 U	NA	5 U	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	29,200	NA	69,100	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	6.1 J	NA	15 U	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	5 U	NA	5 U	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	10 U	NA	1.1 J	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	200 U	NA	200 U	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	4.9 J	NA	5.5 J	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	9,090	NA	17,800	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	5 U	NA	94.1	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	0.2 U	NA	0.2 U	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	10 U	NA	3.2 J	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	5,830	NA	1,440	NA	NA	NA	NA	NA	NA
Selenium	50	78	ug/L	NA	20 U	NA	20 U	NA	NA	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	5 U	NA	5 U	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	13,300	NA	9,540	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	1.2 J	NA	1.8 J	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	20 U	NA	20 U	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW70B	BMW70C	BMW71A	BMW71A	BMW71B	BMW71C	BMW71C	BMW72	BMW72	BMW72
Sample Depth(ft):													0 - 27
Date Collected:				04/04/12	04/04/12	11/15/11	03/28/12	03/28/12	03/29/12	04/13/12	03/29/12	04/13/12	06/08/11
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Miscellaneous													
Bromate	10	0.096	ug/L	NA	NA	NA	NA	NA	NA	NA	5 U	NA	NA
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	2,500 U [2,500 U]	NA	NA
Chloride	- -	- -	ug/L	40,900	34,600	NA	33,000	15,000	3,200	NA	12,300 [18,300]	NA	NA
Nitrate-N	10,000	25,000	ug/L	750	1,700	NA	5,300	4,500	NA	3,600	NA	3,500	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Simazine	4	0.52	ug/L	NA	NA	NA	NA	NA	NA	NA	1 U [0.99 U]	NA	NA
Sulfate	- -	- -	ug/L	27,000	18,800	NA	18,100	33,900	1,600	NA	23,900 [23,800]	NA	NA
Total Dissolved Solids	- -	- -	ug/L	333,000	121,000	NA	290,000	252,000	202,000	NA	269,000 [233,000]	NA	NA
Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	0.26 U	0.25 U	NA	0.25 U	0.25 U	0.25 U	NA	0.25 U [0.19 J]	NA	NA
2,4,5-T	- -	120	ug/L	0.01 U	0.0033 J	NA	0.0098 U	0.01 U	0.0099 U	NA	0.01 U [0.0098 U]	NA	NA
2,4,5-TP	50	84	ug/L	0.01 U	0.01 U	NA	0.0098 U	0.01 U	0.0024 J	NA	0.01 U [0.0098 U]	NA	NA
2,4-D	70	130	ug/L	0.1 U	0.1 U	NA	0.098 U	0.1 U	0.099 U	NA	0.1 U [0.098 U]	NA	NA
2,4-DB	- -	91	ug/L	0.21 U	0.2 U	NA	0.2 U	0.2 U	0.2 U	NA	0.2 U [0.2 U]	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	210 U	200 U	NA	200 U	200 U	200 U	NA	200 U [200 U]	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	1 U	1 U	NA	0.98 U	1 U	0.99 U	NA	1 U [0.98 U]	NA	NA
Dicamba	- -	440	ug/L	0.062 U	0.06 U	NA	0.059 U	0.061 U	0.059 U	NA	0.06 U [0.059 U]	NA	NA
Dichlorprop	- -	- -	ug/L	0.1 U	0.1 U	NA	0.098 U	0.1 U	0.099 U	NA	0.1 U [0.098 U]	NA	NA
Dinoseb	7	11	ug/L	0.1 U	0.1 U	NA	0.098 U	0.1 U	0.099 U	NA	0.1 U [0.098 U]	NA	NA
Diquat	20	34	ug/L	NA	NA	NA	NA	NA	NA	NA	0.4 U	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	0.015 U [0.015 U]	NA	NA
Endothall	100	300	ug/L	NA	NA	NA	NA	NA	NA	NA	9 U	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	0.01 U [0.01 U]	NA	NA
MCPP	- -	12	ug/L	41 U	40 U	NA	39 U	40 U	40 U	NA	40 U [39 U]	NA	NA
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	0.01 U [0.01 U]	NA	NA
Pesticides													
4,4'-DDD	- -	0.28	ug/L	0.022 U	0.021 U	NA	0.021 U	0.02 U	0.02 U	NA	0.022 U [0.02 U]	NA	NA
4,4'-DDE	- -	0.2	ug/L	0.022 U	0.021 U	NA	0.021 U	0.02 U	0.02 U	NA	0.022 U [0.02 U]	NA	NA
4,4'-DDT	- -	0.2	ug/L	0.022 U	0.021 U	NA	0.021 U	0.02 U	0.02 U	NA	0.022 U [0.02 U]	NA	NA
Aldrin	- -	0.00021	ug/L	0.011 U	0.011 U	NA	0.011 U	0.0099 U	0.0098 U	NA	0.011 U [0.01 U]	NA	NA
Alpha-BHC	- -	0.0062	ug/L	0.011 U	0.011 U	NA	0.011 U	0.0099 U	0.0098 U	NA	0.011 U [0.01 U]	NA	NA
Alpha-Chlordane	- -	- -	ug/L	0.011 U	0.011 U	NA	0.011 U	0.0099 U	0.0098 U	NA	0.011 U [0.01 U]	NA	NA
Beta-BHC	- -	0.022	ug/L	0.011 U	0.011 U	NA	0.011 U	0.0099 U	0.0098 U	NA	0.011 U [0.01 U]	NA	NA
Delta-BHC	- -	- -	ug/L	0.011 U	0.011 U	NA	0.011 U	0.0099 U	0.0098 U	NA	0.011 U [0.01 U]	NA	NA
Dieldrin	- -	0.0015	ug/L	0.022 U	0.021 U	NA	0.021 U	0.02 U	0.02 U	NA	0.022 U [0.02 U]	NA	NA
Endosulfan I	- -	- -	ug/L	0.011 U	0.011 U	NA	0.011 U	0.0099 U	0.0098 U	NA	0.011 U [0.01 U]	NA	NA
Endosulfan II	- -	- -	ug/L	0.022 U	0.021 U	NA	0.021 U	0.02 U	0.02 U	NA	0.022 U [0.02 U]	NA	NA
Endosulfan Sulfate	- -	- -	ug/L	0.022 U	0.021 U	NA	0.021 U	0.02 U	0.02 U	NA	0.022 U [0.02 U]	NA	NA
Endrin	2	1.7	ug/L	0.022 U	0.021 U	NA	0.021 U	0.02 U	0.02 U	NA	0.022 U [0.02 U]	NA	NA
Endrin Aldehyde	- -	- -	ug/L	0.11 U	0.11 U	NA	0.11 U	0.099 U	0.098 U	NA	0.11 U [0.1 U]	NA	NA
Endrin Ketone	- -	- -	ug/L	0.022 U	0.021 U	NA	0.021 U	0.02 U	0.02 U	NA	0.022 U [0.02 U]	NA	NA
Gamma-BHC (Lindane)	0.2	0.036	ug/L	0.011 U	0.011 U	NA	0.011 U	0.0099 U	0.0098 U	NA	0.011 U [0.01 U]	NA	NA
Gamma-Chlordane	- -	- -	ug/L	0.022 U	0.021 U	NA	0.021 U	0.02 U	0.02 U	NA	0.022 U [0.02 U]	NA	NA
Heptachlor	0.4	0.0018	ug/L	0.011 U	0.011 U	NA	0.011 U	0.0099 U	0.0098 U	NA	0.011 U [0.01 U]	NA	NA
Heptachlor Epoxide	0.2	0.0033	ug/L	0.011 U	0.011 U	NA	0.011 U	0.0099 U	0.0098 U	NA	0.011 U [0.01 U]	NA	NA
Methoxychlor	40	27	ug/L	0.11 U	0.11 U	NA	0.11 U	0.099 U	0.098 U	NA	0.11 U [0.1 U]	NA	NA
Toxaphene	3	0.013	ug/L	3.3 U	3.2 U	NA	3.2 U	3 U	2.9 U	NA	3.2 U [3.1 U]	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW70B 04/04/12 Area B Monitoring wells	BMW70C 04/04/12 Area B Monitoring wells	BMW71A 11/15/11 Area B Monitoring wells	BMW71A 03/28/12 Area B Monitoring wells	BMW71B 03/28/12 Area B Monitoring wells	BMW71C 03/29/12 Area B Monitoring wells	BMW71C 04/13/12 Area B Monitoring wells	BMW72 03/29/12 Area B Monitoring wells	BMW72 04/13/12 Area B Monitoring wells	BMW72 0 - 27 06/08/11 Area B Monitoring wells
Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	2.97 BJ [2.76 BJQ]	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	1.86 BJQ [1.32 BJQ]	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	0.776 BJQ [0.44 BJ]	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	0.368 BJQ [0.203 BJ]	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	0.584 BJQ [0.374 BJQ]	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	0.486 BJQ [0.427 BJQ]	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	0.401 BJQ [0.557 BJQ]	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	0.389 BJQ [0.465 BJQ]	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	0.613 BJQ [0.354 BJ]	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	0.282 BJQ [0.344 BJQ]	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	0.354 BJQ [0.316 BJ]	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	0.487 BJQ [0.573 BJQ]	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	0.287 BJQ [0.422 BJQ]	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	0.282 JQ [2.04 U]	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	1.97 U [0.233 BJ]	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	1.21 BJ [1.05 BJ]	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	6.56 BJ [7.05 BJ]	NA	NA
Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	0.72	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	0.39	NA	NA
SVOC TIC													
1-Methylnaphthalene	- -	0.97	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UNKNOWN PAH1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs TICs													
2-Cyclohexen-1-ol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diacetone Alcohol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-(3-Methylbutyl)acetamide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	0	0	NA	0	0	0	NA	0 [0]	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown Semivoloatile TIC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOCs TICs													
2-Ethyl-1-Hexanol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorodifluoromethane	- -	100,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromonofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl Ether	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorofluoro-	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOC TICs	- -	- -	ug/L	0	0	NA	0	0	0	NA	0 [0]	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW72	BMW72	BMW72	BMW73	BMW73	BMW74	BMW74	BMW076	BMW76	BMW76
Sample Depth(ft):				45 - 55	58 - 68	85 - 95				59 - 69			97 - 103
Date Collected:				06/07/11	06/07/11	06/07/11	09/13/11	04/10/12	04/05/12	07/25/11	11/15/11	04/02/12	06/05/11
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
PCBs													
Aroclor-1016	- -	0.96	ug/L	NA	NA	NA	NA	0.099 U	0.098 U	NA	NA	0.1 U	NA
Aroclor-1221	- -	0.0043	ug/L	NA	NA	NA	NA	0.099 U	0.098 U	NA	NA	0.1 U	NA
Aroclor-1232	- -	0.0043	ug/L	NA	NA	NA	NA	0.099 U	0.098 U	NA	NA	0.1 U	NA
Aroclor-1242	- -	0.034	ug/L	NA	NA	NA	NA	0.099 U	0.098 U	NA	NA	0.1 U	NA
Aroclor-1248	- -	0.034	ug/L	NA	NA	NA	NA	0.099 U	0.098 U	NA	NA	0.1 U	NA
Aroclor-1254	- -	0.034	ug/L	NA	NA	NA	NA	0.099 U	0.098 U	NA	NA	0.1 U	NA
Aroclor-1260	- -	0.034	ug/L	NA	NA	NA	NA	0.099 U	0.098 U	NA	NA	0.1 U	NA
Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U	0.3 J	0.3 J	0.1 J	0.1 J	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.5 U	0.5 U	0.5 U	0.8	1	0.4 J	0.5 J	0.1 J	0.4 J	1.4
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	- -	15	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
1,2-Dibromo-3-chloropropane	0.2	0.00032	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.05	0.0065	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	**0.3 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	- -	34	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	- -	1,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U	5 U	5 U	3.1 J	3.3 J	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	- -	7	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**0.2 J**	**0.2 J**	**0.4 J**	**7.3**	**6.5**	**1.9**	**2**	**0.3 J**	**0.3 J**	0.5 U
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.5 U	0.5 U	0.5 U	8.5	8.3	0.2 J	0.3 J	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	- -	13,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.1 J	0.1 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	390	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 J	0.5 J	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J
Methyl acetate	- -	16,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylcyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.2 J	0.1 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	100	1,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.5 U	0.5 U	0.2 J	8.7	6.7	0.2 J	0.4 J	0.5 U	0.5 U	0.5 U
Toluene	1,000	860	ug/L	1.8	2.1	1.2	0.5 U	0.5 U	0.1 J	0.5 J	0.5 U	0.5 U	0.4 J
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	0.5 U	0.1 J	0.4 J	**24**	**21**	**18**	**25**	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	- -	1,100	ug/L	0.5 J	0.8	0.6	1.8	2.3	2.5	2.1	0.5 U	0.5 U	0.5 U
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW72 45 - 55 06/07/11 Area B Monitoring wells	BMW72 58 - 68 06/07/11 Area B Monitoring wells	BMW72 85 - 95 06/07/11 Area B Monitoring wells	BMW73 09/13/11 Area B Monitoring wells	BMW73 04/10/12 Area B Monitoring wells	BMW74 04/05/12 Area B Monitoring wells	BMW74 59 - 69 07/25/11 Area B Monitoring wells	BMW076 11/15/11 Area B Monitoring wells	BMW76 04/02/12 Area B Monitoring wells	BMW76 97 - 103 06/05/11 Area B Monitoring wells
Semivolatile Organics													
1,1'-Biphenyl	- -	0.83	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
1,2-Dichlorobenzene	600	280	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
1,3-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
1,4-Dichlorobenzene	75	0.42	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
1,4-Dioxane	- -	0.67	ug/L	NA	NA	NA	NA	**2 J**	5 U	NA	NA	5 U	NA
1,4-Naphthoquinone	- -	- -	ug/L	NA	NA	NA	NA	31 U	29 U	NA	NA	31 U	NA
2,2'-Oxybis(1-Chloropropane)	- -	0.31	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
2,4,5-Trichlorophenol	- -	890	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
2,4,6-Trichlorophenol	- -	3.5	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
2,4-Dichlorophenol	- -	35	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
2,4-Dimethylphenol	- -	270	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
2,4-Dinitrophenol	- -	30	ug/L	NA	NA	NA	NA	31 U	29 U	NA	NA	31 U	NA
2,4-Dinitrotoluene	- -	0.2	ug/L	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA
2,6-Dinitrotoluene	- -	15	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
2-Chloronaphthalene	- -	550	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
2-Chlorophenol	- -	71	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
2-Methylnaphthalene	- -	27	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
2-Methylphenol	- -	720	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
2-Nitroaniline	- -	150	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
2-Nitrophenol	- -	- -	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
3,3'-Dichlorobenzidine	- -	0.11	ug/L	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA
3-Nitroaniline	- -	- -	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
4,6-Dinitro-2-methylphenol	- -	1.2	ug/L	NA	NA	NA	NA	15 U	15 U	NA	NA	15 U	NA
4-Bromophenyl-phenylether	- -	- -	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
4-Chloroaniline	- -	0.32	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
4-Chlorophenyl-phenylether	- -	- -	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
4-Methylphenol	- -	1,400	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
4-Nitroaniline	- -	3.3	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
4-Nitrophenol	- -	- -	ug/L	NA	NA	NA	NA	31 U	29 U	NA	NA	31 U	NA
Acenaphthene	- -	400	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Acenaphthylene	- -	- -	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Acetophenone	- -	1,500	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
Anthracene	- -	1,300	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Atrazine	3	0.26	ug/L	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA
Benzaldehyde	- -	1,500	ug/L	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA
Benzo(a)anthracene	- -	0.029	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Benzo(b)fluoranthene	- -	0.029	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Benzo(g,h,i)perylene	- -	- -	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Benzo(k)fluoranthene	- -	0.29	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Benzoic Acid	- -	58,000	ug/L	NA	NA	NA	NA	15 U	32	NA	NA	15 U	NA
Benzyl Alcohol	- -	1,500	ug/L	NA	NA	NA	NA	15 U	15 U	NA	NA	15 U	NA
bis(2-Chloroethoxy)methane	- -	47	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
bis(2-Chloroethyl)ether	- -	0.012	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
bis(2-Chloroisopropyl)ether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA
Butylbenzylphthalate	- -	14	ug/L	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA
Caprolactam	- -	7,700	ug/L	NA	NA	NA	NA	15 U	15 U	NA	NA	15 U	NA
Carbazole	- -	- -	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
Chrysene	- -	2.9	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Dibenzo(a,h)anthracene	- -	0.0029	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Dibenzofuran	- -	5.8	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
Diethylphthalate	- -	11,000	ug/L	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA
Dimethylphthalate	- -	- -	ug/L	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA
Di-n-Butylphthalate	- -	670	ug/L	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA
Di-n-Octylphthalate	- -	- -	ug/L	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA
Fluoranthene	- -	630	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Fluorene	- -	220	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Hexachlorobenzene	1	0.042	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Hexachlorobutadiene	- -	0.26	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
Hexachlorocyclopentadiene	50	22	ug/L	NA	NA	NA	NA	15 U	15 U	NA	NA	15 U	NA
Hexachloroethane	- -	0.79	ug/L	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA
Indeno(1,2,3-cd)pyrene	- -	0.029	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Isophorone	- -	67	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
Naphthalene	- -	0.14	ug/L	NA	NA	NA	NA	0.1 J	0.5 U	NA	NA	0.5 U	NA
Nitrobenzene	- -	0.12	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
N-Nitroso-di-n-propylamine	- -	0.0093	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
N-Nitrosodiphenylamine	- -	10	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
Pentachlorophenol	1	0.17	ug/L	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA
Phenanthrene	- -	- -	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Phenol	- -	4,500	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
Pyrene	- -	87	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA

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Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW72 45 - 55 06/07/11 Area B Monitoring wells	BMW72 58 - 68 06/07/11 Area B Monitoring wells	BMW72 85 - 95 06/07/11 Area B Monitoring wells	BMW73 09/13/11 Area B Monitoring wells	BMW73 04/10/12 Area B Monitoring wells	BMW74 04/05/12 Area B Monitoring wells	BMW74 59 - 69 07/25/11 Area B Monitoring wells	BMW076 11/15/11 Area B Monitoring wells	BMW76 04/02/12 Area B Monitoring wells	BMW76 97 - 103 06/05/11 Area B Monitoring wells
Inorganics													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	200 U	893	NA	NA	200 U	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	2 U	**2.8**	NA	NA	**1.1 J**	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	49.5	42.1	NA	NA	63.3	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	14.3 J	12.7 J	NA	NA	50 U	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	75,300	62,600	NA	NA	31,300	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	1.7 J	10.8 J	NA	NA	1.3 J	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	10 U	10 U	NA	NA	10 U	NA
Cyanide	200	9.3	ug/L	NA	NA	NA	NA	10 U	10 U	NA	NA	10 U	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	23.5 J	341	NA	NA	34.3 J	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	12.7 J	7 J	NA	NA	8.5 J	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	30,500	10,400	NA	NA	15,300	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	0.58 J	8.6	NA	NA	1.6 J	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	0.028 J	0.2 U	NA	NA	0.2 U	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	2.6 J	10 U	NA	NA	10 U	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	2,810	26,000	NA	NA	1,210	NA
Selenium	50	78	ug/L	NA	NA	NA	NA	20 U	20 U	NA	NA	20 U	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	13,300	22,400	NA	NA	4,610	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	5 U	5.3	NA	NA	1.5 J	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	20 U	20 U	NA	NA	4.9 J	NA
Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	50	78	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW72 45 - 55 06/07/11 Area B Monitoring wells	BMW72 58 - 68 06/07/11 Area B Monitoring wells	BMW72 85 - 95 06/07/11 Area B Monitoring wells	BMW73 09/13/11 Area B Monitoring wells	BMW73 04/10/12 Area B Monitoring wells	BMW74 04/05/12 Area B Monitoring wells	BMW74 59 - 69 07/25/11 Area B Monitoring wells	BMW076 11/15/11 Area B Monitoring wells	BMW76 04/02/12 Area B Monitoring wells	BMW76 97 - 103 06/05/11 Area B Monitoring wells
Miscellaneous													
Bromate	10	0.096	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
Bromide	- -	- -	ug/L	NA	NA	NA	NA	2,500 U	2,500 U	NA	NA	29,400	NA
Chloride	- -	- -	ug/L	NA	NA	NA	NA	20,500	45,300	NA	NA	11,600	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA	NA	3,900	6,900	NA	NA	500 U	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Simazine	4	0.52	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	0.99 U	NA
Sulfate	- -	- -	ug/L	NA	NA	NA	NA	15,300	36,600	NA	NA	11,400	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA	NA	362,000	209,000	NA	NA	173,000	NA
Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA	NA	0.25 U	0.25 U	NA	NA	0.25 U	NA
2,4,5-T	- -	120	ug/L	NA	NA	NA	NA	0.01 U	0.0033 J	NA	NA	0.01 U	NA
2,4,5-TP	50	84	ug/L	NA	NA	NA	NA	0.0038 J	0.0022 J	NA	NA	0.01 U	NA
2,4-D	70	130	ug/L	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	0.1 U	NA
2,4-DB	- -	91	ug/L	NA	NA	NA	NA	0.2 U	0.2 U	NA	NA	0.2 U	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA	NA	200 U	200 U	NA	NA	200 U	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA	NA	0.74 J	1 U	NA	NA	1 U	NA
Dicamba	- -	440	ug/L	NA	NA	NA	NA	0.06 U	0.06 U	NA	NA	0.061 U	NA
Dichlorprop	- -	- -	ug/L	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	0.1 U	NA
Dinoseb	7	11	ug/L	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	0.1 U	NA
Diquat	20	34	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	0.4 U	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	0.015 U	0.015 U	NA	NA	0.015 U	NA
Endothall	100	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	9 U	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	0.01 U	0.01 U	NA	NA	0.01 U	NA
MCPP	- -	12	ug/L	NA	NA	NA	NA	40 U	40 U	NA	NA	40 U	NA
Monuron	- -	- -	ug/L	NA	NA	NA	NA	0.056	0.005 J	NA	NA	0.01 U	NA
Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	NA	NA	NA	0.02 U	0.02 U	NA	NA	0.022 U	NA
4,4'-DDE	- -	0.2	ug/L	NA	NA	NA	NA	0.02 U	0.02 U	NA	NA	0.022 U	NA
4,4'-DDT	- -	0.2	ug/L	NA	NA	NA	NA	0.02 U	0.02 U	NA	NA	0.022 U	NA
Aldrin	- -	0.00021	ug/L	NA	NA	NA	NA	0.0099 U	0.01 U	NA	NA	0.011 U	NA
Alpha-BHC	- -	0.0062	ug/L	NA	NA	NA	NA	0.0099 U	0.01 U	NA	NA	0.011 U	NA
Alpha-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	0.0099 U	0.01 U	NA	NA	0.011 U	NA
Beta-BHC	- -	0.022	ug/L	NA	NA	NA	NA	0.0099 U	0.01 U	NA	NA	0.011 U	NA
Delta-BHC	- -	- -	ug/L	NA	NA	NA	NA	0.0099 U	0.01 U	NA	NA	0.011 U	NA
Dieldrin	- -	0.0015	ug/L	NA	NA	NA	NA	0.02 U	0.02 U	NA	NA	0.022 U	NA
Endosulfan I	- -	- -	ug/L	NA	NA	NA	NA	0.0099 U	0.01 U	NA	NA	0.011 U	NA
Endosulfan II	- -	- -	ug/L	NA	NA	NA	NA	0.02 U	0.02 U	NA	NA	0.022 U	NA
Endosulfan Sulfate	- -	- -	ug/L	NA	NA	NA	NA	0.02 U	0.02 U	NA	NA	0.022 U	NA
Endrin	2	1.7	ug/L	NA	NA	NA	NA	0.02 U	0.02 U	NA	NA	0.022 U	NA
Endrin Aldehyde	- -	- -	ug/L	NA	NA	NA	NA	0.099 U	0.1 U	NA	NA	0.11 U	NA
Endrin Ketone	- -	- -	ug/L	NA	NA	NA	NA	0.02 U	0.02 U	NA	NA	0.022 U	NA
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	NA	NA	NA	0.0099 U	0.01 U	NA	NA	0.011 U	NA
Gamma-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	0.02 U	0.02 U	NA	NA	0.022 U	NA
Heptachlor	0.4	0.0018	ug/L	NA	NA	NA	NA	0.0099 U	0.01 U	NA	NA	0.011 U	NA
Heptachlor Epoxide	0.2	0.0033	ug/L	NA	NA	NA	NA	0.0099 U	0.01 U	NA	NA	0.011 U	NA
Methoxychlor	40	27	ug/L	NA	NA	NA	NA	0.099 U	0.1 U	NA	NA	0.11 U	NA
Toxaphene	3	0.013	ug/L	NA	NA	NA	NA	3 U	3 U	NA	NA	3.3 U	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW72 45 - 55 06/07/11 Area B Monitoring wells	BMW72 58 - 68 06/07/11 Area B Monitoring wells	BMW72 85 - 95 06/07/11 Area B Monitoring wells	BMW73 09/13/11 Area B Monitoring wells	BMW73 04/10/12 Area B Monitoring wells	BMW74 04/05/12 Area B Monitoring wells	BMW74 59 - 69 07/25/11 Area B Monitoring wells	BMW076 11/15/11 Area B Monitoring wells	BMW76 04/02/12 Area B Monitoring wells	BMW76 97 - 103 06/05/11 Area B Monitoring wells
Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	3.45 BJ	3.35 BJ	NA	NA	3.45 BJ	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	1.17 BJ	1.04 BJ	NA	NA	1.6 BJ	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	0.296 BJQ	0.448 BJ	NA	NA	0.563 BJ	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	0.224 BJ	0.367 BJ	NA	NA	0.568 BJ	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	0.604 BJ	0.494 BJ	NA	NA	0.664 BJ	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	0.491 BJQ	0.63 BJ	NA	NA	0.537 BJ	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	0.534 BJ	0.26 BJ	NA	NA	0.491 BJQ	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	0.516 BJ	0.427 BJQ	NA	NA	0.693 BJ	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	0.392 BJ	0.832 BJ	NA	NA	0.52 BJQ	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	0.402 BJ	0.566 BJ	NA	NA	0.715 BJ	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	0.666 BJQ	0.474 BJQ	NA	NA	0.561 BJQ	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	0.485 BJ	0.452 BJ	NA	NA	0.633 BJ	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	0.671 BJ	0.567 BJQ	NA	NA	1.14 BJ	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	1.93 U	**1.39 BJQ**	NA	NA	0.403 JQ	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	0.241 BJ	0.213 J	NA	NA	1.96 U	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	0.928 BJ	1.13 BJ	NA	NA	1.09 BJ	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	7.21 BJ	7.33 BJ	NA	NA	8.36 BJ	NA
Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	1.4	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	0	NA
SVOC TIC													
1-Methylnaphthalene	- -	0.97	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	27 J	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	7 J	NA	NA	NA	NA	NA
UNKNOWN PAH1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	20 J	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs TICs													
2-Cyclohexen-1-ol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diacetone Alcohol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-(3-Methylbutyl)acetamide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	5 J	NA	NA	83 J	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	76 J	NA
Unknown Semivoloatile TIC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	5 J	NA	NA	6 J	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOCs TICs													
2-Ethyl-1-Hexanol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorodifluoromethane	- -	100,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromonofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl Ether	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorofluoro-	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOC TICs	- -	- -	ug/L	NA	NA	NA	NA	0	0	NA	NA	0	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW077	BMW77	BMW77 40 - 50	BMW77 56 - 71	BMW78A	BMW78B	CC001	CC002	CC003A	CC003B
Sample Depth(ft):													
Date Collected:				11/15/11	04/02/12	06/06/11	06/06/11	04/03/12	04/03/12	04/19/12	04/19/12	04/20/12	04/20/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey
PCBs													
Aroclor-1016	- -	0.96	ug/L	NA	0.096 U	NA	NA	0.099 U	0.097 U	NA	0.1 U	0.096 U	NA
Aroclor-1221	- -	0.0043	ug/L	NA	0.096 U	NA	NA	0.099 U	0.097 U	NA	0.1 U	0.096 U	NA
Aroclor-1232	- -	0.0043	ug/L	NA	0.096 U	NA	NA	0.099 U	0.097 U	NA	0.1 U	0.096 U	NA
Aroclor-1242	- -	0.034	ug/L	NA	0.096 U	NA	NA	0.099 U	0.097 U	NA	0.1 U	0.096 U	NA
Aroclor-1248	- -	0.034	ug/L	NA	0.096 U	NA	NA	0.099 U	0.097 U	NA	0.1 U	0.096 U	NA
Aroclor-1254	- -	0.034	ug/L	NA	0.096 U	NA	NA	0.099 U	0.097 U	NA	0.1 U	0.096 U	NA
Aroclor-1260	- -	0.034	ug/L	NA	0.096 U	NA	NA	0.099 U	0.097 U	NA	0.1 U	0.096 U	NA
Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.4 J	0.5 U	0.3 J	0.3 J	0.3 J
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.3 J	0.2 J	0.5 U	0.2 J	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	3.1	3.1	0.4 J	1.4	0.8	1.1	0.5 U	0.8	0.9	0.8
1,2,3-Trichlorobenzene	- -	5.2	ug/L	1.6	1.9	0.2 J	1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	**3.1**	**4.9**	0.4 J	**2.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	- -	15	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.2	0.00032	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.05	0.0065	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.1 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.1 J	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.2 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	- -	34	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	- -	1,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.2 J	0.2 J	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	- -	7	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.2 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**0.5**	**0.5 J**	**0.4 J**	**0.5 J**	**2.1**	**3.7**	**2.6**	**2.7**	**2.9**	**2.7**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	1.5	1.5	0.3 J	0.9	1.7	2.1	0.5 U	1	1.2	1
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	- -	13,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.7	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	390	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	3	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	- -	16,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylcyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.9	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	100	1,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	**15**	**18**	2.3	8.9	1	1.1	0.5 U	0.7	0.9	0.7
Toluene	1,000	860	ug/L	0.5 U	0.5 U	2	4.8	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**5.5**	**5.7**	**0.7**	**3**	**14**	**18**	**0.7**	**12**	**13**	**12**
Trichlorofluoromethane	- -	1,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	1.3	2.5	0.6	3.4	3.8	3.3
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:		RSL		BMW077	BMW77	BMW77	BMW77	BMW78A	BMW78B	CC001	CC002	CC003A	CC003B
Sample Depth(ft):	MCL	Tapwater				40 - 50	56 - 71						
Date Collected:				11/15/11	04/02/12	06/06/11	06/06/11	04/03/12	04/03/12	04/19/12	04/19/12	04/20/12	04/20/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey
Semivolatile Organics													
1,1'-Biphenyl	- -	0.83	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	**5**	NA	NA	1 U	1 U	NA	1 U	1 U	NA
1,2-Dichlorobenzene	600	280	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
1,3-Dichlorobenzene	- -	- -	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
1,4-Dichlorobenzene	75	0.42	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
1,4-Dioxane	- -	0.67	ug/L	NA	**1 J**	NA	NA	5 U	5 U	NA	5 U	5 U	NA
1,4-Naphthoquinone	- -	- -	ug/L	NA	31 U	NA	NA	30 U	29 U	NA	32 U	30 U	NA
2,2'-Oxybis(1-Chloropropane)	- -	0.31	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
2,4,5-Trichlorophenol	- -	890	ug/L	NA	2	NA	NA	1 U	1 U	NA	1 U	1 U	NA
2,4,6-Trichlorophenol	- -	3.5	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
2,4-Dichlorophenol	- -	35	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
2,4-Dimethylphenol	- -	270	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
2,4-Dinitrophenol	- -	30	ug/L	NA	31 U	NA	NA	30 U	29 U	NA	32 U	30 U	NA
2,4-Dinitrotoluene	- -	0.2	ug/L	NA	5 U	NA	NA	5 U	5 U	NA	5 U	5 U	NA
2,6-Dinitrotoluene	- -	15	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
2-Chloronaphthalene	- -	550	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
2-Chlorophenol	- -	71	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
2-Methylnaphthalene	- -	27	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
2-Methylphenol	- -	720	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
2-Nitroaniline	- -	150	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
2-Nitrophenol	- -	- -	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
3,3'-Dichlorobenzidine	- -	0.11	ug/L	NA	5 U	NA	NA	5 U	5 U	NA	5 U	5 U	NA
3-Nitroaniline	- -	- -	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
4,6-Dinitro-2-methylphenol	- -	1.2	ug/L	NA	15 U	NA	NA	15 U	14 U	NA	16 U	15 U	NA
4-Bromophenyl-phenylether	- -	- -	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
4-Chloroaniline	- -	0.32	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
4-Chlorophenyl-phenylether	- -	- -	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
4-Methylphenol	- -	1,400	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
4-Nitroaniline	- -	3.3	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
4-Nitrophenol	- -	- -	ug/L	NA	31 U	NA	NA	30 U	29 U	NA	32 U	30 U	NA
Acenaphthene	- -	400	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Acenaphthylene	- -	- -	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Acetophenone	- -	1,500	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
Anthracene	- -	1,300	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Atrazine	3	0.26	ug/L	NA	5 U	NA	NA	5 U	5 U	NA	5 U	5 U	NA
Benzaldehyde	- -	1,500	ug/L	NA	5 U	NA	NA	5 U	5 U	NA	5 U	5 U	NA
Benzo(a)anthracene	- -	0.029	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Benzo(b)fluoranthene	- -	0.029	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Benzo(g,h,i)perylene	- -	- -	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Benzo(k)fluoranthene	- -	0.29	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Benzoic Acid	- -	58,000	ug/L	NA	15 U	NA	NA	15 U	14 U	NA	16 U	15 U	NA
Benzyl Alcohol	- -	1,500	ug/L	NA	15 U	NA	NA	15 U	14 U	NA	16 U	15 U	NA
bis(2-Chloroethoxy)methane	- -	47	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
bis(2-Chloroethyl)ether	- -	0.012	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
bis(2-Chloroisopropyl)ether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	5 U	NA	NA	5 U	5 U	NA	5 U	5 U	NA
Butylbenzylphthalate	- -	14	ug/L	NA	5 U	NA	NA	5 U	5 U	NA	5 U	5 U	NA
Caprolactam	- -	7,700	ug/L	NA	15 U	NA	NA	15 U	14 U	NA	16 U	15 U	NA
Carbazole	- -	- -	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
Chrysene	- -	2.9	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Dibenzo(a,h)anthracene	- -	0.0029	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Dibenzofuran	- -	5.8	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
Diethylphthalate	- -	11,000	ug/L	NA	5 U	NA	NA	5 U	5 U	NA	5 U	5 U	NA
Dimethylphthalate	- -	- -	ug/L	NA	5 U	NA	NA	5 U	5 U	NA	5 U	5 U	NA
Di-n-Butylphthalate	- -	670	ug/L	NA	5 U	NA	NA	5 U	5 U	NA	5 U	5 U	NA
Di-n-Octylphthalate	- -	- -	ug/L	NA	5 U	NA	NA	5 U	5 U	NA	5 U	5 U	NA
Fluoranthene	- -	630	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Fluorene	- -	220	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Hexachlorobenzene	1	0.042	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Hexachlorobutadiene	- -	0.26	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
Hexachlorocyclopentadiene	50	22	ug/L	NA	15 U	NA	NA	15 U	14 U	NA	16 U	15 U	NA
Hexachloroethane	- -	0.79	ug/L	NA	5 U	NA	NA	5 U	5 U	NA	5 U	5 U	NA
Indeno(1,2,3-cd)pyrene	- -	0.029	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Isophorone	- -	67	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
Naphthalene	- -	0.14	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Nitrobenzene	- -	0.12	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
N-Nitroso-di-n-propylamine	- -	0.0093	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
N-Nitrosodiphenylamine	- -	10	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
Pentachlorophenol	1	0.17	ug/L	NA	**24**	NA	NA	5 U	5 U	NA	5 U	5 U	NA
Phenanthrene	- -	- -	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Phenol	- -	4,500	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
Pyrene	- -	87	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW077	BMW77	BMW77 40 - 50	BMW77 56 - 71	BMW78A	BMW78B	CC001	CC002	CC003A	CC003B
Sample Depth(ft):													
Date Collected:				11/15/11	04/02/12	06/06/11	06/06/11	04/03/12	04/03/12	04/19/12	04/19/12	04/20/12	04/20/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey
Inorganics													
Aluminum	- -	16,000	ug/L	NA	99.7 J	NA	NA	396	200 U	NA	200 U	790	NA
Antimony	6	6	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
Arsenic	10	0.045	ug/L	NA	2 U	NA	NA	2 U	**1.1 J**	NA	2 U	2 U	NA
Barium	2,000	2,900	ug/L	NA	98.3	NA	NA	57.7	82	NA	63.3	73.6	NA
Beryllium	4	16	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Boron	- -	3,100	ug/L	NA	24.9 J	NA	NA	9.2 J	4.1 J	NA	6.6 J	4.3 J	NA
Cadmium	5	- -	ug/L	NA	5 U	NA	NA	5 U	5 U	NA	5 U	5 U	NA
Calcium	- -	- -	ug/L	NA	117,000	NA	NA	68,800	40,000	NA	68,700	65,600	NA
Chromium	100	- -	ug/L	NA	3.9 J	NA	NA	19.9	7.4 J	NA	1.3 J	1.8 J	NA
Cobalt	- -	4.7	ug/L	NA	5 U	NA	NA	5 U	5 U	NA	0.79 J	1.3 J	NA
Copper	1,300	620	ug/L	NA	10 U	NA	NA	10 U	10 U	NA	10 U	1 J	NA
Cyanide	200	9.3	ug/L	NA	10 U	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	128 J	NA	NA	200 U	200 U	NA	46.8 J	1,180	NA
Lead	15	- -	ug/L	NA	11.9 J	NA	NA	8.3 J	12.3 J	NA	15 U	15 U	NA
Magnesium	- -	- -	ug/L	NA	32,500	NA	NA	10,600	11,700	NA	15,600	16,700	NA
Manganese	- -	- -	ug/L	NA	21.6	NA	NA	5 U	5 U	NA	1.2 J	56	NA
Mercury	2	0.63	ug/L	NA	0.2 U	NA	NA	0.2 U	0.2 U	NA	0.2 U	0.2 U	NA
Nickel	- -	300	ug/L	NA	10 U	NA	NA	10 U	10 U	NA	10 U	10 U	NA
Potassium	- -	- -	ug/L	NA	3,200	NA	NA	3,400	11,200	NA	1,650	1,770	NA
Selenium	50	78	ug/L	NA	20 U	NA	NA	20 U	20 U	NA	20 U	20 U	NA
Silver	- -	71	ug/L	NA	5 U	NA	NA	5 U	5 U	NA	5 U	5 U	NA
Sodium	- -	- -	ug/L	NA	12,000	NA	NA	8,310	21,000	NA	12,300	12,000	NA
Thallium	2	0.16	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Vanadium	- -	- -	ug/L	NA	1.5 J	NA	NA	2.5 J	3.1 J	NA	5 U	1.3 J	NA
Zinc	- -	4,700	ug/L	NA	20 U	NA	NA	20 U	20 U	NA	3.5 J	7.8 J	NA
Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	147 J	200 U	NA	200 U	200 U	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	1 U	1 U	NA	1 U	1 U	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	2 U	**1.1 J**	NA	2 U	2 U	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	55.7	82.3	NA	63.5	61.1	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	10.3 J	3.3 J	NA	13.4 J	9.2 J	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	5 U	5 U	NA	5 U	0.44 J	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	47,800	40,200	NA	69,500	64,500	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	7.7 J	6.1 J	NA	15 U	15 U	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	5 U	5 U	NA	5 U	5 U	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	10 U	10 U	NA	2 J	2.5 J	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	200 U	200 U	NA	18 J	200 U	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	8.7 J	8.6 J	NA	15 U	15 U	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	14,200	11,700	NA	15,700	15,500	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	5 U	5 U	NA	5 U	5 U	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	0.2 U	0.2 U	NA	0.2 U	0.2 U	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	10 U	10 U	NA	10 U	10 U	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	3,730	11,200	NA	1,590	1,580	NA
Selenium	50	78	ug/L	NA	NA	NA	NA	20 U	20 U	NA	20 U	20 U	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	5 U	5 U	NA	5 U	5 U	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	8,610	20,500	NA	12,400	11,300	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	1.8 J	3 J	NA	5 U	5 U	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	20 U	20 U	NA	20 U	20 U	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW077 11/15/11 Area B Monitoring wells	BMW77 04/02/12 Area B Monitoring wells	BMW77 40 - 50 06/06/11 Area B Monitoring wells	BMW77 56 - 71 06/06/11 Area B Monitoring wells	BMW78A 04/03/12 Area B Monitoring wells	BMW78B 04/03/12 Area B Monitoring wells	CC001 04/19/12 Springs/Seeps Identified During Stream Survey	CC002 04/19/12 Springs/Seeps Identified During Stream Survey	CC003A 04/20/12 Springs/Seeps Identified During Stream Survey	CC003B 04/20/12 Springs/Seeps Identified During Stream Survey
Miscellaneous													
Bromate	10	0.096	ug/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	- -	- -	ug/L	NA	2,500 U	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	ug/L	NA	22,500	NA	NA	18,100	18,900	NA	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	470 J	NA	NA	3,000	2,800	NA	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Simazine	4	0.52	ug/L	NA	1 U	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	49,100	NA	NA	13,200	43,000	NA	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	486,000	NA	NA	135,000	224,000	NA	NA	NA	NA
Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	0.25 U	NA	NA	0.25 U	0.43	NA	NA	NA	NA
2,4,5-T	- -	120	ug/L	NA	0.17	NA	NA	0.0099 U	0.0033 J	NA	NA	NA	NA
2,4,5-TP	50	84	ug/L	NA	4.6	NA	NA	0.0099 U	0.0099 U	NA	NA	NA	NA
2,4-D	70	130	ug/L	NA	0.14 U	NA	NA	0.099 U	0.099 U	NA	NA	NA	NA
2,4-DB	- -	91	ug/L	NA	0.2 U	NA	NA	0.2 U	0.2 U	NA	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	200 U	NA	NA	200 U	200 U	NA	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	6	NA	NA	0.99 U	0.99 U	NA	NA	NA	NA
Dicamba	- -	440	ug/L	NA	0.06 U	NA	NA	0.059 U	0.059 U	NA	NA	NA	NA
Dichlorprop	- -	- -	ug/L	NA	0.1 U	NA	NA	0.099 U	0.099 U	NA	NA	NA	NA
Dinoseb	7	11	ug/L	NA	2.2	NA	NA	0.099 U	0.099 U	NA	NA	NA	NA
Diquat	20	34	ug/L	NA	0.4 U	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	NA	0.015	NA	NA	NA	NA	NA	NA	NA	NA
Endothall	100	300	ug/L	NA	9 U	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	0.01 U	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	- -	12	ug/L	NA	40 U	NA	NA	39 U	40 U	NA	NA	NA	NA
Monuron	- -	- -	ug/L	NA	0.009 J	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	0.021 U	NA	NA	0.02 U	0.02 U	NA	0.022 U	0.02 U	NA
4,4'-DDE	- -	0.2	ug/L	NA	0.021 U	NA	NA	0.02 U	0.02 U	NA	0.022 U	0.02 U	NA
4,4'-DDT	- -	0.2	ug/L	NA	0.021 U	NA	NA	0.02 U	0.02 U	NA	0.022 U	0.02 U	NA
Aldrin	- -	0.00021	ug/L	NA	0.01 U	NA	NA	0.0098 U	0.0099 U	NA	0.011 U	0.0098 U	NA
Alpha-BHC	- -	0.0062	ug/L	NA	0.01 U	NA	NA	0.0098 U	0.0099 U	NA	0.011 U	0.0098 U	NA
Alpha-Chlordane	- -	- -	ug/L	NA	0.01 U	NA	NA	0.0098 U	0.0099 U	NA	0.011 U	0.0098 U	NA
Beta-BHC	- -	0.022	ug/L	NA	0.01 U	NA	NA	0.0098 U	0.0099 U	NA	0.0039 J	0.0041 J	NA
Delta-BHC	- -	- -	ug/L	NA	0.01 U	NA	NA	0.0098 U	0.0099 U	NA	0.011 U	0.0098 U	NA
Dieldrin	- -	0.0015	ug/L	NA	0.021 U	NA	NA	0.02 U	0.02 U	NA	0.022 U	0.02 U	NA
Endosulfan I	- -	- -	ug/L	NA	0.01 U	NA	NA	0.0098 U	0.0099 U	NA	0.011 U	0.0098 U	NA
Endosulfan II	- -	- -	ug/L	NA	0.021 U	NA	NA	0.02 U	0.02 U	NA	0.022 U	0.02 U	NA
Endosulfan Sulfate	- -	- -	ug/L	NA	0.021 U	NA	NA	0.02 U	0.02 U	NA	0.022 U	0.02 U	NA
Endrin	2	1.7	ug/L	NA	0.021 U	NA	NA	0.02 U	0.02 U	NA	0.022 U	0.02 U	NA
Endrin Aldehyde	- -	- -	ug/L	NA	0.1 U	NA	NA	0.098 U	0.099 U	NA	0.11 U	0.098 U	NA
Endrin Ketone	- -	- -	ug/L	NA	0.021 U	NA	NA	0.02 U	0.02 U	NA	0.022 U	0.02 U	NA
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	0.01 U	NA	NA	0.0098 U	0.0099 U	NA	0.011 U	0.0098 U	NA
Gamma-Chlordane	- -	- -	ug/L	NA	0.021 U	NA	NA	0.02 U	0.02 U	NA	0.022 U	0.02 U	NA
Heptachlor	0.4	0.0018	ug/L	NA	0.01 U	NA	NA	0.0098 U	0.0099 U	NA	0.011 U	0.0098 U	NA
Heptachlor Epoxide	0.2	0.0033	ug/L	NA	0.01 U	NA	NA	0.0098 U	0.0099 U	NA	0.011 U	0.0098 U	NA
Methoxychlor	40	27	ug/L	NA	0.1 U	NA	NA	0.098 U	0.099 U	NA	0.11 U	0.098 U	NA
Toxaphene	3	0.013	ug/L	NA	3.1 U	NA	NA	2.9 U	3 U	NA	3.3 U	2.9 U	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW077 11/15/11 Area B Monitoring wells	BMW77 04/02/12 Area B Monitoring wells	BMW77 40 - 50 06/06/11 Area B Monitoring wells	BMW77 56 - 71 06/06/11 Area B Monitoring wells	BMW78A 04/03/12 Area B Monitoring wells	BMW78B 04/03/12 Area B Monitoring wells	CC001 04/19/12 Springs/Seeps Identified During Stream Survey	CC002 04/19/12 Springs/Seeps Identified During Stream Survey	CC003A 04/20/12 Springs/Seeps Identified During Stream Survey	CC003B 04/20/12 Springs/Seeps Identified During Stream Survey
Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	2.56 BJ	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	1.22 BJ	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	0.365 BJQ	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	0.358 BJ	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	0.423 BJQ	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	0.261 BJQ	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	0.209 BJ	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	0.231 BJQ	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	0.224 BJQ	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	9.68 U	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	0.24 BJQ	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	0.436 BJ	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	0.514 BJ	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	1.94 U	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	1.94 U	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	0.646 BJQ	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	8.78 BJ	NA	NA	NA	NA	NA	NA	NA	NA
Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	2.1	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	7.8	NA	NA	NA	NA	NA	NA	NA	NA
SVOC TIC													
1-Methylnaphthalene	- -	0.97	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UNKNOWN PAH1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs TICs													
2-Cyclohexen-1-ol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diacetone Alcohol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-(3-Methylbutyl)acetamide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	13 J	NA	NA	0	0	NA	12 J	6 J	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	6 J	NA
Unknown Semivoloatile TIC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	13 J	NA	NA	NA	NA	NA	6 J	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOCs TICs													
2-Ethyl-1-Hexanol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorodifluoromethane	- -	100,000	ug/L	NA	1 J	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromonofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl Ether	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorofluoro-	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOC TICs	- -	- -	ug/L	NA	1 J	NA	NA	0	0	0	0	0	0
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		CC003C	CC004	CC006/Sewer line Spring	CC007/Upsurgent Spring	CC008/Spearmint Spring A	rmint Spring B	CC009	CC010	CC011	CC013
Sample Depth(ft):													
Date Collected:				04/20/12	04/20/12	04/19/12	04/19/12	04/19/12	04/19/12	04/19/12	04/19/12	04/20/12	04/20/12
Sampling Area:	(shade)	(bold)	Units	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Named Springs	Named Springs	Named Springs	Named Springs	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey
PCBs													
Aroclor-1016	- -	0.96	ug/L	NA	0.098 U	0.11 U	0.095 U	0.1 U	NA	NA	NA	0.1 U	NA
Aroclor-1221	- -	0.0043	ug/L	NA	0.098 U	0.11 U	0.095 U	0.1 U	NA	NA	NA	0.1 U	NA
Aroclor-1232	- -	0.0043	ug/L	NA	0.098 U	0.11 U	0.095 U	0.1 U	NA	NA	NA	0.1 U	NA
Aroclor-1242	- -	0.034	ug/L	NA	0.098 U	0.11 U	0.095 U	0.1 U	NA	NA	NA	0.1 U	NA
Aroclor-1248	- -	0.034	ug/L	NA	0.098 U	0.11 U	0.095 U	0.1 U	NA	NA	NA	0.1 U	NA
Aroclor-1254	- -	0.034	ug/L	NA	0.098 U	0.11 U	0.095 U	0.1 U	NA	NA	NA	0.1 U	NA
Aroclor-1260	- -	0.034	ug/L	NA	0.098 U	0.11 U	0.095 U	0.1 U	NA	NA	NA	0.1 U	NA
Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.3 J	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.9	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	0.4 J
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	- -	15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.2	0.00032	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.05	0.0065	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	- -	34	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	- -	1,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	- -	7	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**2.8**	**1.7**	**3.7**	**7.4**	**5.7**	**6.7**	**0.6**	**2.5**	**1**	**1**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	1.1	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.4 J	0.5 J
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	- -	13,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	390	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	- -	16,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylcyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	100	1,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.9	0.4 J	0.2 J	0.4 J	0.1 J	0.5 U	0.1 J	0.1 J	0.4 J	0.4 J
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**13**	**6.5**	**1.4**	**1.3**	**2.9**	**3.5**	**1.1**	**0.7**	**4**	**4.3**
Trichlorofluoromethane	- -	1,100	ug/L	3.8	1.8	0.1 J	0.5 U	0.1 J	0.1 J	0.4 J	0.6	2.9	3
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		CC003C	CC004	CC006/Sewer line Spring	CC007/Upsurgent Spring	CC008/Spearmint Spring A	rmint Spring B	CC009	CC010	CC011	CC013
Sample Depth(ft):													
Date Collected:				04/20/12	04/20/12	04/19/12	04/19/12	04/19/12	04/19/12	04/19/12	04/19/12	04/20/12	04/20/12
Sampling Area:	(shade)	(bold)	Units	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Named Springs	Named Springs	Named Springs	Named Springs	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey
Semivolatile Organics													
1,1'-Biphenyl	- -	0.83	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
1,2-Dichlorobenzene	600	280	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
1,3-Dichlorobenzene	- -	- -	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
1,4-Dichlorobenzene	75	0.42	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
1,4-Dioxane	- -	0.67	ug/L	NA	5 U	5 U	5 U	5 U	NA	NA	NA	5 U	NA
1,4-Naphthoquinone	- -	- -	ug/L	NA	29 U	32 U	29 U	29 U	NA	NA	NA	30 U	NA
2,2'-Oxybis(1-Chloropropane)	- -	0.31	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
2,4,5-Trichlorophenol	- -	890	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
2,4,6-Trichlorophenol	- -	3.5	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
2,4-Dichlorophenol	- -	35	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
2,4-Dimethylphenol	- -	270	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
2,4-Dinitrophenol	- -	30	ug/L	NA	29 U	32 U	29 U	29 U	NA	NA	NA	30 U	NA
2,4-Dinitrotoluene	- -	0.2	ug/L	NA	5 U	5 U	5 U	5 U	NA	NA	NA	5 U	NA
2,6-Dinitrotoluene	- -	15	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
2-Chloronaphthalene	- -	550	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
2-Chlorophenol	- -	71	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
2-Methylnaphthalene	- -	27	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
2-Methylphenol	- -	720	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
2-Nitroaniline	- -	150	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
2-Nitrophenol	- -	- -	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
3,3'-Dichlorobenzidine	- -	0.11	ug/L	NA	5 U	5 U	5 U	5 U	NA	NA	NA	5 U	NA
3-Nitroaniline	- -	- -	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
4,6-Dinitro-2-methylphenol	- -	1.2	ug/L	NA	15 U	16 U	14 U	14 U	NA	NA	NA	15 U	NA
4-Bromophenyl-phenylether	- -	- -	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
4-Chloroaniline	- -	0.32	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
4-Chlorophenyl-phenylether	- -	- -	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
4-Methylphenol	- -	1,400	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
4-Nitroaniline	- -	3.3	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
4-Nitrophenol	- -	- -	ug/L	NA	29 U	32 U	29 U	29 U	NA	NA	NA	30 U	NA
Acenaphthene	- -	400	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Acenaphthylene	- -	- -	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Acetophenone	- -	1,500	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
Anthracene	- -	1,300	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Atrazine	3	0.26	ug/L	NA	5 U	5 U	5 U	5 U	NA	NA	NA	5 U	NA
Benzaldehyde	- -	1,500	ug/L	NA	5 U	5 U	5 U	5 U	NA	NA	NA	5 U	NA
Benzo(a)anthracene	- -	0.029	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Benzo(b)fluoranthene	- -	0.029	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Benzo(g,h,i)perylene	- -	- -	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Benzo(k)fluoranthene	- -	0.29	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Benzoic Acid	- -	58,000	ug/L	NA	15 U	16 U	14 U	14 U	NA	NA	NA	15 U	NA
Benzyl Alcohol	- -	1,500	ug/L	NA	15 U	16 U	14 U	14 U	NA	NA	NA	15 U	NA
bis(2-Chloroethoxy)methane	- -	47	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
bis(2-Chloroethyl)ether	- -	0.012	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
bis(2-Chloroisopropyl)ether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	5 U	5 U	5 U	5 U	NA	NA	NA	5 U	NA
Butylbenzylphthalate	- -	14	ug/L	NA	5 U	5 U	5 U	5 U	NA	NA	NA	5 U	NA
Caprolactam	- -	7,700	ug/L	NA	15 U	16 U	14 U	14 U	NA	NA	NA	15 U	NA
Carbazole	- -	- -	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
Chrysene	- -	2.9	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Dibenzo(a,h)anthracene	- -	0.0029	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Dibenzofuran	- -	5.8	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
Diethylphthalate	- -	11,000	ug/L	NA	5 U	5 U	5 U	5 U	NA	NA	NA	5 U	NA
Dimethylphthalate	- -	- -	ug/L	NA	5 U	5 U	5 U	5 U	NA	NA	NA	5 U	NA
Di-n-Butylphthalate	- -	670	ug/L	NA	5 U	5 U	5 U	5 U	NA	NA	NA	5 U	NA
Di-n-Octylphthalate	- -	- -	ug/L	NA	5 U	5 U	5 U	5 U	NA	NA	NA	5 U	NA
Fluoranthene	- -	630	ug/L	NA	0.2 J	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Fluorene	- -	220	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Hexachlorobenzene	1	0.042	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Hexachlorobutadiene	- -	0.26	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
Hexachlorocyclopentadiene	50	22	ug/L	NA	15 U	16 U	14 U	14 U	NA	NA	NA	15 U	NA
Hexachloroethane	- -	0.79	ug/L	NA	5 U	5 U	5 U	5 U	NA	NA	NA	5 U	NA
Indeno(1,2,3-cd)pyrene	- -	0.029	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Isophorone	- -	67	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
Naphthalene	- -	0.14	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Nitrobenzene	- -	0.12	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
N-Nitroso-di-n-propylamine	- -	0.0093	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
N-Nitrosodiphenylamine	- -	10	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
Pentachlorophenol	1	0.17	ug/L	NA	5 U	5 U	5 U	5 U	NA	NA	NA	5 U	NA
Phenanthrene	- -	- -	ug/L	NA	0.2 J	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Phenol	- -	4,500	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
Pyrene	- -	87	ug/L	NA	0.2 J	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		CC003C	CC004	CC006/Sewer line Spring	CC007/Upsurgent Spring	CC008/Spearmint Spring A	rmint Spring B	CC009	CC010	CC011	CC013
Sample Depth(ft):													
Date Collected:				04/20/12	04/20/12	04/19/12	04/19/12	04/19/12	04/19/12	04/19/12	04/19/12	04/20/12	04/20/12
Sampling Area:	(shade)	(bold)	Units	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Named Springs	Named Springs	Named Springs	Named Springs	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey
Inorganics													
Aluminum	- -	16,000	ug/L	NA	14,900	200 U	359	460	NA	NA	NA	717	NA
Antimony	6	6	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
Arsenic	10	0.045	ug/L	NA	**2.4**	2 U	2 U	2 U	NA	NA	NA	2 U	NA
Barium	2,000	2,900	ug/L	NA	221	54.8	36.4	40.2	NA	NA	NA	72.6	NA
Beryllium	4	16	ug/L	NA	0.76	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Boron	- -	3,100	ug/L	NA	7.8 J	24.5 J	40.3 J	19.3 J	NA	NA	NA	10.9 J	NA
Cadmium	5	- -	ug/L	NA	0.57 J	0.29 J	5 U	0.38 J	NA	NA	NA	5 U	NA
Calcium	- -	- -	ug/L	NA	74,500	103,000	73,400	86,400	NA	NA	NA	66,900	NA
Chromium	100	- -	ug/L	NA	16.3	15 U	1.3 J	1.4 J	NA	NA	NA	1.9 J	NA
Cobalt	- -	4.7	ug/L	NA	**9.9**	5 U	**9.2**	0.95 J	NA	NA	NA	5 U	NA
Copper	1,300	620	ug/L	NA	11.7	10 U	9.1 J	1.4 J	NA	NA	NA	1.7 J	NA
Cyanide	200	9.3	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	**21,100**	54.3 J	416	406	NA	NA	NA	1,090	NA
Lead	15	- -	ug/L	NA	22.3	15 U	15 U	15 U	NA	NA	NA	4 J	NA
Magnesium	- -	- -	ug/L	NA	19,600	10,500	9,670	9,460	NA	NA	NA	17,200	NA
Manganese	- -	- -	ug/L	NA	396	1.1 J	5.4	6.8	NA	NA	NA	17.3	NA
Mercury	2	0.63	ug/L	NA	0.2 U	0.2 U	0.2 U	0.2 U	NA	NA	NA	0.2 U	NA
Nickel	- -	300	ug/L	NA	11.6	10 U	5.9 J	10 U	NA	NA	NA	10 U	NA
Potassium	- -	- -	ug/L	NA	4,600	2,840	3,320	3,600	NA	NA	NA	1,810	NA
Selenium	50	78	ug/L	NA	20 U	20 U	20 U	20 U	NA	NA	NA	20 U	NA
Silver	- -	71	ug/L	NA	5 U	5 U	5 U	5 U	NA	NA	NA	5 U	NA
Sodium	- -	- -	ug/L	NA	14,000	81,200	111,000	71,400	NA	NA	NA	10,900	NA
Thallium	2	0.16	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Vanadium	- -	- -	ug/L	NA	20.6	5 U	5 U	5 U	NA	NA	NA	5 U	NA
Zinc	- -	4,700	ug/L	NA	52.1	20 U	4.2 J	5.3 J	NA	NA	NA	5.2 J	NA
Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	200 U	200 U	200 U	200 U	NA	NA	NA	200 U	NA
Antimony	6	6	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
Arsenic	10	0.045	ug/L	NA	2 U	2 U	2 U	2 U	NA	NA	NA	2 U	NA
Barium	2,000	2,900	ug/L	NA	65.7	53	32.5	37.1	NA	NA	NA	63.6	NA
Beryllium	4	16	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Boron	- -	3,100	ug/L	NA	8.8 J	30.3 J	43.7 J	25.3 J	NA	NA	NA	10.3 J	NA
Cadmium	5	- -	ug/L	NA	5 U	5 U	0.31 J	0.33 J	NA	NA	NA	5 U	NA
Calcium	- -	- -	ug/L	NA	68,900	104,000	74,100	81,500	NA	NA	NA	70,600	NA
Chromium	100	- -	ug/L	NA	15 U	1.5 J	1.3 J	1.5 J	NA	NA	NA	15 U	NA
Cobalt	- -	4.7	ug/L	NA	5 U	5 U	**7.7**	5 U	NA	NA	NA	5 U	NA
Copper	1,300	620	ug/L	NA	10 U	6 J	8.5 J	3.4 J	NA	NA	NA	10 U	NA
Iron	- -	11,000	ug/L	NA	200 U	200 U	20.7 J	200 U	NA	NA	NA	200 U	NA
Lead	15	- -	ug/L	NA	15 U	15 U	15 U	15 U	NA	NA	NA	15 U	NA
Magnesium	- -	- -	ug/L	NA	15,800	10,200	9,350	9,170	NA	NA	NA	15,900	NA
Manganese	- -	- -	ug/L	NA	14.6	5 U	2.1 J	3.6 J	NA	NA	NA	5 U	NA
Mercury	2	0.63	ug/L	NA	0.2 U	0.2 U	0.2 U	0.2 U	NA	NA	NA	0.2 U	NA
Nickel	- -	300	ug/L	NA	10 U	10 U	5.5 J	10 U	NA	NA	NA	10 U	NA
Potassium	- -	- -	ug/L	NA	2,400	2,810	3,010	3,330	NA	NA	NA	1,570	NA
Selenium	50	78	ug/L	NA	20 U	20 U	20 U	20 U	NA	NA	NA	20 U	NA
Silver	- -	71	ug/L	NA	5 U	5 U	5 U	5 U	NA	NA	NA	5 U	NA
Sodium	- -	- -	ug/L	NA	13,400	80,200	112,000	67,700	NA	NA	NA	10,200	NA
Thallium	2	0.16	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Vanadium	- -	- -	ug/L	NA	5 U	5 U	5 U	5 U	NA	NA	NA	5 U	NA
Zinc	- -	4,700	ug/L	NA	20 U	20 U	5.1 J	19.3 J	NA	NA	NA	20 U	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	CC003C 04/20/12 Springs/Seeps Identified During Stream Survey	CC004 04/20/12 Springs/Seeps Identified During Stream Survey	CC006/Sewer line Spring 04/19/12 Named Springs	CC007/Upsurgent Spring 04/19/12 Named Springs	CC008/Spearmint Spring A 04/19/12 Named Springs	rmint Spring B 04/19/12 Named Springs	CC009 04/19/12 Springs/Seeps Identified During Stream Survey	CC010 04/19/12 Springs/Seeps Identified During Stream Survey	CC011 04/20/12 Springs/Seeps Identified During Stream Survey	CC013 04/20/12 Springs/Seeps Identified During Stream Survey
Miscellaneous													
Bromate	10	0.096	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Simazine	4	0.52	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-T	- -	120	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TP	50	84	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	70	130	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DB	- -	91	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dicamba	- -	440	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorprop	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dinoseb	7	11	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diquat	20	34	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endothall	100	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	- -	12	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	0.02 U	0.02 U	0.019 U	0.019 U	NA	NA	NA	0.021 U	NA
4,4'-DDE	- -	0.2	ug/L	NA	0.02 U	0.02 U	0.019 U	0.019 U	NA	NA	NA	0.021 U	NA
4,4'-DDT	- -	0.2	ug/L	NA	0.035	0.02 U	0.019 U	0.019 U	NA	NA	NA	0.021 U	NA
Aldrin	- -	0.00021	ug/L	NA	0.01 U	0.01 U	0.0095 U	0.0097 U	NA	NA	NA	0.011 U	NA
Alpha-BHC	- -	0.0062	ug/L	NA	0.01 U	0.01 U	0.0095 U	0.0097 U	NA	NA	NA	0.011 U	NA
Alpha-Chlordane	- -	- -	ug/L	NA	0.01 U	0.01 U	0.0082 J	0.0042 J	NA	NA	NA	0.011 U	NA
Beta-BHC	- -	0.022	ug/L	NA	0.01 U	0.0077 J	0.0037 J	0.0097 U	NA	NA	NA	0.011 U	NA
Delta-BHC	- -	- -	ug/L	NA	0.01 U	0.01 U	0.0095 U	0.0097 U	NA	NA	NA	0.011 U	NA
Dieldrin	- -	0.0015	ug/L	NA	0.02 U	0.02 U	0.019 U	0.019 U	NA	NA	NA	0.021 U	NA
Endosulfan I	- -	- -	ug/L	NA	0.01 U	0.01 U	0.0095 U	0.0097 U	NA	NA	NA	0.011 U	NA
Endosulfan II	- -	- -	ug/L	NA	0.02 U	0.02 U	0.019 U	0.019 U	NA	NA	NA	0.021 U	NA
Endosulfan Sulfate	- -	- -	ug/L	NA	0.02 U	0.02 U	0.019 U	0.019 U	NA	NA	NA	0.021 U	NA
Endrin	2	1.7	ug/L	NA	0.02 U	0.02 U	0.019 U	0.019 U	NA	NA	NA	0.021 U	NA
Endrin Aldehyde	- -	- -	ug/L	NA	0.1 U	0.1 U	0.095 U	0.097 U	NA	NA	NA	0.11 U	NA
Endrin Ketone	- -	- -	ug/L	NA	0.02 U	0.02 U	0.019 U	0.019 U	NA	NA	NA	0.021 U	NA
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	0.01 U	0.01 U	0.0095 U	0.0097 U	NA	NA	NA	0.011 U	NA
Gamma-Chlordane	- -	- -	ug/L	NA	0.02 U	0.02 U	0.0043 J	0.019 U	NA	NA	NA	0.021 U	NA
Heptachlor	0.4	0.0018	ug/L	NA	0.01 U	0.01 U	0.0095 U	0.0097 U	NA	NA	NA	0.011 U	NA
Heptachlor Epoxide	0.2	0.0033	ug/L	NA	0.01 U	0.01 U	0.0095 U	0.0097 U	NA	NA	NA	0.011 U	NA
Methoxychlor	40	27	ug/L	NA	0.1 U	0.1 U	0.095 U	0.097 U	NA	NA	NA	0.11 U	NA
Toxaphene	3	0.013	ug/L	NA	3 U	3 U	2.9 U	2.9 U	NA	NA	NA	3.2 U	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				CC003C	CC004	CC006/Sewer line Spring	CC007/Upsurgent Spring	CC008/Spearmint Spring A	rmint Spring B	CC009	CC010	CC011	CC013
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				04/20/12	04/20/12	04/19/12	04/19/12	04/19/12	04/19/12	04/19/12	04/19/12	04/20/12	04/20/12
Sampling Area:	(shade)	(bold)	Units	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Named Springs	Named Springs	Named Springs	Named Springs	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey
Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOC TIC													
1-Methylnaphthalene	- -	0.97	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UNKNOWN PAH1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs TICs													
2-Cyclohexen-1-ol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diacetone Alcohol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-(3-Methylbutyl)acetamide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	5 J	18 J	4 BJ	100 BJ	NA	NA	NA	0	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	4 BJ	6 BJ	NA	NA	NA	NA	NA
Unknown Semivoloatile TIC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	5 J	18 J	NA	17 J	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOCs TICs													
2-Ethyl-1-Hexanol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorodifluoromethane	- -	100,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromonofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl Ether	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorofluoro-	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOC TICs	- -	- -	ug/L	0	0	0	0	0	0	0	0	0	0
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	CC015 04/20/12 Springs/Seeps Identified During Stream Survey	CC018 04/20/12 Springs/Seeps Identified During Stream Survey	CC019 04/20/12 Springs/Seeps Identified During Stream Survey	CC020 04/20/12 Springs/Seeps Identified During Stream Survey	CC021 04/19/12 Springs/Seeps Identified During Stream Survey	CC022 04/20/12 Springs/Seeps Identified During Stream Survey	CC023 04/20/12 Springs/Seeps Identified During Stream Survey	CC024 04/20/12 Springs/Seeps Identified During Stream Survey	DGRAN-18 04/20/12 Residential Wells	DWELL-66 11/16/11 Residential Wells
PCBs													
Aroclor-1016	- -	0.96	ug/L	NA	0.098 U	NA	0.095 U	NA	0.12 U	NA	NA	NA	NA
Aroclor-1221	- -	0.0043	ug/L	NA	0.098 U	NA	0.095 U	NA	0.12 U	NA	NA	NA	NA
Aroclor-1232	- -	0.0043	ug/L	NA	0.098 U	NA	0.095 U	NA	0.12 U	NA	NA	NA	NA
Aroclor-1242	- -	0.034	ug/L	NA	0.098 U	NA	0.095 U	NA	0.12 U	NA	NA	NA	NA
Aroclor-1248	- -	0.034	ug/L	NA	0.098 U	NA	0.095 U	NA	0.12 U	NA	NA	NA	NA
Aroclor-1254	- -	0.034	ug/L	NA	0.098 U	NA	0.095 U	NA	0.12 U	NA	NA	NA	NA
Aroclor-1260	- -	0.034	ug/L	NA	0.098 U	NA	0.095 U	NA	0.12 U	NA	NA	NA	NA
Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.3 J	0.3 J	0.5 U	0.5 U	0.5 U [0.5 U]
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,1-Dichloroethene	7	260	ug/L	0.2 J	0.5 U	0.5 U	0.5 U	0.7	0.8	0.8	0.5 U	0.5 U	0.5 U [0.5 U]
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,2,3-Trichloropropane	- -	0.00065	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,2,4-Trimethylbenzene	- -	15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA
1,2-Dibromo-3-chloropropane	0.2	0.00032	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,2-Dibromoethane	0.05	0.0065	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
2-Hexanone	- -	34	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
4-Methyl-2-pentanone	- -	1,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
Acetone	- -	12,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Bromomethane	- -	7	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Chloroform	70	0.19	ug/L	**0.7**	**0.7**	**0.5**	**0.3 J**	**2.6**	**2.7**	**2.9**	**0.5**	0.5 U	0.5 U [0.5 U]
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
cis-1,2-Dichloroethene	70	28	ug/L	0.2 J	0.5 U	0.5 U	0.5 U	0.9	0.9	1	0.5 U	0.5 U	0.5 U [0.5 U]
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Cyclohexane	- -	13,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Isopropylbenzene	- -	390	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Methyl acetate	- -	16,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U [1 U]
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J [0.2 J]
Methylcyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Styrene	100	1,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Tetrachloroethene	5	9.7	ug/L	0.2 J	0.1 J	0.5 U	0.5 U	0.7	0.7	0.8	0.5 U	0.5 U	0.5 U [0.5 U]
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Trichloroethene	5	0.44	ug/L	**2.1**	**0.6**	0.3 J	0.5 U	**11**	**12**	**13**	0.2 J	0.5 U	0.5 U [0.5 U]
Trichlorofluoromethane	- -	1,100	ug/L	2.5	1	0.8	0.9	3	3.2	3.5	1	0.5 U	0.5 U [0.5 U]
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				CC015	CC018	CC019	CC020	CC021	CC022	CC023	CC024	DGRAN-18	DWELL-66
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				04/20/12	04/20/12	04/20/12	04/20/12	04/19/12	04/20/12	04/20/12	04/20/12	04/20/12	11/16/11
Sampling Area:	(shade)	(bold)	Units	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Residential Wells	Residential Wells
Semivolatile Organics													
1,1'-Biphenyl	- -	0.83	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
1,2-Dichlorobenzene	600	280	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
1,3-Dichlorobenzene	- -	- -	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
1,4-Dichlorobenzene	75	0.42	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
1,4-Dioxane	- -	0.67	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
1,4-Naphthoquinone	- -	- -	ug/L	NA	30 U	NA	29 U	NA	29 U	NA	NA	NA	NA
2,2'-Oxybis(1-Chloropropane)	- -	0.31	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
2,4,5-Trichlorophenol	- -	890	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
2,4,6-Trichlorophenol	- -	3.5	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
2,4-Dichlorophenol	- -	35	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
2,4-Dimethylphenol	- -	270	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
2,4-Dinitrophenol	- -	30	ug/L	NA	30 U	NA	29 U	NA	29 U	NA	NA	NA	NA
2,4-Dinitrotoluene	- -	0.2	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
2,6-Dinitrotoluene	- -	15	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
2-Chloronaphthalene	- -	550	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
2-Chlorophenol	- -	71	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
2-Methylnaphthalene	- -	27	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
2-Methylphenol	- -	720	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
2-Nitroaniline	- -	150	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
2-Nitrophenol	- -	- -	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
3,3'-Dichlorobenzidine	- -	0.11	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
3-Nitroaniline	- -	- -	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	- -	1.2	ug/L	NA	15 U	NA	15 U	NA	14 U	NA	NA	NA	NA
4-Bromophenyl-phenylether	- -	- -	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
4-Chloroaniline	- -	0.32	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
4-Chlorophenyl-phenylether	- -	- -	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
4-Methylphenol	- -	1,400	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
4-Nitroaniline	- -	3.3	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
4-Nitrophenol	- -	- -	ug/L	NA	30 U	NA	29 U	NA	29 U	NA	NA	NA	NA
Acenaphthene	- -	400	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Acenaphthylene	- -	- -	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Acetophenone	- -	1,500	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
Anthracene	- -	1,300	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Atrazine	3	0.26	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Benzaldehyde	- -	1,500	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Benzo(a)anthracene	- -	0.029	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Benzo(b)fluoranthene	- -	0.029	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Benzo(g,h,i)perylene	- -	- -	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Benzo(k)fluoranthene	- -	0.29	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Benzoic Acid	- -	58,000	ug/L	NA	15 U	NA	15 U	NA	14 U	NA	NA	NA	NA
Benzyl Alcohol	- -	1,500	ug/L	NA	15 U	NA	15 U	NA	14 U	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	- -	47	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
bis(2-Chloroethyl)ether	- -	0.012	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
bis(2-Chloroisopropyl)ether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Butylbenzylphthalate	- -	14	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Caprolactam	- -	7,700	ug/L	NA	15 U	NA	15 U	NA	14 U	NA	NA	NA	NA
Carbazole	- -	- -	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
Chrysene	- -	2.9	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Dibenzo(a,h)anthracene	- -	0.0029	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Dibenzofuran	- -	5.8	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
Diethylphthalate	- -	11,000	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Dimethylphthalate	- -	- -	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Di-n-Butylphthalate	- -	670	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Di-n-Octylphthalate	- -	- -	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Fluoranthene	- -	630	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Fluorene	- -	220	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Hexachlorobenzene	1	0.042	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Hexachlorobutadiene	- -	0.26	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
Hexachlorocyclopentadiene	50	22	ug/L	NA	15 U	NA	15 U	NA	14 U	NA	NA	NA	NA
Hexachloroethane	- -	0.79	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	- -	0.029	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Isophorone	- -	67	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
Naphthalene	- -	0.14	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Nitrobenzene	- -	0.12	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	- -	0.0093	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
N-Nitrosodiphenylamine	- -	10	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
Pentachlorophenol	1	0.17	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Phenanthrene	- -	- -	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Phenol	- -	4,500	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
Pyrene	- -	87	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		CC015	CC018	CC019	CC020	CC021	CC022	CC023	CC024	DGRAN-18	DWELL-66
Sample Depth(ft):													
Date Collected:				04/20/12	04/20/12	04/20/12	04/20/12	04/19/12	04/20/12	04/20/12	04/20/12	04/20/12	11/16/11
Sampling Area:	(shade)	(bold)	Units	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Residential Wells	Residential Wells
Inorganics													
Aluminum	- -	16,000	ug/L	NA	1,730	NA	1,050	NA	455	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	2 U	NA	2 U	NA	2 U	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	75.4	NA	79.3	NA	69.6	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	8.8 J	NA	8.3 J	NA	6.8 J	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	68,100	NA	78,100	NA	62,200	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	2.4 J	NA	1.6 J	NA	1.5 J	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	1.2 J	NA	5 U	NA	0.88 J	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	2.3 J	NA	1.4 J	NA	0.97 J	NA	NA	NA	NA
Cyanide	200	9.3	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	2,180	NA	1,370	NA	727	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	4.2 J	NA	3.8 J	NA	15 U	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	17,000	NA	15,300	NA	14,600	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	13.6	NA	14.3	NA	22.6	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	0.2 U	NA	0.2 U	NA	0.2 U	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	1.6 J	NA	1.3 J	NA	10 U	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	1,950	NA	1,720	NA	2,170	NA	NA	NA	NA
Selenium	50	78	ug/L	NA	20 U	NA	20 U	NA	20 U	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	11,700	NA	20,500	NA	14,700	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	1.5 J	NA	1.3 J	NA	5 U	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	14.3 J	NA	6.7 J	NA	3.9 J	NA	NA	NA	NA
Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	200 U	NA	200 U	NA	200 U	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	2 U	NA	2 U	NA	2 U	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	59.8	NA	70.3	NA	62	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	8.8 J	NA	7.8 J	NA	12.4 J	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	79,000	NA	88,800	NA	61,400	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	15 U	NA	1.2 J	NA	15 U	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	10 U	NA	10 U	NA	1.9 J	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	200 U	NA	200 U	NA	20.7 J	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	15 U	NA	15 U	NA	15 U	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	16,600	NA	14,900	NA	14,000	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	0.72 J	NA	5 U	NA	5	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	0.2 U	NA	0.2 U	NA	0.2 U	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	1,610	NA	1,430	NA	1,980	NA	NA	NA	NA
Selenium	50	78	ug/L	NA	20 U	NA	20 U	NA	20 U	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	11,600	NA	20,200	NA	14,400	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	7.1 J	NA	20 U	NA	20 U	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				CC015	CC018	CC019	CC020	CC021	CC022	CC023	CC024	DGRAN-18	DWELL-66
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				04/20/12	04/20/12	04/20/12	04/20/12	04/19/12	04/20/12	04/20/12	04/20/12	04/20/12	11/16/11
Sampling Area:	(shade)	(bold)	Units	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Residential Wells	Residential Wells
Miscellaneous													
Bromate	10	0.096	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Simazine	4	0.52	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-T	- -	120	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TP	50	84	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	70	130	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DB	- -	91	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dicamba	- -	440	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorprop	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dinoseb	7	11	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diquat	20	34	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endothall	100	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	- -	12	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	0.02 U	NA	0.02 U	NA	0.02 U	NA	NA	NA	NA
4,4'-DDE	- -	0.2	ug/L	NA	0.02 U	NA	0.02 U	NA	0.02 U	NA	NA	NA	NA
4,4'-DDT	- -	0.2	ug/L	NA	0.02 U	NA	0.02 U	NA	0.02 U	NA	NA	NA	NA
Aldrin	- -	0.00021	ug/L	NA	0.0098 U	NA	0.0098 U	NA	0.0098 U	NA	NA	NA	NA
Alpha-BHC	- -	0.0062	ug/L	NA	0.0098 U	NA	0.0098 U	NA	0.0098 U	NA	NA	NA	NA
Alpha-Chlordane	- -	- -	ug/L	NA	0.0098 U	NA	0.0032 J	NA	0.0098 U	NA	NA	NA	NA
Beta-BHC	- -	0.022	ug/L	NA	0.0098 U	NA	0.0098 U	NA	0.0093 J	NA	NA	NA	NA
Delta-BHC	- -	- -	ug/L	NA	0.0098 U	NA	0.0098 U	NA	0.0098 U	NA	NA	NA	NA
Dieldrin	- -	0.0015	ug/L	NA	0.02 U	NA	0.02 U	NA	0.02 U	NA	NA	NA	NA
Endosulfan I	- -	- -	ug/L	NA	0.0098 U	NA	0.0098 U	NA	0.0098 U	NA	NA	NA	NA
Endosulfan II	- -	- -	ug/L	NA	0.02 U	NA	0.02 U	NA	0.02 U	NA	NA	NA	NA
Endosulfan Sulfate	- -	- -	ug/L	NA	0.02 U	NA	0.02 U	NA	0.02 U	NA	NA	NA	NA
Endrin	2	1.7	ug/L	NA	0.02 U	NA	0.02 U	NA	0.02 U	NA	NA	NA	NA
Endrin Aldehyde	- -	- -	ug/L	NA	0.098 U	NA	0.098 U	NA	0.098 U	NA	NA	NA	NA
Endrin Ketone	- -	- -	ug/L	NA	0.02 U	NA	0.02 U	NA	0.02 U	NA	NA	NA	NA
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	0.0098 U	NA	0.0098 U	NA	0.0098 U	NA	NA	NA	NA
Gamma-Chlordane	- -	- -	ug/L	NA	0.02 U	NA	0.02 U	NA	0.02 U	NA	NA	NA	NA
Heptachlor	0.4	0.0018	ug/L	NA	0.0098 U	NA	0.0098 U	NA	0.0098 U	NA	NA	NA	NA
Heptachlor Epoxide	0.2	0.0033	ug/L	NA	0.0098 U	NA	0.0098 U	NA	0.0098 U	NA	NA	NA	NA
Methoxychlor	40	27	ug/L	NA	0.098 U	NA	0.098 U	NA	0.098 U	NA	NA	NA	NA
Toxaphene	3	0.013	ug/L	NA	2.9 U	NA	2.9 U	NA	2.9 U	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				CC015	CC018	CC019	CC020	CC021	CC022	CC023	CC024	DGRAN-18	DWELL-66
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				04/20/12	04/20/12	04/20/12	04/20/12	04/19/12	04/20/12	04/20/12	04/20/12	04/20/12	11/16/11
Sampling Area:	(shade)	(bold)	Units	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Residential Wells	Residential Wells
Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOC TIC													
1-Methylnaphthalene	- -	0.97	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UNKNOWN PAH1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs TICs													
2-Cyclohexen-1-ol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diacetone Alcohol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-(3-Methylbutyl)acetamide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	440 J	NA	0	NA	8 J	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	4 J	NA	NA	NA	NA
Unknown Semivoloatile TIC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	11 J	NA	NA	NA	4 J	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOCs TICs													
2-Ethyl-1-Hexanol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorodifluoromethane	- -	100,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromonofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl Ether	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorofluoro-	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOC TICs	- -	- -	ug/L	0	0	0	0	0	0	0	0	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	DWELL-66 04/20/12 Residential Wells	DWELL-77 11/16/11 Residential Wells	DWELL-77 04/20/12 Residential Wells	DWELL-314 11/16/11 Residential Wells	DWELL-314 04/20/12 Residential Wells	DWELL-600 11/16/11 Residential Wells	DWELL-600 04/20/12 Residential Wells	DWGRAN-17 05/30/12 Residential Wells	DWGRAN-18 11/16/11 Residential Wells	DWGRAN-18 04/20/12 Residential Wells
PCBs													
Aroclor-1016	- -	0.96	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	- -	0.0043	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	- -	0.0043	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	- -	0.034	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	- -	0.034	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	- -	0.034	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	- -	0.034	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	NA	NA	NA	NA	NA	NA	NA	1 U	NA	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	- -	15	ug/L	NA	NA	NA	NA	NA	NA	NA	0.5 U	NA	NA
1,2-Dibromo-3-chloropropane	0.2	0.00032	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.05	0.0065	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U
2-Hexanone	- -	34	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U
4-Methyl-2-pentanone	- -	1,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Bromomethane	- -	7	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Cyclohexane	- -	13,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	390	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Methyl acetate	- -	16,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U [1 U]	1 U	1 U	1 U
Methyl tert-butyl ether	- -	12	ug/L	0.2 J	0.1 J	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Methylcyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Styrene	100	1,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	- -	1,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				DWELL-66	DWELL-77	DWELL-77	DWELL-314	DWELL-314	DWELL-600	DWELL-600	DWGRAN-17	DWGRAN-18	DWGRAN-18
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				04/20/12	11/16/11	04/20/12	11/16/11	04/20/12	11/16/11	04/20/12	05/30/12	11/16/11	04/20/12
Sampling Area:	(shade)	(bold)	Units	Residential Wells	Residential Wells	Residential Wells	Residential Wells	Residential Wells	Residential Wells	Residential Wells	Residential Wells	Residential Wells	Residential Wells
Semivolatile Organics													
1,1'-Biphenyl	- -	0.83	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	600	280	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	75	0.42	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dioxane	- -	0.67	ug/L	NA	NA	NA	NA	NA	NA	NA	5 U	NA	NA
1,4-Naphthoquinone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-Chloropropane)	- -	0.31	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	- -	890	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	- -	3.5	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	- -	35	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	- -	270	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	- -	30	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	- -	15	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	- -	550	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	- -	27	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	- -	720	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	- -	150	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	- -	0.11	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	- -	1.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl-phenylether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	- -	0.32	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	- -	1,400	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	- -	3.3	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	- -	400	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	- -	1,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	- -	1,300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	3	0.26	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	- -	1,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	- -	0.029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	- -	0.029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	- -	0.29	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic Acid	- -	58,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	- -	1,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	- -	47	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	- -	0.012	ug/L	NA	NA	NA	NA	NA	NA	NA	1 U	NA	NA
bis(2-Chloroisopropyl)ether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butylbenzylphthalate	- -	14	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	- -	7,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	- -	2.9	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	- -	0.0029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	- -	5.8	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethylphthalate	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-Butylphthalate	- -	670	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-Octylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	- -	630	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	- -	220	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	1	0.042	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	- -	0.26	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	50	22	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	- -	0.79	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	- -	0.029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	- -	67	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	- -	0.14	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	- -	0.12	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	- -	0.0093	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	- -	10	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	1	0.17	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	- -	4,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	- -	87	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	DWELL-66 04/20/12 Residential Wells	DWELL-77 11/16/11 Residential Wells	DWELL-77 04/20/12 Residential Wells	DWELL-314 11/16/11 Residential Wells	DWELL-314 04/20/12 Residential Wells	DWELL-600 11/16/11 Residential Wells	DWELL-600 04/20/12 Residential Wells	DWGRAN-17 05/30/12 Residential Wells	DWGRAN-18 11/16/11 Residential Wells	DWGRAN-18 04/20/12 Residential Wells
Inorganics													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	200	9.3	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	50	78	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	50	78	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	DWELL-66 04/20/12 Residential Wells	DWELL-77 11/16/11 Residential Wells	DWELL-77 04/20/12 Residential Wells	DWELL-314 11/16/11 Residential Wells	DWELL-314 04/20/12 Residential Wells	DWELL-600 11/16/11 Residential Wells	DWELL-600 04/20/12 Residential Wells	DWGRAN-17 05/30/12 Residential Wells	DWGRAN-18 11/16/11 Residential Wells	DWGRAN-18 04/20/12 Residential Wells
Miscellaneous													
Bromate	10	0.096	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Simazine	4	0.52	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-T	- -	120	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TP	50	84	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	70	130	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DB	- -	91	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dicamba	- -	440	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorprop	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dinoseb	7	11	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diquat	20	34	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endothall	100	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	- -	12	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	- -	0.00021	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-BHC	- -	0.0062	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beta-BHC	- -	0.022	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta-BHC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	- -	0.0015	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	2	1.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Ketone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	0.4	0.0018	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor Epoxide	0.2	0.0033	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	40	27	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	3	0.013	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	DWELL-66 04/20/12 Residential Wells	DWELL-77 11/16/11 Residential Wells	DWELL-77 04/20/12 Residential Wells	DWELL-314 11/16/11 Residential Wells	DWELL-314 04/20/12 Residential Wells	DWELL-600 11/16/11 Residential Wells	DWELL-600 04/20/12 Residential Wells	DWGRAN-17 05/30/12 Residential Wells	DWGRAN-18 11/16/11 Residential Wells	DWGRAN-18 04/20/12 Residential Wells
Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOC TIC													
1-Methylnaphthalene	- -	0.97	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UNKNOWN PAH1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs TICs													
2-Cyclohexen-1-ol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diacetone Alcohol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-(3-Methylbutyl)acetamide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown Semivoloatile TIC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOCs TICs													
2-Ethyl-1-Hexanol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorodifluoromethane	- -	100,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromonofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl Ether	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorofluoro-	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	0	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				DWGRAW-18	DWSRD-1	DWSRD-26	PZ-01	PZ-02	PZ-03	PZ-05	PZ-06	PZ-07	PZ-08
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				11/16/11	04/24/12	04/24/12	03/12/12	03/12/12	03/12/12	03/12/12	03/12/12	03/12/12	03/09/12
Sampling Area:	(shade)	(bold)	Units	Residential Wells	Residential Wells	Residential Wells	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers
PCBs													
Aroclor-1016	- -	0.96	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	- -	0.0043	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	- -	0.0043	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	- -	0.034	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	- -	0.034	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	- -	0.034	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	- -	0.034	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	NA	1 U	1 U [1 U]	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	- -	15	ug/L	NA	0.5 U	0.5 U [0.5 U]	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	0.2	0.00032	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.05	0.0065	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	- -	34	ug/L	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	- -	1,000	ug/L	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U [5 U]	5 U	3 J	5 U	5 U	5 U	3.3 J	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	- -	7	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	0.5 U	**0.4 J**	**0.5 J [0.5 J]**	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	- -	13,000	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	390	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J
Methyl acetate	- -	16,000	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylcyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	100	1,100	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.5 U	0.2 J	0.1 J [0.1 J]	0.1 J	4.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	0.5 U	**2**	**1.1 [1.1]**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	- -	1,100	ug/L	0.5 U	0.4 J	0.5 J [0.5 J]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	DWGRAW-18 11/16/11 Residential Wells	DWSRD-1 04/24/12 Residential Wells	DWSRD-26 04/24/12 Residential Wells	PZ-01 03/12/12 DPT/ Piezometers	PZ-02 03/12/12 DPT/ Piezometers	PZ-03 03/12/12 DPT/ Piezometers	PZ-05 03/12/12 DPT/ Piezometers	PZ-06 03/12/12 DPT/ Piezometers	PZ-07 03/12/12 DPT/ Piezometers	PZ-08 03/09/12 DPT/ Piezometers
Semivolatile Organics													
1,1'-Biphenyl	- -	0.83	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	600	280	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	75	0.42	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dioxane	- -	0.67	ug/L	NA	6 U	5 U [5 U]	NA	NA	NA	NA	NA	NA	NA
1,4-Naphthoquinone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-Chloropropane)	- -	0.31	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	- -	890	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	- -	3.5	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	- -	35	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	- -	270	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	- -	30	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	- -	15	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	- -	550	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	- -	27	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	- -	720	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	- -	150	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	- -	0.11	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	- -	1.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl-phenylether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	- -	0.32	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	- -	1,400	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	- -	3.3	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	- -	400	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	- -	1,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	- -	1,300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	3	0.26	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	- -	1,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	- -	0.029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	- -	0.029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	- -	0.29	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic Acid	- -	58,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	- -	1,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	- -	47	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	- -	0.012	ug/L	NA	1 U	1 U [1 U]	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl)ether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butylbenzylphthalate	- -	14	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	- -	7,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	- -	2.9	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	- -	0.0029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	- -	5.8	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethylphthalate	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-Butylphthalate	- -	670	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-Octylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	- -	630	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	- -	220	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	1	0.042	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	- -	0.26	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	50	22	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	- -	0.79	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	- -	0.029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	- -	67	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	- -	0.14	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	- -	0.12	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	- -	0.0093	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	- -	10	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	1	0.17	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	- -	4,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	- -	87	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	DWGRAW-18 11/16/11 Residential Wells	DWSRD-1 04/24/12 Residential Wells	DWSRD-26 04/24/12 Residential Wells	PZ-01 03/12/12 DPT/ Piezometers	PZ-02 03/12/12 DPT/ Piezometers	PZ-03 03/12/12 DPT/ Piezometers	PZ-05 03/12/12 DPT/ Piezometers	PZ-06 03/12/12 DPT/ Piezometers	PZ-07 03/12/12 DPT/ Piezometers	PZ-08 03/09/12 DPT/ Piezometers
Inorganics													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	200	9.3	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	50	78	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	50	78	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	DWGRAW-18 11/16/11 Residential Wells	DWSRD-1 04/24/12 Residential Wells	DWSRD-26 04/24/12 Residential Wells	PZ-01 03/12/12 DPT/ Piezometers	PZ-02 03/12/12 DPT/ Piezometers	PZ-03 03/12/12 DPT/ Piezometers	PZ-05 03/12/12 DPT/ Piezometers	PZ-06 03/12/12 DPT/ Piezometers	PZ-07 03/12/12 DPT/ Piezometers	PZ-08 03/09/12 DPT/ Piezometers
Miscellaneous													
Bromate	10	0.096	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Simazine	4	0.52	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-T	- -	120	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TP	50	84	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	70	130	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DB	- -	91	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dicamba	- -	440	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorprop	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dinoseb	7	11	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diquat	20	34	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endothall	100	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	- -	12	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	- -	0.00021	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-BHC	- -	0.0062	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beta-BHC	- -	0.022	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta-BHC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	- -	0.0015	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	2	1.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Ketone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	0.4	0.0018	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor Epoxide	0.2	0.0033	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	40	27	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	3	0.013	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	DWGRAW-18 11/16/11 Residential Wells	DWSRD-1 04/24/12 Residential Wells	DWSRD-26 04/24/12 Residential Wells	PZ-01 03/12/12 DPT/ Piezometers	PZ-02 03/12/12 DPT/ Piezometers	PZ-03 03/12/12 DPT/ Piezometers	PZ-05 03/12/12 DPT/ Piezometers	PZ-06 03/12/12 DPT/ Piezometers	PZ-07 03/12/12 DPT/ Piezometers	PZ-08 03/09/12 DPT/ Piezometers
Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOC TIC													
1-Methylnaphthalene	- -	0.97	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UNKNOWN PAH1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs TICs													
2-Cyclohexen-1-ol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diacetone Alcohol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-(3-Methylbutyl)acetamide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown Semivoloatile TIC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOCs TICs													
2-Ethyl-1-Hexanol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorodifluoromethane	- -	100,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromonofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl Ether	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorofluoro-	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOC TICs	- -	- -	ug/L	NA	0	0 [0]	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	PZ-09 03/13/12 DPT/ Piezometers	PZ-11 03/13/12 DPT/ Piezometers	PZ-14 03/20/12 DPT/ Piezometers	PZ-16 03/06/12 DPT/ Piezometers	PZ-20 03/07/12 DPT/ Piezometers	PZ-21 03/07/12 DPT/ Piezometers	PZ-22 03/22/12 DPT/ Piezometers	PZ-23 03/19/12 DPT/ Piezometers	PZ-24 03/22/12 DPT/ Piezometers	PZ-26 03/20/12 DPT/ Piezometers
PCBs													
Aroclor-1016	- -	0.96	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	- -	0.0043	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	- -	0.0043	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	- -	0.034	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	- -	0.034	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	- -	0.034	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	- -	0.034	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.1 J	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.1 J	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	- -	15	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	0.2	0.00032	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.05	0.0065	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.1 J	5 U	5 U
2-Hexanone	- -	34	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	- -	1,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	3.9 J	5 U	5 U	5 U	5 U	5 U	4 J	5 U	3 J
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	- -	7	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	1.2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**1.2**	0.5 U	**1.7**	0.5 U	**0.3 J**	**0.3 J**	0.1 J	0.5 U	0.5 U	**0.6**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.3 J	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	- -	13,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	390	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.2 J	0.5 U	0.5 U	0.2 J	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U
Methyl acetate	- -	16,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylcyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	100	1,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.4 J	0.5 U	0.7	0.5 U	9.1	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J
Toluene	1,000	860	ug/L	0.5 U	0.2 J	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**5.3**	0.5 U	**7.4**	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	**1.5**
Trichlorofluoromethane	- -	1,100	ug/L	1.5	0.5 U	2.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	PZ-09 03/13/12 DPT/ Piezometers	PZ-11 03/13/12 DPT/ Piezometers	PZ-14 03/20/12 DPT/ Piezometers	PZ-16 03/06/12 DPT/ Piezometers	PZ-20 03/07/12 DPT/ Piezometers	PZ-21 03/07/12 DPT/ Piezometers	PZ-22 03/22/12 DPT/ Piezometers	PZ-23 03/19/12 DPT/ Piezometers	PZ-24 03/22/12 DPT/ Piezometers	PZ-26 03/20/12 DPT/ Piezometers
Semivolatile Organics													
1,1'-Biphenyl	- -	0.83	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	600	280	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	75	0.42	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dioxane	- -	0.67	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Naphthoquinone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-Chloropropane)	- -	0.31	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	- -	890	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	- -	3.5	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	- -	35	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	- -	270	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	- -	30	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	- -	15	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	- -	550	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	- -	27	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	- -	720	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	- -	150	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	- -	0.11	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	- -	1.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl-phenylether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	- -	0.32	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	- -	1,400	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	- -	3.3	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	- -	400	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	- -	1,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	- -	1,300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	3	0.26	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	- -	1,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	- -	0.029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	- -	0.029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	- -	0.29	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic Acid	- -	58,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	- -	1,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	- -	47	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	- -	0.012	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl)ether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butylbenzylphthalate	- -	14	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	- -	7,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	- -	2.9	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	- -	0.0029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	- -	5.8	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethylphthalate	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-Butylphthalate	- -	670	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-Octylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	- -	630	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	- -	220	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	1	0.042	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	- -	0.26	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	50	22	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	- -	0.79	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	- -	0.029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	- -	67	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	- -	0.14	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	- -	0.12	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	- -	0.0093	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	- -	10	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	1	0.17	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	- -	4,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	- -	87	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	PZ-09 03/13/12 DPT/ Piezometers	PZ-11 03/13/12 DPT/ Piezometers	PZ-14 03/20/12 DPT/ Piezometers	PZ-16 03/06/12 DPT/ Piezometers	PZ-20 03/07/12 DPT/ Piezometers	PZ-21 03/07/12 DPT/ Piezometers	PZ-22 03/22/12 DPT/ Piezometers	PZ-23 03/19/12 DPT/ Piezometers	PZ-24 03/22/12 DPT/ Piezometers	PZ-26 03/20/12 DPT/ Piezometers
Inorganics													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	200	9.3	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	50	78	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	50	78	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	PZ-09 03/13/12 DPT/ Piezometers	PZ-11 03/13/12 DPT/ Piezometers	PZ-14 03/20/12 DPT/ Piezometers	PZ-16 03/06/12 DPT/ Piezometers	PZ-20 03/07/12 DPT/ Piezometers	PZ-21 03/07/12 DPT/ Piezometers	PZ-22 03/22/12 DPT/ Piezometers	PZ-23 03/19/12 DPT/ Piezometers	PZ-24 03/22/12 DPT/ Piezometers	PZ-26 03/20/12 DPT/ Piezometers
Miscellaneous													
Bromate	10	0.096	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Simazine	4	0.52	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-T	- -	120	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TP	50	84	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	70	130	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DB	- -	91	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dicamba	- -	440	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorprop	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dinoseb	7	11	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diquat	20	34	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endothall	100	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	- -	12	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	- -	0.00021	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-BHC	- -	0.0062	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beta-BHC	- -	0.022	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta-BHC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	- -	0.0015	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	2	1.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Ketone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	0.4	0.0018	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor Epoxide	0.2	0.0033	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	40	27	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	3	0.013	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	PZ-09 03/13/12 DPT/ Piezometers	PZ-11 03/13/12 DPT/ Piezometers	PZ-14 03/20/12 DPT/ Piezometers	PZ-16 03/06/12 DPT/ Piezometers	PZ-20 03/07/12 DPT/ Piezometers	PZ-21 03/07/12 DPT/ Piezometers	PZ-22 03/22/12 DPT/ Piezometers	PZ-23 03/19/12 DPT/ Piezometers	PZ-24 03/22/12 DPT/ Piezometers	PZ-26 03/20/12 DPT/ Piezometers
Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOC TIC													
1-Methylnaphthalene	- -	0.97	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UNKNOWN PAH1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs TICs													
2-Cyclohexen-1-ol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diacetone Alcohol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-(3-Methylbutyl)acetamide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown Semivoloatile TIC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOCs TICs													
2-Ethyl-1-Hexanol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorodifluoromethane	- -	100,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromonofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl Ether	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorofluoro-	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	PZ-27 03/19/12 DPT/ Piezometers	PZ-29 02/29/12 DPT/ Piezometers	PZ-30 02/28/12 DPT/ Piezometers	PZ-31 02/28/12 DPT/ Piezometers	PZ-33 03/08/12 DPT/ Piezometers	PZ-34 03/09/12 DPT/ Piezometers	PZ-36 03/20/12 DPT/ Piezometers	PZ-37 03/22/12 DPT/ Piezometers	PZ-38 03/05/12 DPT/ Piezometers	PZ-39 02/29/12 DPT/ Piezometers
PCBs													
Aroclor-1016	- -	0.96	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	- -	0.0043	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	- -	0.0043	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	- -	0.034	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	- -	0.034	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	- -	0.034	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	- -	0.034	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.5 U	0.1 J
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.1 J	0.3 J	0.1 J	0.5 U	0.5 U	0.5 U	0.2 J	0.7	0.5 U	0.2 J
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	- -	15	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	0.2	0.00032	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.05	0.0065	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	1.9 J	5 U	5 U	5	5 U	5 U	5 U	5 U	6.4	3.2 J
2-Hexanone	- -	34	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	- -	1,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	16	5 U	5 U	11	5 U	5 U	5 U	5 U	18	7.6
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	- -	7	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**0.9**	**1.5**	**1.8**	0.5 U	**1**	0.5 U	**1.3**	**3.1**	**0.2 J**	**1.3**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.1 J	0.4 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.7	0.5 U	0.5
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	- -	13,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	390	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.2 J	0.1 J	0.5 U	0.5 U	0.5 U	0.2 J	0.1 J
Methyl acetate	- -	16,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylcyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	100	1,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.2 J	**26**	0.2 J	0.5 U	0.5 U	0.5 U	0.3 J	0.7	0.5 U	0.3 J
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.5 U	0.4 J	0.1 J	0.5 U	0.5 U	0.5 U	0.3 J	0.2 J
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**2.1**	**4.9**	**1.8**	0.5 U	0.5 U	0.5 U	**3.5**	**12**	**0.5 J**	**3.8**
Trichlorofluoromethane	- -	1,100	ug/L	0.5	2.1	1.2	0.5 U	0.5 U	0.5 U	0.9	2.6	0.1 J	1.4
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	PZ-27 03/19/12 DPT/ Piezometers	PZ-29 02/29/12 DPT/ Piezometers	PZ-30 02/28/12 DPT/ Piezometers	PZ-31 02/28/12 DPT/ Piezometers	PZ-33 03/08/12 DPT/ Piezometers	PZ-34 03/09/12 DPT/ Piezometers	PZ-36 03/20/12 DPT/ Piezometers	PZ-37 03/22/12 DPT/ Piezometers	PZ-38 03/05/12 DPT/ Piezometers	PZ-39 02/29/12 DPT/ Piezometers
Semivolatile Organics													
1,1'-Biphenyl	- -	0.83	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	600	280	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	75	0.42	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dioxane	- -	0.67	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Naphthoquinone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-Chloropropane)	- -	0.31	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	- -	890	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	- -	3.5	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	- -	35	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	- -	270	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	- -	30	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	- -	15	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	- -	550	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	- -	27	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	- -	720	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	- -	150	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	- -	0.11	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	- -	1.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl-phenylether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	- -	0.32	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	- -	1,400	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	- -	3.3	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	- -	400	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	- -	1,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	- -	1,300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	3	0.26	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	- -	1,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	- -	0.029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	- -	0.029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	- -	0.29	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic Acid	- -	58,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	- -	1,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	- -	47	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	- -	0.012	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl)ether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butylbenzylphthalate	- -	14	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	- -	7,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	- -	2.9	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	- -	0.0029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	- -	5.8	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethylphthalate	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-Butylphthalate	- -	670	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-Octylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	- -	630	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	- -	220	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	1	0.042	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	- -	0.26	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	50	22	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	- -	0.79	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	- -	0.029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	- -	67	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	- -	0.14	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	- -	0.12	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	- -	0.0093	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	- -	10	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	1	0.17	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	- -	4,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	- -	87	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	PZ-27 03/19/12 DPT/ Piezometers	PZ-29 02/29/12 DPT/ Piezometers	PZ-30 02/28/12 DPT/ Piezometers	PZ-31 02/28/12 DPT/ Piezometers	PZ-33 03/08/12 DPT/ Piezometers	PZ-34 03/09/12 DPT/ Piezometers	PZ-36 03/20/12 DPT/ Piezometers	PZ-37 03/22/12 DPT/ Piezometers	PZ-38 03/05/12 DPT/ Piezometers	PZ-39 02/29/12 DPT/ Piezometers
Inorganics													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	200	9.3	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	50	78	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	50	78	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	PZ-27 03/19/12 DPT/ Piezometers	PZ-29 02/29/12 DPT/ Piezometers	PZ-30 02/28/12 DPT/ Piezometers	PZ-31 02/28/12 DPT/ Piezometers	PZ-33 03/08/12 DPT/ Piezometers	PZ-34 03/09/12 DPT/ Piezometers	PZ-36 03/20/12 DPT/ Piezometers	PZ-37 03/22/12 DPT/ Piezometers	PZ-38 03/05/12 DPT/ Piezometers	PZ-39 02/29/12 DPT/ Piezometers
Miscellaneous													
Bromate	10	0.096	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Simazine	4	0.52	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-T	- -	120	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TP	50	84	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	70	130	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DB	- -	91	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dicamba	- -	440	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorprop	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dinoseb	7	11	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diquat	20	34	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endothall	100	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	- -	12	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	- -	0.00021	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-BHC	- -	0.0062	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beta-BHC	- -	0.022	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta-BHC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	- -	0.0015	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	2	1.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Ketone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	0.4	0.0018	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor Epoxide	0.2	0.0033	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	40	27	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	3	0.013	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	PZ-27 03/19/12 DPT/ Piezometers	PZ-29 02/29/12 DPT/ Piezometers	PZ-30 02/28/12 DPT/ Piezometers	PZ-31 02/28/12 DPT/ Piezometers	PZ-33 03/08/12 DPT/ Piezometers	PZ-34 03/09/12 DPT/ Piezometers	PZ-36 03/20/12 DPT/ Piezometers	PZ-37 03/22/12 DPT/ Piezometers	PZ-38 03/05/12 DPT/ Piezometers	PZ-39 02/29/12 DPT/ Piezometers
Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOC TIC													
1-Methylnaphthalene	- -	0.97	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UNKNOWN PAH1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs TICs													
2-Cyclohexen-1-ol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diacetone Alcohol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-(3-Methylbutyl)acetamide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown Semivoloatile TIC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOCs TICs													
2-Ethyl-1-Hexanol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorodifluoromethane	- -	100,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromonofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl Ether	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorofluoro-	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	PZ-40 03/01/12 DPT/ Piezometers	PZ-44 03/05/12 DPT/ Piezometers	PZ-45 03/02/12 DPT/ Piezometers	PZ-46 03/01/12 DPT/ Piezometers	PZ-49 03/09/12 DPT/ Piezometers	PZ-52 03/01/12 DPT/ Piezometers	PZ-54 03/21/12 DPT/ Piezometers	PZ-55A 03/21/12 DPT/ Piezometers	PZ-55B 03/20/12 DPT/ Piezometers	PZ-56 03/21/12 DPT/ Piezometers
PCBs													
Aroclor-1016	- -	0.96	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	- -	0.0043	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	- -	0.0043	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	- -	0.034	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	- -	0.034	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	- -	0.034	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	- -	0.034	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.1 J	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	- -	15	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	0.2	0.00032	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.05	0.0065	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	5 U	1.1 J	5 U	5 U	5 U	5 U	5 U
2-Hexanone	- -	34	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	- -	1,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	- -	7	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**0.9**	**1.4**	0.5 U	**2.2**	**5.3**	**2.3**	**1.2**	0.1 J	0.1 J	**0.2 J**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.3 J	0.4 J	0.5 U	0.1 J	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	- -	13,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	390	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	- -	16,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylcyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	100	1,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.3 J	0.3 J	0.5 U	0.2 J	0.5 U	0.1 J	0.1 J	0.5 U	0.5 U	0.5 U
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**2.1**	**5**	0.5 U	**1.2**	**1.7**	**0.7**	**1.7**	0.5 U	0.2 J	0.5 U
Trichlorofluoromethane	- -	1,100	ug/L	1	1.5	0.5 U	0.9	0.5 U	0.4 J	0.5 U	0.5 U	0.1 J	0.5 U
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	PZ-40 03/01/12 DPT/ Piezometers	PZ-44 03/05/12 DPT/ Piezometers	PZ-45 03/02/12 DPT/ Piezometers	PZ-46 03/01/12 DPT/ Piezometers	PZ-49 03/09/12 DPT/ Piezometers	PZ-52 03/01/12 DPT/ Piezometers	PZ-54 03/21/12 DPT/ Piezometers	PZ-55A 03/21/12 DPT/ Piezometers	PZ-55B 03/20/12 DPT/ Piezometers	PZ-56 03/21/12 DPT/ Piezometers
Semivolatile Organics													
1,1'-Biphenyl	- -	0.83	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	600	280	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	75	0.42	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dioxane	- -	0.67	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Naphthoquinone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-Chloropropane)	- -	0.31	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	- -	890	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	- -	3.5	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	- -	35	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	- -	270	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	- -	30	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	- -	15	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	- -	550	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	- -	27	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	- -	720	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	- -	150	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	- -	0.11	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	- -	1.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl-phenylether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	- -	0.32	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	- -	1,400	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	- -	3.3	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	- -	400	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	- -	1,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	- -	1,300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	3	0.26	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	- -	1,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	- -	0.029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	- -	0.029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	- -	0.29	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic Acid	- -	58,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	- -	1,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	- -	47	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	- -	0.012	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl)ether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butylbenzylphthalate	- -	14	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	- -	7,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	- -	2.9	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	- -	0.0029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	- -	5.8	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethylphthalate	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-Butylphthalate	- -	670	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-Octylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	- -	630	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	- -	220	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	1	0.042	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	- -	0.26	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	50	22	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	- -	0.79	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	- -	0.029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	- -	67	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	- -	0.14	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	- -	0.12	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	- -	0.0093	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	- -	10	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	1	0.17	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	- -	4,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	- -	87	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	PZ-40 03/01/12 DPT/ Piezometers	PZ-44 03/05/12 DPT/ Piezometers	PZ-45 03/02/12 DPT/ Piezometers	PZ-46 03/01/12 DPT/ Piezometers	PZ-49 03/09/12 DPT/ Piezometers	PZ-52 03/01/12 DPT/ Piezometers	PZ-54 03/21/12 DPT/ Piezometers	PZ-55A 03/21/12 DPT/ Piezometers	PZ-55B 03/20/12 DPT/ Piezometers	PZ-56 03/21/12 DPT/ Piezometers
Inorganics													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	200	9.3	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	50	78	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	50	78	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	PZ-40 03/01/12 DPT/ Piezometers	PZ-44 03/05/12 DPT/ Piezometers	PZ-45 03/02/12 DPT/ Piezometers	PZ-46 03/01/12 DPT/ Piezometers	PZ-49 03/09/12 DPT/ Piezometers	PZ-52 03/01/12 DPT/ Piezometers	PZ-54 03/21/12 DPT/ Piezometers	PZ-55A 03/21/12 DPT/ Piezometers	PZ-55B 03/20/12 DPT/ Piezometers	PZ-56 03/21/12 DPT/ Piezometers
Miscellaneous													
Bromate	10	0.096	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Simazine	4	0.52	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-T	- -	120	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TP	50	84	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	70	130	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DB	- -	91	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dicamba	- -	440	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorprop	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dinoseb	7	11	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diquat	20	34	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endothall	100	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	- -	12	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	- -	0.00021	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-BHC	- -	0.0062	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beta-BHC	- -	0.022	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta-BHC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	- -	0.0015	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	2	1.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Ketone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	0.4	0.0018	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor Epoxide	0.2	0.0033	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	40	27	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	3	0.013	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(ft): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	PZ-40 03/01/12 DPT/ Piezometers	PZ-44 03/05/12 DPT/ Piezometers	PZ-45 03/02/12 DPT/ Piezometers	PZ-46 03/01/12 DPT/ Piezometers	PZ-49 03/09/12 DPT/ Piezometers	PZ-52 03/01/12 DPT/ Piezometers	PZ-54 03/21/12 DPT/ Piezometers	PZ-55A 03/21/12 DPT/ Piezometers	PZ-55B 03/20/12 DPT/ Piezometers	PZ-56 03/21/12 DPT/ Piezometers
Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOC TIC													
1-Methylnaphthalene	- -	0.97	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UNKNOWN PAH1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs TICs													
2-Cyclohexen-1-ol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diacetone Alcohol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-(3-Methylbutyl)acetamide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown Semivoloatile TIC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOCs TICs													
2-Ethyl-1-Hexanol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorodifluoromethane	- -	100,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromonofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl Ether	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorofluoro-	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		PZ-58	PZ-59	3/Robinson Box Spring	3/Robinson Box Spring	4/Robinson Rock Spring	S2-001	S2-002	S2-003	S2-004	30/North Armory
Sample Depth(ft):													
Date Collected:				03/21/12	03/08/12	11/16/11	04/20/12	04/20/12	04/19/12	04/19/12	04/20/12	04/20/12	04/16/12
Sampling Area:	(shade)	(bold)	Units	DPT/ Piezometers	DPT/ Piezometers	Named Springs	Named Springs	Named Springs	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Named Springs
PCBs													
Aroclor-1016	- -	0.96	ug/L	NA	NA	NA	NA	0.1 U	0.11 U [0.11 U]	NA	NA	0.098 U	0.1 U
Aroclor-1221	- -	0.0043	ug/L	NA	NA	NA	NA	0.1 U	0.11 U [0.11 U]	NA	NA	0.098 U	0.1 U
Aroclor-1232	- -	0.0043	ug/L	NA	NA	NA	NA	0.1 U	0.11 U [0.11 U]	NA	NA	0.098 U	0.1 U
Aroclor-1242	- -	0.034	ug/L	NA	NA	NA	NA	0.1 U	0.11 U [0.11 U]	NA	NA	0.098 U	0.1 U
Aroclor-1248	- -	0.034	ug/L	NA	NA	NA	NA	0.1 U	0.11 U [0.11 U]	NA	NA	0.098 U	0.1 U
Aroclor-1254	- -	0.034	ug/L	NA	NA	NA	NA	0.1 U	0.11 U [0.11 U]	NA	NA	0.098 U	0.1 U
Aroclor-1260	- -	0.034	ug/L	NA	NA	NA	NA	0.1 U	0.11 U [0.11 U]	NA	NA	0.098 U	0.1 U
Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.2 J	NA	0.1 J	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.5 U	0.5 U	0.6	NA	0.4 J	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.3 J
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	- -	15	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.2	0.00032	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.05	0.0065	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	NA	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
2-Hexanone	- -	34	ug/L	5 U	5 U	5 U	NA	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	- -	1,000	ug/L	5 U	5 U	5 U	NA	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U	NA	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	- -	7	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**3.6**	0.5 U	**1.9**	NA	**1.5**	**0.6 [0.6]**	**0.6**	0.5 U	0.5 U	**0.7**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.5 U	0.5 U	1	NA	0.7	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.1 J
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	- -	13,000	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	390	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	- -	16,000	ug/L	1 U	1 U	1 U	NA	1 U	1 U [1 U]	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Methylcyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	100	1,100	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.2 J	0.5 U	0.6	NA	0.6	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.3 J
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**2.1**	0.5 U	**9.4**	NA	**6.9**	**0.6 [0.6]**	**0.6**	0.5 U	0.5 U	**1.9**
Trichlorofluoromethane	- -	1,100	ug/L	0.5 U	0.5 U	2.8	NA	2.8	0.2 J [0.2 J]	0.2 J	0.5 U	0.5 U	3.5
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		PZ-58	PZ-59	3/Robinson Box Spring	3/Robinson Box Spring	4/Robinson Rock Spring	S2-001	S2-002	S2-003	S2-004	30/North Armory
Sample Depth(ft):													
Date Collected:				03/21/12	03/08/12	11/16/11	04/20/12	04/20/12	04/19/12	04/19/12	04/20/12	04/20/12	04/16/12
Sampling Area:	(shade)	(bold)	Units	DPT/ Piezometers	DPT/ Piezometers	Named Springs	Named Springs	Named Springs	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Named Springs
Semivolatile Organics													
1,1'-Biphenyl	- -	0.83	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
1,2-Dichlorobenzene	600	280	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
1,3-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
1,4-Dichlorobenzene	75	0.42	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
1,4-Dioxane	- -	0.67	ug/L	NA	NA	NA	NA	5 U	5 U [5 U]	NA	NA	5 U	6 U
1,4-Naphthoquinone	- -	- -	ug/L	NA	NA	NA	NA	29 U	32 U [33 U]	NA	NA	32 U	33 U
2,2'-Oxybis(1-Chloropropane)	- -	0.31	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
2,4,5-Trichlorophenol	- -	890	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
2,4,6-Trichlorophenol	- -	3.5	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
2,4-Dichlorophenol	- -	35	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
2,4-Dimethylphenol	- -	270	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
2,4-Dinitrophenol	- -	30	ug/L	NA	NA	NA	NA	29 U	32 U [33 U]	NA	NA	32 U	33 U
2,4-Dinitrotoluene	- -	0.2	ug/L	NA	NA	NA	NA	5 U	5 U [5 U]	NA	NA	5 U	6 U
2,6-Dinitrotoluene	- -	15	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
2-Chloronaphthalene	- -	550	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
2-Chlorophenol	- -	71	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
2-Methylnaphthalene	- -	27	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
2-Methylphenol	- -	720	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
2-Nitroaniline	- -	150	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
2-Nitrophenol	- -	- -	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
3,3'-Dichlorobenzidine	- -	0.11	ug/L	NA	NA	NA	NA	5 U	5 U [5 U]	NA	NA	5 U	6 U
3-Nitroaniline	- -	- -	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
4,6-Dinitro-2-methylphenol	- -	1.2	ug/L	NA	NA	NA	NA	14 U	16 U [16 U]	NA	NA	16 U	17 U
4-Bromophenyl-phenylether	- -	- -	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
4-Chloroaniline	- -	0.32	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
4-Chlorophenyl-phenylether	- -	- -	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
4-Methylphenol	- -	1,400	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
4-Nitroaniline	- -	3.3	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
4-Nitrophenol	- -	- -	ug/L	NA	NA	NA	NA	29 U	32 U [33 U]	NA	NA	32 U	33 U
Acenaphthene	- -	400	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
Acenaphthylene	- -	- -	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
Acetophenone	- -	1,500	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
Anthracene	- -	1,300	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
Atrazine	3	0.26	ug/L	NA	NA	NA	NA	5 U	5 U [5 U]	NA	NA	5 U	6 U
Benzaldehyde	- -	1,500	ug/L	NA	NA	NA	NA	5 U	5 U [5 U]	NA	NA	5 U	6 U
Benzo(a)anthracene	- -	0.029	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
Benzo(b)fluoranthene	- -	0.029	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
Benzo(g,h,i)perylene	- -	- -	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
Benzo(k)fluoranthene	- -	0.29	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
Benzoic Acid	- -	58,000	ug/L	NA	NA	NA	NA	14 U	16 U [16 U]	NA	NA	16 U	17 U
Benzyl Alcohol	- -	1,500	ug/L	NA	NA	NA	NA	14 U	16 U [16 U]	NA	NA	16 U	17 U
bis(2-Chloroethoxy)methane	- -	47	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
bis(2-Chloroethyl)ether	- -	0.012	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
bis(2-Chloroisopropyl)ether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	NA	NA	NA	5 U	5 U [5 U]	NA	NA	5 U	6 U
Butylbenzylphthalate	- -	14	ug/L	NA	NA	NA	NA	5 U	5 U [5 U]	NA	NA	5 U	6 U
Caprolactam	- -	7,700	ug/L	NA	NA	NA	NA	14 U	16 U [16 U]	NA	NA	16 U	17 U
Carbazole	- -	- -	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
Chrysene	- -	2.9	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
Dibenzo(a,h)anthracene	- -	0.0029	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
Dibenzofuran	- -	5.8	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
Diethylphthalate	- -	11,000	ug/L	NA	NA	NA	NA	5 U	5 U [5 U]	NA	NA	5 U	6 U
Dimethylphthalate	- -	- -	ug/L	NA	NA	NA	NA	5 U	5 U [5 U]	NA	NA	5 U	6 U
Di-n-Butylphthalate	- -	670	ug/L	NA	NA	NA	NA	5 U	5 U [5 U]	NA	NA	5 U	6 U
Di-n-Octylphthalate	- -	- -	ug/L	NA	NA	NA	NA	5 U	5 U [5 U]	NA	NA	5 U	6 U
Fluoranthene	- -	630	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
Fluorene	- -	220	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
Hexachlorobenzene	1	0.042	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
Hexachlorobutadiene	- -	0.26	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
Hexachlorocyclopentadiene	50	22	ug/L	NA	NA	NA	NA	14 U	16 U [16 U]	NA	NA	16 U	17 U
Hexachloroethane	- -	0.79	ug/L	NA	NA	NA	NA	5 U	5 U [5 U]	NA	NA	5 U	6 U
Indeno(1,2,3-cd)pyrene	- -	0.029	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
Isophorone	- -	67	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
Naphthalene	- -	0.14	ug/L	NA	NA	NA	NA	0.1 J	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
Nitrobenzene	- -	0.12	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
N-Nitroso-di-n-propylamine	- -	0.0093	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
N-Nitrosodiphenylamine	- -	10	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
Pentachlorophenol	1	0.17	ug/L	NA	NA	NA	NA	5 U	5 U [5 U]	NA	NA	5 U	6 U
Phenanthrene	- -	- -	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
Phenol	- -	4,500	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
Pyrene	- -	87	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.1 J	0.6 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		PZ-58	PZ-59	3/Robinson Box Spring	3/Robinson Box Spring	4/Robinson Rock Spring	S2-001	S2-002	S2-003	S2-004	30/North Armory
Sample Depth(ft):													
Date Collected:				03/21/12	03/08/12	11/16/11	04/20/12	04/20/12	04/19/12	04/19/12	04/20/12	04/20/12	04/16/12
Sampling Area:	(shade)	(bold)	Units	DPT/ Piezometers	DPT/ Piezometers	Named Springs	Named Springs	Named Springs	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Named Springs
Inorganics													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	991	4,620 [4,660]	NA	NA	1,100	1,400
Antimony	6	6	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	2 U	**1.4 J [1.1 J]**	NA	NA	2 U	2 U
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	106	129 [126]	NA	NA	45	84.3
Beryllium	4	16	ug/L	NA	NA	NA	NA	0.15 J	0.3 J [0.27 J]	NA	NA	0.5 U	0.5 U
Boron	- -	3,100	ug/L	NA	NA	NA	NA	24.3 J	11.1 J [9.8 J]	NA	NA	20 J	10.5 J
Cadmium	5	- -	ug/L	NA	NA	NA	NA	0.28 J	5 U [0.27 J]	NA	NA	5 U	5 U
Calcium	- -	- -	ug/L	NA	NA	NA	NA	84,500	130,000 [131,000]	NA	NA	17,900	65,700
Chromium	100	- -	ug/L	NA	NA	NA	NA	2 J	6.3 J [6.1 J]	NA	NA	15 U	2.3 J
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	5 U	3.8 J [4 J]	NA	NA	1.1 J	0.99 B
Copper	1,300	620	ug/L	NA	NA	NA	NA	3.1 J	5.7 J [5.8 J]	NA	NA	2 J	2.6 J
Cyanide	200	9.3	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	1,220	8,260 [8,430]	NA	NA	1,730	2,250 J
Lead	15	- -	ug/L	NA	NA	NA	NA	2.9 J	7.5 J [9.3 J]	NA	NA	15 U	12.8 J
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	18,100	14,300 [14,400]	NA	NA	6,080	17,200
Manganese	- -	- -	ug/L	NA	NA	NA	NA	162	93.2 [100]	NA	NA	25.9	25 J
Mercury	2	0.63	ug/L	NA	NA	NA	NA	0.2 U	0.032 J [0.049 J]	NA	NA	0.2 U	0.2 U
Nickel	- -	300	ug/L	NA	NA	NA	NA	2.4 J	4.2 J [4.6 J]	NA	NA	1.5 J	1.7 J
Potassium	- -	- -	ug/L	NA	NA	NA	NA	2,710	2,850 [2,750]	NA	NA	2,910	1,880
Selenium	50	78	ug/L	NA	NA	NA	NA	20 U	20 U [20 U]	NA	NA	20 U	20 U
Silver	- -	71	ug/L	NA	NA	NA	NA	5 U	5 U [5 U]	NA	NA	5 U	5 U
Sodium	- -	- -	ug/L	NA	NA	NA	NA	11,000	40,000 [41,300]	NA	NA	29,600	11,800
Thallium	2	0.16	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	5.7	7.1 [7.4]	NA	NA	1.3 J	2.5 J
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	40.4	28.7 [29.4]	NA	NA	10.8 J	10.2 J
Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	200 U	200 U	200 U [200 U]	NA	NA	200 U	200 U
Antimony	6	6	ug/L	NA	NA	NA	1 U	1 U	1 U [1 U]	NA	NA	1 U	1 U
Arsenic	10	0.045	ug/L	NA	NA	NA	2 U	2 U	2 U [2 U]	NA	NA	2 U	2 U
Barium	2,000	2,900	ug/L	NA	NA	NA	65.6	58.2	68.2 [69.1]	NA	NA	34.4	66.4
Beryllium	4	16	ug/L	NA	NA	NA	0.5 U	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.5 U
Boron	- -	3,100	ug/L	NA	NA	NA	12.3 J	13.4 J	15.4 J [16.4 J]	NA	NA	19.7 J	10.7 J
Cadmium	5	- -	ug/L	NA	NA	NA	5 U	5 U	5 U [0.48 J]	NA	NA	5 U	5 U
Calcium	- -	- -	ug/L	NA	NA	NA	60,900	66,300	130,000 [126,000]	NA	NA	16,200	68,800
Chromium	100	- -	ug/L	NA	NA	NA	15 U	15 U	1.6 J [1.2 J]	NA	NA	15 U	15 U
Cobalt	- -	4.7	ug/L	NA	NA	NA	5 U	5 U	5 U [5 U]	NA	NA	5 U	5 U
Copper	1,300	620	ug/L	NA	NA	NA	10 U	10 U	1.7 J [2.1 J]	NA	NA	10 U	10 U
Iron	- -	11,000	ug/L	NA	NA	NA	200 U	200 U	49.2 J [49.3 J]	NA	NA	200 U	200 UJ
Lead	15	- -	ug/L	NA	NA	NA	15 U	15 U	15 U [15 U]	NA	NA	15 U	4 B
Magnesium	- -	- -	ug/L	NA	NA	NA	16,300	16,000	13,300 [13,200]	NA	NA	5,550	16,700
Manganese	- -	- -	ug/L	NA	NA	NA	24.5	1 J	10.9 [11]	NA	NA	2.2 J	2.3 J
Mercury	2	0.63	ug/L	NA	NA	NA	0.2 U	0.2 U	0.2 U [0.2 U]	NA	NA	0.2 U	0.2 U
Nickel	- -	300	ug/L	NA	NA	NA	10 U	10 U	10 U [10 U]	NA	NA	10 U	10 U
Potassium	- -	- -	ug/L	NA	NA	NA	1,690	1,800	2,130 [2,040]	NA	NA	2,650	1,560
Selenium	50	78	ug/L	NA	NA	NA	20 U	20 U	20 U [20 U]	NA	NA	20 U	20 U
Silver	- -	71	ug/L	NA	NA	NA	5 U	5 U	5 U [5 U]	NA	NA	5 U	5 U
Sodium	- -	- -	ug/L	NA	NA	NA	10,800	10,400	40,000 [39,200]	NA	NA	33,700	11,900
Thallium	2	0.16	ug/L	NA	NA	NA	0.5 U	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	NA	NA	NA	5 U	5 U	5 U [5 U]	NA	NA	5 U	5 U
Zinc	- -	4,700	ug/L	NA	NA	NA	20 U	20 U	4.3 J [5 J]	NA	NA	20 U	20 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		PZ-58	PZ-59	3/Robinson Box Spring	3/Robinson Box Spring	4/Robinson Rock Spring	S2-001	S2-002	S2-003	S2-004	30/North Armory
Sample Depth(ft):													
Date Collected:				03/21/12	03/08/12	11/16/11	04/20/12	04/20/12	04/19/12	04/19/12	04/20/12	04/20/12	04/16/12
Sampling Area:	(shade)	(bold)	Units	DPT/ Piezometers	DPT/ Piezometers	Named Springs	Named Springs	Named Springs	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Named Springs
Miscellaneous													
Bromate	10	0.096	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Simazine	4	0.52	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-T	- -	120	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TP	50	84	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	70	130	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DB	- -	91	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dicamba	- -	440	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorprop	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dinoseb	7	11	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diquat	20	34	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endothall	100	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	- -	12	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	NA	NA	NA	0.022 U	0.022 U [0.023 U]	NA	NA	0.02 U	0.022 U
4,4'-DDE	- -	0.2	ug/L	NA	NA	NA	NA	0.022 U	0.022 U [0.023 U]	NA	NA	0.02 U	0.022 U
4,4'-DDT	- -	0.2	ug/L	NA	NA	NA	NA	0.022 U	0.022 U [0.023 U]	NA	NA	0.02 U	0.022 UJ
Aldrin	- -	0.00021	ug/L	NA	NA	NA	NA	0.011 U	0.011 U [0.011 U]	NA	NA	0.0098 U	0.011 U
Alpha-BHC	- -	0.0062	ug/L	NA	NA	NA	NA	0.011 U	0.011 U [0.011 U]	NA	NA	0.0098 U	0.011 U
Alpha-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	0.011 U	0.011 U [0.011 U]	NA	NA	0.0098 U	0.011 U
Beta-BHC	- -	0.022	ug/L	NA	NA	NA	NA	0.011 U	0.011 U [0.011 U]	NA	NA	0.0098 U	0.011 U
Delta-BHC	- -	- -	ug/L	NA	NA	NA	NA	0.011 U	0.011 U [0.011 U]	NA	NA	0.0098 U	0.011 U
Dieldrin	- -	0.0015	ug/L	NA	NA	NA	NA	0.022 U	0.022 U [0.023 U]	NA	NA	0.02 U	0.022 U
Endosulfan I	- -	- -	ug/L	NA	NA	NA	NA	0.011 U	0.011 U [0.011 U]	NA	NA	0.0098 U	0.011 U
Endosulfan II	- -	- -	ug/L	NA	NA	NA	NA	0.022 U	0.022 U [0.023 U]	NA	NA	0.02 U	0.022 U
Endosulfan Sulfate	- -	- -	ug/L	NA	NA	NA	NA	0.022 U	0.022 U [0.023 U]	NA	NA	0.02 U	0.022 U
Endrin	2	1.7	ug/L	NA	NA	NA	NA	0.022 U	0.022 U [0.023 U]	NA	NA	0.02 U	0.022 U
Endrin Aldehyde	- -	- -	ug/L	NA	NA	NA	NA	0.11 U	0.11 U [0.11 U]	NA	NA	0.098 U	0.11 U
Endrin Ketone	- -	- -	ug/L	NA	NA	NA	NA	0.022 U	0.022 U [0.023 U]	NA	NA	0.02 U	0.022 U
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	NA	NA	NA	0.011 U	0.011 U [0.011 U]	NA	NA	0.0098 U	0.011 U
Gamma-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	0.022 U	0.022 U [0.023 U]	NA	NA	0.02 U	0.022 U
Heptachlor	0.4	0.0018	ug/L	NA	NA	NA	NA	0.011 U	0.011 U [0.011 U]	NA	NA	0.0098 U	0.011 U
Heptachlor Epoxide	0.2	0.0033	ug/L	NA	NA	NA	NA	0.011 U	0.011 U [0.011 U]	NA	NA	0.0098 U	0.011 U
Methoxychlor	40	27	ug/L	NA	NA	NA	NA	0.11 U	0.11 U [0.11 U]	NA	NA	0.098 U	0.11 UJ
Toxaphene	3	0.013	ug/L	NA	NA	NA	NA	3.3 U	3.4 U [3.4 U]	NA	NA	2.9 U	3.4 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:				PZ-58	PZ-59	3/Robinson Box Spring	3/Robinson Box Spring	4/Robinson Rock Spring	S2-001	S2-002	S2-003	S2-004	30/North Armory
Sample Depth(ft):	MCL	RSL Tapwater											
Date Collected:				03/21/12	03/08/12	11/16/11	04/20/12	04/20/12	04/19/12	04/19/12	04/20/12	04/20/12	04/16/12
Sampling Area:	(shade)	(bold)	Units	DPT/ Piezometers	DPT/ Piezometers	Named Springs	Named Springs	Named Springs	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Named Springs
Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOC TIC													
1-Methylnaphthalene	- -	0.97	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UNKNOWN PAH1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs TICs													
2-Cyclohexen-1-ol	- -	- -	ug/L	NA	NA	NA	NA	NA	25 J	NA	NA	NA	NA
Diacetone Alcohol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-(3-Methylbutyl)acetamide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA	NA	58 J	46 J [42 J]	NA	NA	23 J	130 J
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	6 BJ [6 J]	NA	NA	NA	5 J
Unknown Semivoloatile TIC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA	NA	58 J	15 J [5 J] [18 J] [14 J]	NA	NA	23 J	110 J
Unknown16	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOCs TICs													
2-Ethyl-1-Hexanol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorodifluoromethane	- -	100,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromonofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl Ether	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorofluoro-	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOC TICs	- -	- -	ug/L	NA	NA	NA	NA	0	0 [0]	0	0	0	0
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	31/South Armory 04/16/12 Named Springs	53/Dock Spring 04/16/12 Named Springs	UnnamedBoils 0 04/17/12 Springs/Seeps Identified During Stream Survey
PCBs						
Aroclor-1016	- -	0.96	ug/L	0.11 U	0.11 U	0.1 U
Aroclor-1221	- -	0.0043	ug/L	0.11 U	0.11 U	0.1 U
Aroclor-1232	- -	0.0043	ug/L	0.11 U	0.11 U	0.1 U
Aroclor-1242	- -	0.034	ug/L	0.11 U	0.11 U	0.1 U
Aroclor-1248	- -	0.034	ug/L	0.11 U	0.11 U	0.1 U
Aroclor-1254	- -	0.034	ug/L	0.11 U	0.11 U	0.1 U
Aroclor-1260	- -	0.034	ug/L	0.11 U	0.11 U	0.1 U
Volatile Organics						
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.2 J
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.3 J	0.4 J	0.5 J
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	1 U	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	- -	15	ug/L	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.2	0.00032	ug/L	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.05	0.0065	ug/L	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U
2-Hexanone	- -	34	ug/L	5 U	5 U	5 U
4-Methyl-2-pentanone	- -	1,000	ug/L	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U
Bromomethane	- -	7	ug/L	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**0.8**	**1**	**2.2**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.2 J	0.3 J	0.5
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
Cyclohexane	- -	13,000	ug/L	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	390	ug/L	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
Methyl acetate	- -	16,000	ug/L	1 U	1 U	1 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U
Methylcyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U
Styrene	100	1,100	ug/L	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.3 J	0.4 J	0.6
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**2.3**	**3.8**	**7.3**
Trichlorofluoromethane	- -	1,100	ug/L	3.2	3.7	3.2
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	31/South Armory 04/16/12 Named Springs	53/Dock Spring 04/16/12 Named Springs	UnnamedBoils 0 04/17/12 Springs/Seeps Identified During Stream Survey
Semivolatile Organics						
1,1'-Biphenyl	- -	0.83	ug/L	1 U	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	1 U	1 U	1 U
1,2-Dichlorobenzene	600	280	ug/L	1 U	1 U	1 U
1,3-Dichlorobenzene	- -	- -	ug/L	1 U	1 U	1 U
1,4-Dichlorobenzene	75	0.42	ug/L	1 U	1 U	1 U
1,4-Dioxane	- -	0.67	ug/L	6 U	5 U	5 U
1,4-Naphthoquinone	- -	- -	ug/L	33 U	31 U	30 U
2,2'-Oxybis(1-Chloropropane)	- -	0.31	ug/L	1 U	1 U	1 U
2,4,5-Trichlorophenol	- -	890	ug/L	1 U	1 U	1 U
2,4,6-Trichlorophenol	- -	3.5	ug/L	1 U	1 U	1 U
2,4-Dichlorophenol	- -	35	ug/L	1 U	1 U	1 U
2,4-Dimethylphenol	- -	270	ug/L	1 U	1 U	1 U
2,4-Dinitrophenol	- -	30	ug/L	33 U	31 U	30 U
2,4-Dinitrotoluene	- -	0.2	ug/L	6 U	5 U	5 U
2,6-Dinitrotoluene	- -	15	ug/L	1 U	1 U	1 U
2-Chloronaphthalene	- -	550	ug/L	1 U	1 U	1 U
2-Chlorophenol	- -	71	ug/L	1 U	1 U	1 U
2-Methylnaphthalene	- -	27	ug/L	0.6 U	0.5 U	0.5 U
2-Methylphenol	- -	720	ug/L	1 U	1 U	1 U
2-Nitroaniline	- -	150	ug/L	1 U	1 U	1 U
2-Nitrophenol	- -	- -	ug/L	1 U	1 U	1 U
3,3'-Dichlorobenzidine	- -	0.11	ug/L	6 U	5 U	5 U
3-Nitroaniline	- -	- -	ug/L	1 U	1 U	1 U
4,6-Dinitro-2-methylphenol	- -	1.2	ug/L	17 U	15 U	15 U
4-Bromophenyl-phenylether	- -	- -	ug/L	1 U	1 U	1 U
4-Chloro-3-Methylphenol	- -	1,100	ug/L	1 U	1 U	1 U
4-Chloroaniline	- -	0.32	ug/L	1 U	1 U	1 U
4-Chlorophenyl-phenylether	- -	- -	ug/L	1 U	1 U	1 U
4-Methylphenol	- -	1,400	ug/L	1 U	1 U	1 U
4-Nitroaniline	- -	3.3	ug/L	1 U	1 U	1 U
4-Nitrophenol	- -	- -	ug/L	33 U	31 U	30 U
Acenaphthene	- -	400	ug/L	0.6 U	0.5 U	0.5 U
Acenaphthylene	- -	- -	ug/L	0.6 U	0.5 U	0.5 U
Acetophenone	- -	1,500	ug/L	1 U	1 U	1 U
Anthracene	- -	1,300	ug/L	0.6 U	0.5 U	0.5 U
Atrazine	3	0.26	ug/L	6 U	5 U	5 UJ
Benzaldehyde	- -	1,500	ug/L	6 U	5 U	5 UJ
Benzo(a)anthracene	- -	0.029	ug/L	0.6 U	0.5 U	0.5 U
Benzo(a)pyrene	0.2	0.0029	ug/L	0.6 U	0.5 U	0.5 U
Benzo(b)fluoranthene	- -	0.029	ug/L	0.6 U	0.5 U	0.5 U
Benzo(g,h,i)perylene	- -	- -	ug/L	0.6 U	0.5 U	0.5 U
Benzo(k)fluoranthene	- -	0.29	ug/L	0.6 U	0.5 U	0.5 U
Benzoic Acid	- -	58,000	ug/L	17 U	15 U	15 U
Benzyl Alcohol	- -	1,500	ug/L	17 U	15 U	15 U
bis(2-Chloroethoxy)methane	- -	47	ug/L	1 U	1 U	1 U
bis(2-Chloroethyl)ether	- -	0.012	ug/L	1 U	1 U	1 U
bis(2-Chloroisopropyl)ether	- -	- -	ug/L	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	6 U	5 U	5 U
Butylbenzylphthalate	- -	14	ug/L	6 U	5 U	5 U
Caprolactam	- -	7,700	ug/L	17 U	15 U	15 U
Carbazole	- -	- -	ug/L	1 U	1 U	1 U
Chrysene	- -	2.9	ug/L	0.6 U	0.5 U	0.5 U
Dibenzo(a,h)anthracene	- -	0.0029	ug/L	0.6 U	0.5 U	0.5 U
Dibenzofuran	- -	5.8	ug/L	1 U	1 U	1 U
Diethylphthalate	- -	11,000	ug/L	6 U	5 U	5 U
Dimethylphthalate	- -	- -	ug/L	6 U	5 U	5 U
Di-n-Butylphthalate	- -	670	ug/L	6 U	5 U	5 U
Di-n-Octylphthalate	- -	- -	ug/L	6 U	5 U	5 U
Fluoranthene	- -	630	ug/L	0.6 U	0.5 U	0.5 U
Fluorene	- -	220	ug/L	0.6 U	0.5 U	0.5 U
Hexachlorobenzene	1	0.042	ug/L	0.6 U	0.5 U	0.5 U
Hexachlorobutadiene	- -	0.26	ug/L	1 U	1 U	1 U
Hexachlorocyclopentadiene	50	22	ug/L	17 U	15 U	15 U
Hexachloroethane	- -	0.79	ug/L	6 U	5 U	5 U
Indeno(1,2,3-cd)pyrene	- -	0.029	ug/L	0.6 U	0.5 U	0.5 U
Isophorone	- -	67	ug/L	1 U	1 U	1 U
Naphthalene	- -	0.14	ug/L	0.6 U	0.5 U	0.5 U
Nitrobenzene	- -	0.12	ug/L	1 U	1 U	1 U
N-Nitroso-di-n-propylamine	- -	0.0093	ug/L	1 U	1 U	1 U
N-Nitrosodiphenylamine	- -	10	ug/L	1 U	1 U	1 U
Pentachlorophenol	1	0.17	ug/L	6 U	5 U	5 U
Phenanthrene	- -	- -	ug/L	0.6 U	0.5 U	0.5 U
Phenol	- -	4,500	ug/L	1 U	1 U	1 U
Pyrene	- -	87	ug/L	0.6 U	0.5 U	0.5 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	31/South Armory 04/16/12 Named Springs	53/Dock Spring 04/16/12 Named Springs	UnnamedBoils 0 04/17/12 Springs/Seeps Identified During Stream Survey
Inorganics						
Aluminum	- -	16,000	ug/L	200 U	3,430	826
Antimony	6	6	ug/L	1 U	1 U	1 U
Arsenic	10	0.045	ug/L	2 U	2 U	2 U
Barium	2,000	2,900	ug/L	67.1	106	74.5
Beryllium	4	16	ug/L	0.5 U	0.24 J	0.5 U
Boron	- -	3,100	ug/L	10.4 J	9.1 J	10 B
Cadmium	5	- -	ug/L	5 U	5 U	5 U
Calcium	- -	- -	ug/L	64,800	64,900	71,100
Chromium	100	- -	ug/L	15 U	5.1 J	1.9 J
Cobalt	- -	4.7	ug/L	5 U	3.5 J	0.84 J
Copper	1,300	620	ug/L	10 U	4.4 J	1.3 B
Cyanide	200	9.3	ug/L	NA	NA	NA
Iron	- -	11,000	ug/L	200 UJ	5,880 J	1,220
Lead	15	- -	ug/L	7.9 J	19.7	11 J
Magnesium	- -	- -	ug/L	16,600	17,900	17,100
Manganese	- -	- -	ug/L	5 UJ	142 J	21.6
Mercury	2	0.63	ug/L	0.2 U	0.2 U	0.2 U
Nickel	- -	300	ug/L	10 U	3.9 J	10 U
Potassium	- -	- -	ug/L	1,600	2,370	2,590
Selenium	50	78	ug/L	20 U	20 U	20 U
Silver	- -	71	ug/L	5 U	5 U	5 U
Sodium	- -	- -	ug/L	11,300	11,000	18,000
Thallium	2	0.16	ug/L	0.5 U	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	5 U	5.9	1.1 J
Zinc	- -	4,700	ug/L	6.6 J	24.2	6.7 J
Inorganics-Filtered						
Aluminum	- -	16,000	ug/L	89.3 J [200 U]	200 U	200 U
Antimony	6	6	ug/L	1 U [1 U]	1 U	1 U
Arsenic	10	0.045	ug/L	2 U [2 U]	2 U	2 U
Barium	2,000	2,900	ug/L	68.6 [66.5]	64.1	63.2
Beryllium	4	16	ug/L	0.5 U [0.5 U]	0.5 U	0.5 U
Boron	- -	3,100	ug/L	11.3 J [10.3 J]	9.4 J	8.2 J
Cadmium	5	- -	ug/L	5 U [5 U]	5 U	5 U
Calcium	- -	- -	ug/L	67,200 [65,400]	66,000	68,700
Chromium	100	- -	ug/L	15 U [15 U]	15 U	1.2 B
Cobalt	- -	4.7	ug/L	5 U [5 U]	5 U	5 U
Copper	1,300	620	ug/L	10 U [10 U]	10 U	10 U
Iron	- -	11,000	ug/L	96.4 J [200 UJ]	200 UJ	200 U
Lead	15	- -	ug/L	3.7 B [4.2 B]	4.8 B	7 B
Magnesium	- -	- -	ug/L	16,600 [16,300]	16,800	17,300
Manganese	- -	- -	ug/L	1.4 J [0.49 J]	5 UJ	13
Mercury	2	0.63	ug/L	0.2 U [0.2 U]	0.2 U	0.2 U
Nickel	- -	300	ug/L	10 U [10 U]	10 U	10 U
Potassium	- -	- -	ug/L	1,600 [1,550]	1,520	2,500
Selenium	50	78	ug/L	20 U [20 U]	20 U	20 U
Silver	- -	71	ug/L	5 U [5 U]	5 U	5 U
Sodium	- -	- -	ug/L	11,500 [11,300]	10,900	18,400
Thallium	2	0.16	ug/L	0.5 U [0.5 U]	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	5 U [5 U]	5 U	5 U
Zinc	- -	4,700	ug/L	6.2 J [5.7 J]	20 U	20 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	31/South Armory 04/16/12 Named Springs	53/Dock Spring 04/16/12 Named Springs	UnnamedBoils 0 04/17/12 Springs/Seeps Identified During Stream Survey
Miscellaneous						
Bromate	10	0.096	ug/L	NA	NA	NA
Bromide	- -	- -	ug/L	NA	NA	NA
Chloride	- -	- -	ug/L	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	51.4
Simazine	4	0.52	ug/L	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA
Herbicides						
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA
2,4,5-T	- -	120	ug/L	NA	NA	NA
2,4,5-TP	50	84	ug/L	NA	NA	NA
2,4-D	70	130	ug/L	NA	NA	NA
2,4-DB	- -	91	ug/L	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA
Dicamba	- -	440	ug/L	NA	NA	NA
Dichlorprop	- -	- -	ug/L	NA	NA	NA
Dinoseb	7	11	ug/L	NA	NA	NA
Diquat	20	34	ug/L	NA	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA
Endothall	100	300	ug/L	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA
MCPP	- -	12	ug/L	NA	NA	NA
Monuron	- -	- -	ug/L	NA	NA	NA
Pesticides						
4,4'-DDD	- -	0.28	ug/L	0.022 U	0.024 U	0.022 U
4,4'-DDE	- -	0.2	ug/L	0.022 U	0.024 U	0.022 U
4,4'-DDT	- -	0.2	ug/L	0.022 UJ	0.024 UJ	0.022 U
Aldrin	- -	0.00021	ug/L	0.011 U	0.012 U	0.011 U
Alpha-BHC	- -	0.0062	ug/L	0.011 U	0.012 U	0.011 U
Alpha-Chlordane	- -	- -	ug/L	0.011 U	0.012 U	0.011 U
Beta-BHC	- -	0.022	ug/L	0.011 U	0.012 U	0.011 U
Delta-BHC	- -	- -	ug/L	0.011 U	0.012 U	0.011 U
Dieldrin	- -	0.0015	ug/L	0.022 U	0.024 U	0.022 U
Endosulfan I	- -	- -	ug/L	0.011 U	0.012 U	0.011 U
Endosulfan II	- -	- -	ug/L	0.022 U	0.024 U	0.022 U
Endosulfan Sulfate	- -	- -	ug/L	0.022 U	0.024 U	0.022 U
Endrin	2	1.7	ug/L	0.022 U	0.024 U	0.022 U
Endrin Aldehyde	- -	- -	ug/L	0.11 U	0.12 U	0.11 U
Endrin Ketone	- -	- -	ug/L	0.022 U	0.024 U	0.022 U
Gamma-BHC (Lindane)	0.2	0.036	ug/L	0.011 U	0.012 U	0.011 U
Gamma-Chlordane	- -	- -	ug/L	0.022 U	0.024 U	0.022 U
Heptachlor	0.4	0.0018	ug/L	0.011 U	0.012 U	0.011 U
Heptachlor Epoxide	0.2	0.0033	ug/L	0.011 U	0.012 U	0.011 U
Methoxychlor	40	27	ug/L	0.11 UJ	0.12 UJ	0.11 U
Toxaphene	3	0.013	ug/L	3.3 U	3.6 U	3.4 U

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(ft): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	31/South Armory 04/16/12 Named Springs	53/Dock Spring 04/16/12 Named Springs	UnnamedBoils 0 04/17/12 Springs/Seeps Identified During Stream Survey
Dioxins						
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA
Radiochemistry						
Gross Alpha	- -	- -	pci/l	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA
SVOC TIC						
1-Methylnaphthalene	- -	0.97	ug/L	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	NA	NA	NA
Unknown alkane1	- -	- -	ug/L	NA	NA	NA
UNKNOWN PAH1	- -	- -	ug/L	NA	NA	NA
Unknown1	- -	- -	ug/L	NA	NA	NA
Unknown16	- -	- -	ug/L	NA	NA	NA
SVOCs TICs						
2-Cyclohexen-1-ol	- -	- -	ug/L	NA	NA	NA
Diacetone Alcohol	- -	- -	ug/L	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA
N-(3-Methylbutyl)acetamide	- -	- -	ug/L	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	4,600 JB	14 J	80 J
Unknown alkane1	- -	- -	ug/L	5 J	NA	5 J
Unknown Semivoloatile TIC	- -	- -	ug/L	NA	NA	NA
Unknown1	- -	- -	ug/L	10 J	8 J	6 J
Unknown16	- -	- -	ug/L	NA	NA	NA
VOCs TICs						
2-Ethyl-1-Hexanol	- -	- -	ug/L	NA	NA	NA
Chlorodifluoromethane	- -	100,000	ug/L	NA	NA	NA
Dichloromonofluoromethane	- -	- -	ug/L	NA	NA	NA
Ethyl Ether	- -	3,100	ug/L	NA	NA	NA
Methane, chlorofluoro-	- -	- -	ug/L	NA	NA	NA
Total VOC TICs	- -	- -	ug/L	0	0	0
Unknown alkane1	- -	- -	ug/L	NA	NA	NA

Table A.7.5.4-2
Comprehensive Groundwater and Spring Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Qualifier Type	Lab Qualifiers	Definition
Inorganic	B	Indicates an estimated value between the instrument detection limit and the Reporting Limit (RL).
Inorganic	J	Indicates an estimated value.
Inorganic	U	The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
Inorganic	UJ	The compound was analyzed for but not detected. The associated value is the compound quantitation limit. Indicates an estimated value.
Organic	B	Analyte was also detected in the associated method blank.
Organic	BJ	Analyte was also detected in the associated method blank. Indicates an estimated value.
Organic	BJQ	Analyte was also detected in the associated method blank. Indicates an estimated value.
Organic	E	Analyte exceeded calibration range.
Organic	J	Indicates an estimated value.
Organic	JA	
Organic	JAB	
Organic	JB	
Organic	JQ	Indicates an estimated value.
Organic	U	The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
Organic	UJ	The compound was analyzed for but not detected. The associated value is the compound quantitation limit. Indicates an estimated value.

Notes:
Exceedances of MCL are shaded.
Exceedances of RSL Tapwater are in bold.

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW4	BMW5	BMW5D	BMW9D	BMW11	BMW11	BMW11D	BMW16	BMW018	BMW18
Sample Depth(FT):													
Date Collected:				03/30/12	03/30/12	03/30/12	04/03/12	03/29/12	04/13/12	03/30/12	04/06/12	11/15/11	04/05/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Detected PCBs													
None Detected	- -	- -	- -	- -	- -	- -	- -	- -	NA	- -	- -	NA	- -
Detected Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.2 J	1	1.6
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.6	0.2 J	0.3 J
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	**3**	**2.5**
1,1-Dichloroethene	7	260	ug/L	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.3 J	0.4 J	14	17
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	**0.07 J**
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	NA	0.5 U	0.5 U	0.1 J	0.2 J
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	**1**	**1.2**
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.1 J	0.1 J
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	**0.4 J**	0.2 J
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.1 J
Chloroform	70	0.19	ug/L	**0.3 J**	0.1 J	**0.2 J**	**0.4 J**	0.5 U	NA	**0.6**	**3.6**	**5.7**	**5.4**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.8	16	20
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.2 J	0.5 U	0.1 J
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.2 J	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	1.3	0.3 J
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	1	0.4 J	0.5 J	3.1	0.5 U	NA	0.2 J	4.5	2.6	3.7
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	NA	0.2 J	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.2 J	0.3 J
Trichloroethene	5	0.44	ug/L	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	**3.8**	**150**	**150**
Trichlorofluoromethane	- -	1,100	ug/L	0.1 J	2.8	75	0.5 U	0.5 U	NA	1.5	16	3.6	7.5
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	**3**	**4.1**
Detected Semivolatile Organics													
1,2,4-Trichlorobenzene	70	0.99	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
1,2-Dichlorobenzene	600	280	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
1,4-Dichlorobenzene	75	0.42	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
1,4-Dioxane	- -	0.67	ug/L	5 U	5 U	5 U	5 U	6 U	NA	5 U	5 U	NA	**43**
2,4,5-Trichlorophenol	- -	890	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
2,4-Dichlorophenol	- -	35	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
2,4-Dimethylphenol	- -	270	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
2-Chlorophenol	- -	71	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
2-Methylnaphthalene	- -	27	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
4-Chloro-3-Methylphenol	- -	1,100	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
4-Methylphenol	- -	1,400	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
Acetophenone	- -	1,500	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
Benzo(a)pyrene	0.2	0.0029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
Benzoic Acid	- -	58,000	ug/L	15 U	15 U	16 U	15 U	17 U	NA	15 U	15 U	NA	15 U
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	5 U	5 U	5 U	5 U	6 U	NA	5 U	5 U	NA	5 U
Fluoranthene	- -	630	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
Fluorene	- -	220	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
Hexachlorobutadiene	- -	0.26	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
Naphthalene	- -	0.14	ug/L	0.5 U	0.1 J	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	**0.2 J**
Pentachlorophenol	1	0.17	ug/L	5 U	5 U	5 U	5 U	6 U	NA	5 U	5 U	NA	5 U
Phenanthrene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
Phenol	- -	4,500	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
Pyrene	- -	87	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	NA	0.5 U	0.5 U	NA	0.5 U
Detected Inorganics													
Aluminum	- -	16,000	ug/L	86.4 J	200 U	87.2 J	120 J	200 U	NA	771	200 U	NA	200 U
Antimony	6	6	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1	1 U	NA	1 U
Arsenic	10	0.045	ug/L	2 U	2 U	2 U	**16.1**	2 U	NA	2 U	2 U	NA	**2 J**
Barium	2,000	2,900	ug/L	34.4	34	84.7	125	63.3	NA	204	44.6	NA	109
Beryllium	4	16	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA	0.5 U
Boron	- -	3,100	ug/L	36 J	41.2 J	42.3 J	162	34.1 J	NA	17.5 J	6.1 J	NA	7.3 J
Cadmium	5	- -	ug/L	5 U	5 U	5 U	5 U	5 U	NA	1.7 J	5 U	NA	0.38 J
Calcium	- -	- -	ug/L	56,600	63,900	65,900	26,300	48,200	NA	60,700	60,700	NA	47,700
Chromium	100	- -	ug/L	15 U	15 U	15 U	2.3 J	1.3 J	NA	18.5	1.5 J	NA	1.4 J
Cobalt	- -	4.7	ug/L	5 U	5 U	5 U	5 U	5 U	NA	0.89 J	1.2 J	NA	**69.6**
Copper	1,300	620	ug/L	10 U	10 U	10 U	10 U	1.7 J	NA	19.3	10 U	NA	10 U
Iron	- -	11,000	ug/L	200 U	200 U	200 U	108 J	200 U	NA	1,520	200 U	NA	4,370
Lead	15	- -	ug/L	7.1 J	4.7 J	5.8 J	12.5 J	4.4 J	NA	15.1	6.2 J	NA	3.8 J
Magnesium	- -	- -	ug/L	16,000	17,500	19,700	18,800	14,400	NA	22,500	12,800	NA	21,100
Manganese	- -	- -	ug/L	5 U	5 U	5 U	1.9 J	0.49 J	NA	32.4	4.2 J	NA	8,230
Mercury	2	0.63	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	NA	0.2 U	0.2 U	NA	0.027 J
Nickel	- -	300	ug/L	10 U	10 U	10 U	10 U	10 U	NA	12.3	2.3 J	NA	54.5
Potassium	- -	- -	ug/L	2,680	1,940	1,670	1,980	1,640	NA	1,420	2,110	NA	11,700
Silver	- -	71	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	NA	1.4 J
Sodium	- -	- -	ug/L	14,900	10,200	10,200	31,500	2,440	NA	7,020	12,400	NA	12,400
Thallium	2	0.16	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA	0.5 U
Vanadium	- -	- -	ug/L	5 U	5 U	5 U	11.4	5 U	NA	1.5 J	5 U	NA	5 U
Zinc	- -	4,700	ug/L	20 U	20 U	20 U	20 U	4.4 J	NA	165	4.4 J	NA	77.2
Detected Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW4	BMW5	BMW5D	BMW9D	BMW11	BMW11	BMW11D	BMW16	BMW018	BMW18
Sample Depth(FT):													
Date Collected:				03/30/12	03/30/12	03/30/12	04/03/12	03/29/12	04/13/12	03/30/12	04/06/12	11/15/11	04/05/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Detected Miscellaneous													
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	2,500 U	2,500 U	NA	2,500 U
Chloride	- -	- -	ug/L	NA	20,400	23,800	NA	15,600	NA	25,700	22,200	NA	38,100
Nitrate-N	10,000	25,000	ug/L	NA	1,400	1,300	NA	NA	920	5,100	3,900	NA	280 J
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	24,400	16,300	NA	10,600	NA	10,700	14,500	NA	40,800
Total Dissolved Solids	- -	- -	ug/L	NA	273,000	291,000	NA	205,000	NA	251,000	252,000	NA	306,000
Detected Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA	NA	NA	NA	0.25 U	0.24 U	NA	0.25 U
2,4,5-T	- -	120	ug/L	NA	NA	NA	NA	NA	NA	0.0099 U	0.0044 J	NA	0.01 U
2,4,5-TP	50	84	ug/L	NA	NA	NA	NA	NA	NA	0.0099 U	0.0096 U	NA	0.06
2,4-D	70	130	ug/L	NA	NA	NA	NA	NA	NA	0.099 U	0.096 U	NA	0.1 U
2,4-DB	- -	91	ug/L	NA	NA	NA	NA	NA	NA	0.2 U	0.19 U	NA	0.2 U
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA	NA	NA	NA	200 U	190 U	NA	200 U
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA	NA	NA	NA	0.99 U	0.96 U	NA	1 U
Dicamba	- -	440	ug/L	NA	NA	NA	NA	NA	NA	0.059 U	0.058 U	NA	0.06 U
Dichlorprop	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	0.099 U	0.096 U	NA	0.1 U
Dinoseb	7	11	ug/L	NA	NA	NA	NA	NA	NA	0.099 U	0.096 U	NA	0.1 U
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	0.015 U	0.015 U	NA	0.009 J
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	0.01 U	0.01 U	NA	0.022
MCPP	- -	12	ug/L	NA	NA	NA	NA	NA	NA	40 U	39 U	NA	40 U
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	0.01 U	0.006 J	NA	0.063
Detected Pesticides													
4,4'-DDD	- -	0.28	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA	0.019 U	0.02 U	NA	0.02 U
4,4'-DDE	- -	0.2	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA	0.019 U	0.02 U	NA	0.02 U
4,4'-DDT	- -	0.2	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA	0.019 U	0.02 U	NA	0.02 U
Aldrin	- -	0.00021	ug/L	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0098 U	NA	0.0097 U	0.01 U	NA	0.01 U
Alpha-BHC	- -	0.0062	ug/L	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0098 U	NA	0.0097 U	0.01 U	NA	0.01 U
Alpha-Chlordane	- -	- -	ug/L	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0098 U	NA	0.0097 U	0.01 U	NA	0.01 U
Beta-BHC	- -	0.022	ug/L	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0098 U	NA	0.0097 U	0.01 U	NA	0.01 U
Delta-BHC	- -	- -	ug/L	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0098 U	NA	0.0097 U	0.01 U	NA	0.01 U
Gamma-BHC (Lindane)	0.2	0.036	ug/L	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0098 U	NA	0.0097 U	0.01 U	NA	0.01 U
Gamma-Chlordane	- -	- -	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA	0.019 U	0.02 U	NA	0.02 U
Heptachlor	0.4	0.0018	ug/L	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0098 U	NA	0.0097 U	0.01 U	NA	0.01 U
Detected Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	3.66 BJ	2.96 BJ	NA	3.37 BJ
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	1.29 BJ	0.925 BJ	NA	0.912 BJQ
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	0.281 BJQ	0.295 BJ	NA	0.398 BJ
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	9.62 U	0.252 BJ	NA	10.3 U
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	0.442 BJ	0.354 BJ	NA	0.434 BJ
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	0.448 BJ	0.173 BJ	NA	0.316 BJQ
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	0.331 BJQ	0.236 BJ	NA	0.281 BJ
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	0.485 BJQ	0.338 BJ	NA	0.288 BJ
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	0.368 BJ	0.294 BJ	NA	0.198 BJ
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	0.349 BJQ	0.146 BJQ	NA	10.3 U
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	0.342 BJQ	0.286 BJ	NA	0.179 BJQ
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	0.527 BJQ	0.182 BJ	NA	0.47 BJQ
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	0.577 BJQ	0.496 BJQ	NA	0.566 BJ
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	1.92 U	0.211 BJQ	NA	2.06 U
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	1.92 U	2.03 U	NA	2.06 U
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	1.74 BJ	0.986 BJ	NA	0.952 BJ
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	7.68 BJ	9.51 BJ	NA	38.4 B
Detected Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	1.5	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	2.9	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW20	BMW20D	BMW21	BMW21D	BMW24	BMW24D	BMW24D	BMW29A	BMW29B	BMW31
Sample Depth(FT):													
Date Collected:				04/05/12	04/05/12	04/05/12	04/06/12	04/05/12	11/17/11	04/05/12	03/30/12	03/30/12	04/04/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Detected PCBs													
None Detected	- -	- -	- -	- -	- -	- -	- -	- -	NA	- -	- -	- -	- -
Detected Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.3 J	0.5 J	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.7	1	1.5	0.5 U	0.1 J	0.5 U
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	**0.2 J**	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	**3**	**4.1**	**6.4**	0.5 U	**0.3 J**	**0.2 J**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.5	0.6	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.5 U	**23**	0.5 U	2.7	0.4 J	**110**	**180**	0.1 J	0.5	0.5 U
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	0.5 U	0.1 J	0.5 U	0.5 U	**9.6**	**12**	**20**	0.5 U	**0.5**	0.5 U
Trichlorofluoromethane	- -	1,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	3.8	3.4	7.3	140	130	0.3 J
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Detected Semivolatile Organics													
1,2,4-Trichlorobenzene	70	0.99	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
1,2-Dichlorobenzene	600	280	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
1,4-Dichlorobenzene	75	0.42	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
1,4-Dioxane	- -	0.67	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
2,4,5-Trichlorophenol	- -	890	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
2,4-Dichlorophenol	- -	35	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
2,4-Dimethylphenol	- -	270	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
2-Chlorophenol	- -	71	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
2-Methylnaphthalene	- -	27	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
4-Chloro-3-Methylphenol	- -	1,100	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
4-Methylphenol	- -	1,400	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
Acetophenone	- -	1,500	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
Benzo(a)pyrene	0.2	0.0029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Benzoic Acid	- -	58,000	ug/L	15 U	16 U	15 U	15 U	15 U	NA	15 U	15 U	15 U	14 U
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
Fluoranthene	- -	630	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Fluorene	- -	220	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene	- -	0.26	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
Naphthalene	- -	0.14	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Pentachlorophenol	1	0.17	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
Phenanthrene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Phenol	- -	4,500	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	0.9 U
Pyrene	- -	87	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Detected Inorganics													
Aluminum	- -	16,000	ug/L	200 U	200 U	656	200 U	200 U	NA	200 U	200 U	290	200 U
Antimony	6	6	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U
Arsenic	10	0.045	ug/L	2 U	**1.3 J**	2 U	2 U	2 U	NA	2 U	2 U	**2.7**	2 U
Barium	2,000	2,900	ug/L	38.4	335	154	192	50	NA	58.9	57.8	79.4	59.6
Beryllium	4	16	ug/L	0.5 U	0.5 U	0.23 J	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Boron	- -	3,100	ug/L	2.7 J	50 U	50 U	50 U	3.1 J	NA	5.3 J	72.5	51.5	7.7 J
Cadmium	5	- -	ug/L	5 U	5 U	0.87 J	5 U	5 U	NA	5 U	5 U	5 U	5 U
Calcium	- -	- -	ug/L	29,700	25,900	19,800	39,900	60,300	NA	51,300	62,800	89,200	78,700
Chromium	100	- -	ug/L	15 U	2.3 J	5 J	15 U	1.3 J	NA	15 U	15 U	7 J	15 U
Cobalt	- -	4.7	ug/L	5 U	5 U	**40.3**	5 U	5 U	NA	1.5 J	5 U	5 U	5 U
Copper	1,300	620	ug/L	10 U	10 U	10 U	1 J	10 U	NA	10 U	10 U	10 U	10 U
Iron	- -	11,000	ug/L	123 J	33 J	5,980	200 U	34.7 J	NA	200 U	200 U	200 U	29.4 J
Lead	15	- -	ug/L	5.3 J	5.1 J	15.1	6.3 J	9.1 J	NA	5.1 J	4.3 J	7.5 J	6.3 J
Magnesium	- -	- -	ug/L	13,000	21,200	2,720	31,500	14,800	NA	22,100	17,100	11,100	10,600
Manganese	- -	- -	ug/L	2.9 J	9.7	2,610	1.4 J	1.5 J	NA	5 U	5 U	0.96 J	9.8
Mercury	2	0.63	ug/L	0.2 U	0.2 U	0.041 J	0.2 U	0.039 J	NA	0.036 J	0.2 U	0.2 U	0.2 U
Nickel	- -	300	ug/L	10 U	1.7 J	10.5	10 U	10 U	NA	10 U	10 U	10 U	10 U
Potassium	- -	- -	ug/L	1,730	12,700	2,920	2,070	4,240	NA	1,350	1,350	3,570	1,600
Silver	- -	71	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U
Sodium	- -	- -	ug/L	26,700	14,000	7,070	12,500	10,500	NA	20,600	12,100	24,500	15,000
Thallium	2	0.16	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	5 U	5 U	1.6 J	5 U	5 U	NA	5 U	5 U	5.6	5 U
Zinc	- -	4,700	ug/L	20 U	20 U	16.3 J	6.7 J	20 U	NA	20 U	20 U	20 U	20 U
Detected Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	200 U	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	2 U	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	152	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	50 U	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	0.66 J	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	20,100	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	15 U	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	**36.8**	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	10 U	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	3,770	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	11.9 J	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	2,700	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	2,500	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	0.2 U	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	7.6 J	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	2,620	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	7,230	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	8.5 J	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW20	BMW20D	BMW21	BMW21D	BMW24	BMW24D	BMW24D	BMW29A	BMW29B	BMW31
Sample Depth(FT):													
Date Collected:				04/05/12	04/05/12	04/05/12	04/06/12	04/05/12	11/17/11	04/05/12	03/30/12	03/30/12	04/04/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Detected Miscellaneous													
Bromide	- -	- -	ug/L	2,500 U	2,500 U	NA	NA	2,500 U	NA	2,500 U	2,500 U	2,500 U	NA
Chloride	- -	- -	ug/L	52,900	41,800	12,400	41,900	23,500	NA	45,400	34,000	61,100	NA
Nitrate-N	10,000	25,000	ug/L	3,600	1,900	360 J	2,100	3,500	NA	4,100	2,100	1,800	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	18,500	15,500	22,500	25,200	5,200	NA	10,000	15,900	38,800	NA
Total Dissolved Solids	- -	- -	ug/L	226,000	214,000	122,000	281,000	253,000	NA	281,000	268,000	209,000	NA
Detected Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	0.1 J	0.26 U	NA	NA	0.25 U	NA	0.24 U	0.24 U	0.25 U	0.24 U
2,4,5-T	- -	120	ug/L	0.0099 U	0.0063 J	NA	NA	0.0099 U	NA	0.0096 U	0.0098 U	0.008 J	0.0097 U
2,4,5-TP	50	84	ug/L	0.0099 U	0.01 U	NA	NA	0.0099 U	NA	0.0096 U	0.0098 U	0.01 U	0.0097 U
2,4-D	70	130	ug/L	0.099 U	0.1 U	NA	NA	0.099 U	NA	0.096 U	0.098 U	0.1 U	0.097 U
2,4-DB	- -	91	ug/L	0.2 U	0.21 U	NA	NA	0.2 U	NA	0.19 U	0.2 U	0.2 U	0.19 U
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	200 U	210 U	NA	NA	200 U	NA	190 U	200 U	200 U	190 U
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	0.99 U	1 U	NA	NA	0.99 U	NA	0.96 U	0.98 U	1 U	0.97 U
Dicamba	- -	440	ug/L	0.06 U	0.062 U	NA	NA	0.059 U	NA	0.058 U	0.059 U	0.061 U	0.058 U
Dichlorprop	- -	- -	ug/L	0.099 U	0.1 U	NA	NA	0.099 U	NA	0.096 U	0.098 U	0.1 U	0.097 U
Dinoseb	7	11	ug/L	0.099 U	0.1 U	NA	NA	0.099 U	NA	0.096 U	0.098 U	0.1 U	0.097 U
Diuron	- -	28	ug/L	0.015 U	0.015 U	NA	NA	0.015 U	NA	0.015 U	0.015 U	0.015 U	NA
Fenuron	- -	- -	ug/L	0.01 U	0.01 U	NA	NA	0.01 U	NA	0.01 U	0.056	0.064	NA
MCPP	- -	12	ug/L	40 U	41 U	NA	NA	39 U	NA	38 U	39 U	40 U	39 U
Monuron	- -	- -	ug/L	0.01 U	0.01 U	NA	NA	0.006 J	NA	0.006 J	0.061	0.1	NA
Detected Pesticides													
4,4'-DDD	- -	0.28	ug/L	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.019 U
4,4'-DDE	- -	0.2	ug/L	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.019 U
4,4'-DDT	- -	0.2	ug/L	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.019 U
Aldrin	- -	0.00021	ug/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U	0.0098 U	0.01 U	0.0097 U
Alpha-BHC	- -	0.0062	ug/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U	0.0098 U	0.01 U	0.0097 U
Alpha-Chlordane	- -	- -	ug/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U	0.0023 J	0.01 U	0.0097 U
Beta-BHC	- -	0.022	ug/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U	0.0098 U	0.01 U	0.0097 U
Delta-BHC	- -	- -	ug/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U	0.0098 U	0.01 U	0.0097 U
Gamma-BHC (Lindane)	0.2	0.036	ug/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U	0.0098 U	0.01 U	0.0097 U
Gamma-Chlordane	- -	- -	ug/L	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.019 U
Heptachlor	0.4	0.0018	ug/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U	0.0098 U	0.01 U	0.0097 U
Detected Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	2.86 BJ	2.57 BJ	NA	NA	2.97 BJ	NA	2.44 BJ	2.97 BJ	3.4 BJ	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	1.18 BJ	0.79 BJ	NA	NA	1.01 BJ	NA	0.825 BJ	1.08 BJQ	2.04 BJQ	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	0.249 BJQ	0.368 BJ	NA	NA	0.506 BJ	NA	0.856 BJ	0.461 BJQ	0.304 BJQ	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	0.31 BJ	0.473 BJ	NA	NA	0.551 BJ	NA	0.245 BJ	0.387 BJQ	0.255 BJQ	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	0.297 BJ	0.466 BJ	NA	NA	0.599 BJ	NA	0.435 BJQ	0.543 BJQ	0.749 BJQ	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	0.364 BJ	0.578 BJ	NA	NA	0.629 BJ	NA	0.22 BJ	0.387 BJQ	0.452 BJQ	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	0.23 BJ	0.627 BJ	NA	NA	0.442 BJ	NA	0.374 BJ	0.211 BJQ	0.266 BJQ	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	0.781 BJ	0.456 BJ	NA	NA	0.488 BJQ	NA	0.32 BJ	9.74 U	0.658 BJQ	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	0.535 BJ	0.505 BJ	NA	NA	0.658 BJ	NA	0.565 BJ	9.74 U	10.5 U	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	0.241 BJQ	10.3 U	NA	NA	0.41 BJ	NA	0.187 BJQ	0.333 BJQ	0.303 BJQ	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	0.453 BJ	0.538 BJ	NA	NA	0.537 BJQ	NA	0.42 BJQ	0.205 BJQ	0.541 BJQ	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	0.363 BJ	0.45 BJQ	NA	NA	0.373 BJ	NA	0.354 BJ	0.458 BJQ	0.532 BJQ	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	0.655 BJ	0.641 BJ	NA	NA	0.777 BJ	NA	0.747 BJ	0.655 BJQ	0.732 BJQ	NA
2,3,7,8-TCDD	30	0.52	pg/L	2.06 U	**0.64 BJ**	NA	NA	**0.653 BJ**	NA	**1.07 BJQ**	0.24 JQ	2.1 U	NA
2,3,7,8-TCDF	- -	- -	pg/L	2.06 U	1.47 J	NA	NA	1.97 U	NA	1.94 U	0.262 BJQ	0.314 BJQ	NA
Octachlorodibenzofuran	- -	- -	pg/L	1.06 BJ	0.825 BJ	NA	NA	0.988 BJ	NA	0.864 BJ	1.46 BJQ	1.33 BJQ	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	6.62 BJ	5.45 BJ	NA	NA	6.79 BJ	NA	4.75 BJ	6.35 BJQ	7.94 BJ	NA
Detected Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	-0.06000	0.04	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	0.6	3	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW31D	BMW31D	BMW32D	BMW32D	BMW33	BMW34	BMW35	BMW35D	BMW36	BMW36D
Sample Depth(FT):													
Date Collected:				11/17/11	04/05/12	11/21/11	04/05/12	03/29/12	03/30/12	03/29/12	03/29/12	03/30/12	03/30/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Detected PCBs													
None Detected	- -	- -	- -	NA	- -	NA	- -	- -	- -	- -	- -	- -	- -
Detected Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.1 J	0.5 U	0.1 J
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.5 U	0.5 J	0.5	0.2 J	2
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	NA	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	2.5 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	41 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.4 J**	0.5 U	**1.2**	**1.3**	0.1 J	**0.5 J**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	22	1.1	0.5 U	0.5 U	0.5 U	0.5 U	0.6	0.7	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	**25**	3.9	0.4 J	0.5 U	0.1 J	0.5 U	0.5 J	0.5	0.1 J	0.2 J
Toluene	1,000	860	ug/L	0.1 J	0.3 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**2.9**	0.2 J	0.1 J	0.5 U	0.5 U	0.5 U	**5.6**	**6.1**	0.5 U	0.1 J
Trichlorofluoromethane	- -	1,100	ug/L	0.2 J	0.5 U	0.5 U	0.5 U	3.9	3.8	3.7	4.2	0.1 J	0.8
Vinyl Chloride	2	0.015	ug/L	**5.1**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Detected Semivolatile Organics													
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	600	280	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	75	0.42	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	- -	0.67	ug/L	NA	5 U	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U
2,4,5-Trichlorophenol	- -	890	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dichlorophenol	- -	35	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dimethylphenol	- -	270	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorophenol	- -	71	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
2-Methylnaphthalene	- -	27	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
4-Methylphenol	- -	1,400	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
Acetophenone	- -	1,500	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	0.5 U	NA	NA	0.5 U	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U
Benzoic Acid	- -	58,000	ug/L	NA	14 U	NA	NA	15 U	16 U	15 U	15 U	15 U	15 U
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	5 U	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U
Fluoranthene	- -	630	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Fluorene	- -	220	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene	- -	0.26	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
Naphthalene	- -	0.14	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	0.5 U
Pentachlorophenol	1	0.17	ug/L	NA	5 U	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U
Phenanthrene	- -	- -	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Phenol	- -	4,500	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
Pyrene	- -	87	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Detected Inorganics													
Aluminum	- -	16,000	ug/L	NA	200 U	NA	200 U	200 U	151 J	483	200 U	200 U	287
Antimony	6	6	ug/L	NA	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	10	0.045	ug/L	NA	2 U	NA	**2 J**	2 U	2 U	2 U	2 U	2 U	2 U
Barium	2,000	2,900	ug/L	NA	183	NA	171	71.6	77.7	80.2	67.2	30.7	43.6
Beryllium	4	16	ug/L	NA	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Boron	- -	3,100	ug/L	NA	15.4 J	NA	6.1 J	28.1 J	22.9 J	10.6 J	12 J	44.9 J	33.2 J
Cadmium	5	- -	ug/L	NA	5 U	NA	0.27 J	5 U	5 U	5 U	5 U	5 U	5 U
Calcium	- -	- -	ug/L	NA	47,200	NA	77,900	60,900	67,300	66,900	63,900	39,800	47,300
Chromium	100	- -	ug/L	NA	15 U	NA	15 U	15 U	15 U	3.1 J	15 U	15 U	15 U
Cobalt	- -	4.7	ug/L	NA	5 U	NA	3.2 J	0.94 J	0.79 J	5 U	0.82 J	5 U	5 U
Copper	1,300	620	ug/L	NA	2 J	NA	10 U	10 U	0.96 J	10 U	10 U	10 U	10 U
Iron	- -	11,000	ug/L	NA	200 U	NA	**11,900**	200 U	122 J	929	19.8 J	51.3 J	127 J
Lead	15	- -	ug/L	NA	8.9 J	NA	7.8 J	4.9 J	5.2 J	8.4 J	5 J	6.1 J	4.7 J
Magnesium	- -	- -	ug/L	NA	26,000	NA	4,930	13,400	20,300	16,100	15,800	12,800	15,000
Manganese	- -	- -	ug/L	NA	5.2	NA	729	5 U	7.4	149	1.3 J	1.5 J	2.4 J
Mercury	2	0.63	ug/L	NA	0.035 J	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	- -	300	ug/L	NA	1.7 J	NA	10 U	10 U	10 U	3.4 J	10 U	10 U	10 U
Potassium	- -	- -	ug/L	NA	2,280	NA	1,540	1,610	1,550	1,690	1,740	2,620	2,150
Silver	- -	71	ug/L	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Sodium	- -	- -	ug/L	NA	15,800	NA	12,600	10,900	8,700	10,500	10,600	18,400	15,600
Thallium	2	0.16	ug/L	NA	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	NA	5 U	NA	5 U	5 U	5 U	0.97 J	5 U	5 U	5 U
Zinc	- -	4,700	ug/L	NA	140	NA	20 U	20 U	20 U	5.1 J	20 U	20 U	20 U
Detected Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	200 U	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	1 U	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	2 U	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	72.4	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	9.3 J	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	5 U	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	64,100	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	15 U	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	5 U	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	10 U	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	200 U	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	7.2 J	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	15,800	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	10.2	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	0.2 U	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	1.6 J	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	1,640	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	10,500	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	0.5 U	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	5 U	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	20 U	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW31D	BMW31D	BMW32D	BMW32D	BMW33	BMW34	BMW35	BMW35D	BMW36	BMW36D
Sample Depth(FT):													
Date Collected:				11/17/11	04/05/12	11/21/11	04/05/12	03/29/12	03/30/12	03/29/12	03/29/12	03/30/12	03/30/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Detected Miscellaneous													
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	0.096 J	NA	0.26 U	0.25 U	0.24 U	0.24 U	0.26 U	0.25 U	0.26 U
2,4,5-T	- -	120	ug/L	NA	0.0039 J	NA	0.0066 J	0.01 U	0.0097 U	0.0097 U	0.01 U	0.0076 J	0.01 U
2,4,5-TP	50	84	ug/L	NA	0.0098 U	NA	0.01 U	0.01 U	0.0097 U	0.0097 U	0.01 U	0.01 U	0.01 U
2,4-D	70	130	ug/L	NA	0.098 U	NA	0.1 U	0.1 U	0.097 U	0.097 U	0.1 U	0.1 U	0.1 U
2,4-DB	- -	91	ug/L	NA	0.2 U	NA	0.21 U	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	0.2 U
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	200 U	NA	210 U	200 U	190 U	190 U	210 U	200 U	200 U
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	0.98 U	NA	1 U	1 U	0.97 U	0.97 U	1 U	1 U	1 U
Dicamba	- -	440	ug/L	NA	0.059 U	NA	0.063 U	0.06 U	0.058 U	0.058 U	0.062 U	0.06 U	0.061 U
Dichlorprop	- -	- -	ug/L	NA	0.098 U	NA	0.1 U	0.1 U	0.097 U	0.097 U	0.1 U	0.1 U	0.1 U
Dinoseb	7	11	ug/L	NA	0.098 U	NA	0.1 U	0.1 U	0.097 U	0.097 U	0.1 U	0.1 U	0.1 U
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	- -	12	ug/L	NA	39 U	NA	42 U	40 U	39 U	39 U	41 U	40 U	41 U
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	0.019 U	NA	0.02 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U
4,4'-DDE	- -	0.2	ug/L	NA	0.019 U	NA	0.02 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U
4,4'-DDT	- -	0.2	ug/L	NA	0.019 U	NA	0.02 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U
Aldrin	- -	0.00021	ug/L	NA	0.0096 U	NA	0.0099 U	0.01 U	0.0096 U	0.0099 U	0.0096 U	0.01 U	0.01 U
Alpha-BHC	- -	0.0062	ug/L	NA	0.0096 U	NA	0.0099 U	0.01 U	0.0096 U	0.0099 U	0.0096 U	0.01 U	0.01 U
Alpha-Chlordane	- -	- -	ug/L	NA	0.0096 U	NA	0.0099 U	0.01 U	0.0096 U	0.0099 U	0.0096 U	0.01 U	0.01 U
Beta-BHC	- -	0.022	ug/L	NA	0.0096 U	NA	0.0099 U	0.01 U	0.0096 U	0.0099 U	0.0096 U	0.01 U	0.01 U
Delta-BHC	- -	- -	ug/L	NA	0.0096 U	NA	0.0099 U	0.01 U	0.0096 U	0.0099 U	0.0096 U	0.01 U	0.01 U
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	0.0096 U	NA	0.0099 U	0.01 U	0.0096 U	0.0099 U	0.0096 U	0.01 U	0.01 U
Gamma-Chlordane	- -	- -	ug/L	NA	0.019 U	NA	0.02 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U
Heptachlor	0.4	0.0018	ug/L	NA	0.0096 U	NA	0.0099 U	0.01 U	0.0096 U	0.0099 U	0.0096 U	0.01 U	0.01 U
Detected Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW37	BMW37D	BMW38	BMW40	BMW41D	BMW42	BMW43	BMW44	BMW45	BMW47D
Sample Depth(FT):													
Date Collected:				04/09/12	04/09/12	04/05/12	04/03/12	04/02/12	04/02/12	04/02/12	03/30/12	03/29/12	04/06/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Detected PCBs													
None Detected	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Detected Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	1.3	3	0.3 J	0.5 U	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.2 J	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.4 J	0.8 J	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	4.8	10	0.9	0.2 J	0.5 U	0.5 U	1.2	0.5 U	0.3 J	0.5 U
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	**0.5**	**1.2 J**	0.1 J	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**13**	**27**	**4.4**	**0.6**	0.5 U	0.5 U	**3.3**	0.5 U	**0.4 J**	**0.3 J**
Chloromethane	- -	190	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	6.4	14	0.6	0.5 J	0.5 U	0.5 U	2.4	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.1 J	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	2.7	**320**	0.5 J	0.4 J	0.5 U	0.5 U	1.4	0.5 U	0.1 J	0.1 J
Toluene	1,000	860	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**59**	**160**	**14**	**4**	0.5 U	0.5 U	**20**	0.5 U	0.5 U	0.2 J
Trichlorofluoromethane	- -	1,100	ug/L	9.7	20	4	0.3 J	0.5 U	0.5 U	2.1	0.5 U	3.4	0.3 J
Vinyl Chloride	2	0.015	ug/L	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Detected Semivolatile Organics													
1,2,4-Trichlorobenzene	70	0.99	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	600	280	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	75	0.42	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	- -	0.67	ug/L	**1 J**	**3 J**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,4,5-Trichlorophenol	- -	890	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dichlorophenol	- -	35	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dimethylphenol	- -	270	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorophenol	- -	71	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Methylnaphthalene	- -	27	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Chloro-3-Methylphenol	- -	1,100	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Methylphenol	- -	1,400	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Acetophenone	- -	1,500	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Benzo(a)pyrene	0.2	0.0029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzoic Acid	- -	58,000	ug/L	15 U	15 U	15 U	16 U	15 U	15 U	16 U	15 U	15 U	15 U
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Fluoranthene	- -	630	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Fluorene	- -	220	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene	- -	0.26	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Naphthalene	- -	0.14	ug/L	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U
Pentachlorophenol	1	0.17	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Phenanthrene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Phenol	- -	4,500	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Pyrene	- -	87	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Detected Inorganics													
Aluminum	- -	16,000	ug/L	200 U	200 U	157 J	200 U	103 J	200 U	151 J	200 U	189 J	13,200
Antimony	6	6	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	10	0.045	ug/L	2 U	2 U	2 U	2 U	2 U	**1.2 J**	2 U	**1.2 J**	2 U	**3.9**
Barium	2,000	2,900	ug/L	60.6	74.1	51.3	46.1	44.4	40.1	41.3	72.1	73.4	120
Beryllium	4	16	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.1
Boron	- -	3,100	ug/L	6.7 J	4.6 J	50 U	6.7 J	8.5 J	9.2 J	9.4 J	22.1 J	27.1 J	50 U
Cadmium	5	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.1 J
Calcium	- -	- -	ug/L	66,900	71,800	53,000	54,100	61,100	71,600	65,000	60,400	64,300	67,200
Chromium	100	- -	ug/L	15 U	15 U	15 U	15 U	15 U	15 U	1.3 J	15 U	15 U	17.3
Cobalt	- -	4.7	ug/L	5 U	2.1 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**7.9**
Copper	1,300	620	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1.5 J	10.7
Iron	- -	11,000	ug/L	119 J	47.4 J	291	200 U	129 J	200 U	279	200 U	96.5 J	**21,700**
Lead	15	- -	ug/L	10.4 J	8.3 J	7.3 J	8.5 J	15.1	8.4 J	7.5 J	9.3 J	8 J	53.2
Magnesium	- -	- -	ug/L	22,900	26,200	21,600	17,600	7,010	8,260	15,700	8,870	15,800	24,900
Manganese	- -	- -	ug/L	5.2	1.8 J	5.7	5 U	4.9 J	5 U	9.3	5 U	1.9 J	493
Mercury	2	0.63	ug/L	0.2 U	0.033 J	0.029 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.082 J
Nickel	- -	300	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	25.6
Potassium	- -	- -	ug/L	2,630	2,540	1,460	1,560	660	569	1,800	546	1,620	2,470
Silver	- -	71	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Sodium	- -	- -	ug/L	15,100	14,200	17,700	7,270	7,920	7,230	7,660	6,790	12,400	7,970
Thallium	2	0.16	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**
Vanadium	- -	- -	ug/L	5 U	5 U	5 U	5 U	2.8 J	5.8	5 U	4.5 J	5 U	25.5
Zinc	- -	4,700	ug/L	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	146
Detected Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	200 U
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	1 U
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	2 U
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	51.7
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	50 U
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	57,400
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.1 J
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	200 U
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	13 J
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	22,600
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.7 J
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.2 U
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.8 J
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,280
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	8,210
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.5 U
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	20 U

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW37	BMW37D	BMW38	BMW40	BMW41D	BMW42	BMW43	BMW44	BMW45	BMW47D
Sample Depth(FT):													
Date Collected:				04/09/12	04/09/12	04/05/12	04/03/12	04/02/12	04/02/12	04/02/12	03/30/12	03/29/12	04/06/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Detected Miscellaneous													
Bromide	- -	- -	ug/L	2,500 U	2,500 U	2,500 U	NA	2,500 U	2,500 U	NA	2,500 U	NA	NA
Chloride	- -	- -	ug/L	38,600	39,100	43,600	NA	10,600	4,600	NA	10,500	NA	34,300
Nitrate-N	10,000	25,000	ug/L	3,800	3,600	4,000	NA	4,100	1,300	NA	2,500	NA	3,900
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	10,200	10,100	9,000	NA	20,000	30,200	NA	21,400	NA	10,400
Total Dissolved Solids	- -	- -	ug/L	342,000	351,000	278,000	NA	242,000	258,000	NA	240,000	NA	293,000
Detected Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	0.25 U	0.25 U	0.068 J	0.25 U	0.25 U	0.25 U	0.26 U	0.25 U	0.24 U	0.19 J
2,4,5-T	- -	120	ug/L	0.0098 U	0.0098 U	0.0098 U	0.0031 J	0.01 U	0.0098 U	0.01 U	0.0067 J	0.0098 U	0.01 U
2,4,5-TP	50	84	ug/L	0.0098 U	0.0098 U	0.0098 U	0.0099 U	0.01 U	0.0098 U	0.01 U	0.01 U	0.0098 U	0.01 U
2,4-D	70	130	ug/L	0.098 U	0.098 U	0.098 U	0.099 U	0.1 U	0.098 U	0.1 U	0.1 U	0.098 U	0.1 U
2,4-DB	- -	91	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	0.2 U	0.21 U
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	200 U	200 U	200 U	200 U	200 U	200 U	210 U	200 U	200 U	210 U
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	0.31 J	0.79 J	0.98 U	0.99 U	1 U	0.98 U	1 U	1 U	0.98 U	1 U
Dicamba	- -	440	ug/L	0.059 U	0.059 U	0.059 U	0.06 U	0.06 U	0.059 U	0.063 U	0.061 U	0.059 U	0.063 U
Dichlorprop	- -	- -	ug/L	0.098 U	0.098 U	0.098 U	0.099 U	0.1 U	0.098 U	0.1 U	0.1 U	0.098 U	0.1 U
Dinoseb	7	11	ug/L	0.098 U	0.098 U	0.098 U	0.099 U	0.1 U	0.098 U	0.1 U	0.1 U	0.098 U	0.1 U
Diuron	- -	28	ug/L	0.015 U	0.015 U	0.015 U	NA	0.015 U	0.015 U	NA	0.015 U	NA	NA
Fenuron	- -	- -	ug/L	0.008 J	0.016	0.01 U	NA	0.01 U	0.01 U	NA	0.01 U	NA	NA
MCPP	- -	12	ug/L	39 U	39 U	39 U	40 U	40 U	39 U	42 U	41 U	39 U	42 U
Monuron	- -	- -	ug/L	0.041	0.077	0.008 J	NA	0.01 U	0.01 U	NA	0.01 U	NA	NA
Detected Pesticides													
4,4'-DDD	- -	0.28	ug/L	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.019 U	0.02 U	0.02 U	0.019 U	0.02 U
4,4'-DDE	- -	0.2	ug/L	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.019 U	0.02 U	0.02 U	0.019 U	0.02 U
4,4'-DDT	- -	0.2	ug/L	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.019 U	0.02 U	0.02 U	0.019 U	0.02 U
Aldrin	- -	0.00021	ug/L	0.01 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0096 U	0.01 U	0.01 U	0.0096 U	0.01 U
Alpha-BHC	- -	0.0062	ug/L	0.01 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0096 U	0.01 U	0.01 U	0.0096 U	0.01 U
Alpha-Chlordane	- -	- -	ug/L	0.01 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0096 U	0.01 U	0.01 U	0.0096 U	0.01 U
Beta-BHC	- -	0.022	ug/L	0.01 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0096 U	0.01 U	0.01 U	0.0096 U	0.01 U
Delta-BHC	- -	- -	ug/L	0.01 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0096 U	0.01 U	0.01 U	0.0096 U	0.01 U
Gamma-BHC (Lindane)	0.2	0.036	ug/L	0.01 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0096 U	0.01 U	0.01 U	0.0096 U	0.01 U
Gamma-Chlordane	- -	- -	ug/L	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.019 U	0.02 U	0.02 U	0.019 U	0.02 U
Heptachlor	0.4	0.0018	ug/L	0.01 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.0096 U	0.01 U	0.01 U	0.0096 U	0.01 U
Detected Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	2.76 BJ	2.63 BJ	2.85 BJ	NA	2.89 BJ	3.89 BJQ	NA	4.41 BJ	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	1.08 BJ	1.25 BJ	1.01 BJQ	NA	1.42 BJ	2.05 BJ	NA	2.36 BJQ	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	0.189 BJQ	0.513 BJ	0.367 BJ	NA	0.626 BJ	1.47 BJ	NA	0.443 BJQ	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	0.305 BJ	0.361 BJ	0.283 BJQ	NA	0.452 BJ	1.29 BJ	NA	0.494 BJQ	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	0.411 BJ	0.481 BJQ	0.47 BJ	NA	0.484 BJ	1.58 BJ	NA	0.649 BJQ	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	0.312 BJ	0.478 BJ	0.361 BJ	NA	0.511 BJQ	1.38 BJ	NA	0.773 BJQ	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	0.418 BJ	0.445 BJQ	0.312 BJ	NA	0.426 BJQ	0.971 BJQ	NA	0.526 BJQ	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	0.292 BJ	0.721 BJQ	0.493 BJQ	NA	0.367 BJQ	1.26 BJ	NA	0.659 BJQ	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	0.147 BJ	0.599 BJ	0.156 BJ	NA	0.472 BJQ	1.87 BJ	NA	0.359 BJQ	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	0.3 BJ	0.428 BJQ	9.93 U	NA	0.412 BJQ	1.58 BJQ	NA	10.5 U	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	0.598 BJ	0.309 BJ	0.332 BJ	NA	0.378 BJQ	1.57 BJ	NA	0.49 BJQ	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	0.268 BJ	0.423 BJ	0.322 BJQ	NA	0.641 BJQ	1.74 BJ	NA	0.695 BJQ	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	0.468 BJQ	0.864 BJ	0.677 BJQ	NA	0.953 BJQ	1.46 BJ	NA	0.773 BJQ	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	0.326 BJQ	**0.919 BJ**	1.99 U	NA	2.02 U	1.94 U	NA	2.1 U	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	0.194 BJ	0.209 BJ	0.317 J	NA	0.411 J	0.461 BJQ	NA	0.288 BJQ	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	0.849 BJ	1.3 BJ	0.9 BJ	NA	1.14 BJQ	2.62 BJ	NA	0.966 BJQ	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	8.21 BJ	4.98 BJ	5.65 BJ	NA	5.06 BJ	8.1 BJ	NA	7.28 BJQ	NA	NA
Detected Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	1.2	NA	0.41	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	-0.9200	NA	0.2	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW49	BMW52D	BMW53A	BMW53B	BMW53B	BMW53D	BMW53E	BMW53F	BMW54D	BMW55D
Sample Depth(FT):													
Date Collected:				04/02/12	04/03/12	04/03/12	11/17/11	04/03/12	04/03/12	04/03/12	04/03/12	04/04/12	04/05/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Detected PCBs													
None Detected	- -	- -	- -	- -	- - [- -]	- -	NA	- -	- -	- -	- -	- -	- -
Detected Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.7 [0.7]	0.5 J	0.4 J	0.7	0.7	0.7	1.1	0.5	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.4 J	0.1 J [0.1 J]	0.1 J	0.5 U	0.1 J	0.2 J	0.2 J	0.1 J	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.5 U	2.2 [2.1]	1.3	1.1	2	2.3	2.3	2.8	0.7	0.5 U
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	**0.2 J [0.2 J]**	**0.2 J**	0.1 J	**0.2 J**	**0.3 J**	**0.3 J**	**0.3 J**	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U [5 U]	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U [5 U]	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.2 J	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.3 J	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.3 J	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**0.5**	**7.1 [6.9]**	**6.2**	**4.1**	**6.2**	**7.1**	**7**	**9.3**	**3**	0.5 U
Chloromethane	- -	190	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	1	2.2 [2.1]	1.5	1.6	2.5	3	2.9	1.6	0.5	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.2 J	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	- -	12	ug/L	0.1 J	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.2 J	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.6	1.6 [1.5]	1.2	0.9	1.8	8.7	2	0.8	0.4 J	0.5 U
Toluene	1,000	860	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	0.2 J	**26 [26]**	**22**	**24**	**31**	**31**	**32**	**41 E**	**12**	0.5 U
Trichlorofluoromethane	- -	1,100	ug/L	2	7.5 [7.2]	4.5	3	5.9	6.7	6.7	11	3.8	0.5 U
Vinyl Chloride	2	0.015	ug/L	**0.1 J**	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Detected Semivolatile Organics													
1,2,4-Trichlorobenzene	70	0.99	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	600	280	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	75	0.42	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	- -	0.67	ug/L	5 U	5 U [5 U]	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
2,4,5-Trichlorophenol	- -	890	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dichlorophenol	- -	35	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dimethylphenol	- -	270	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorophenol	- -	71	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
2-Methylnaphthalene	- -	27	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Chloro-3-Methylphenol	- -	1,100	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
4-Methylphenol	- -	1,400	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
Acetophenone	- -	1,500	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
Benzo(a)pyrene	0.2	0.0029	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzoic Acid	- -	58,000	ug/L	15 U	15 U [15 U]	15 U	NA	15 U	15 U	15 U	14 U	15 U	15 U
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	5 U	5 U [5 U]	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Fluoranthene	- -	630	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Fluorene	- -	220	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene	- -	0.26	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
Naphthalene	- -	0.14	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Pentachlorophenol	1	0.17	ug/L	5 U	5 U [5 U]	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Phenanthrene	- -	- -	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Phenol	- -	4,500	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
Pyrene	- -	87	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Detected Inorganics													
Aluminum	- -	16,000	ug/L	200 U	200 U [200 U]	526	NA	200 U	292	127 J	235	200 U	1,540
Antimony	6	6	ug/L	1 U	1 U [1 U]	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	10	0.045	ug/L	2 U	2 U [2 U]	**4.1**	NA	2 U	2 U	2 U	2 U	2 U	2 U
Barium	2,000	2,900	ug/L	73.8	55.8 [55.6]	25.5	NA	44.4	48.2	53.1	57.8	78.2	48.3
Beryllium	4	16	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.18 J
Boron	- -	3,100	ug/L	11.2 J	6.1 J [6.3 J]	6.9 J	NA	6.4 J	6.8 J	5.8 J	4 J	5.2 J	50 U
Cadmium	5	- -	ug/L	5 U	5 U [5 U]	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Calcium	- -	- -	ug/L	131,000	55,300 [57,300]	59,100	NA	60,600	64,500	57,700	47,100	55,400	58,300
Chromium	100	- -	ug/L	15 U	15 U [15 U]	4.6 J	NA	3.3 J	1.9 J	3 J	2.7 J	2.6 J	6.1 J
Cobalt	- -	4.7	ug/L	1.1 J	5 U [5 U]	5 U	NA	0.91 J	5 U	5 U	5 U	5 U	1.3 J
Copper	1,300	620	ug/L	10 U	10 U [10 U]	10 U	NA	1.1 J	0.94 J	10 U	1.3 J	10 U	1.2 J
Iron	- -	11,000	ug/L	106 J	1,030 [835]	53 J	NA	97.9 J	861	20.6 J	424	200 U	3,030
Lead	15	- -	ug/L	13 J	4.9 J [4.3 J]	6.4 J	NA	5.8 J	7 J	5.8 J	7 J	7.4 J	14 J
Magnesium	- -	- -	ug/L	19,100	20,000 [20,100]	3,150	NA	18,200	18,200	14,900	15,700	17,400	27,400
Manganese	- -	- -	ug/L	368	4.4 J [3.8 J]	1.2 J	NA	6.6	33.2	0.91 J	8.4	5 U	109
Mercury	2	0.63	ug/L	0.2 U	0.2 U [0.2 U]	0.2 U	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.027 J
Nickel	- -	300	ug/L	3.8 J	10 U [10 U]	0.98 J	NA	17.9	1.3 J	10 U	1.3 J	10 U	5.1 J
Potassium	- -	- -	ug/L	3,080	1,650 [1,610]	5,750	NA	1,620	1,660	2,550	1,990	1,680	5,620
Silver	- -	71	ug/L	5 U	5 U [5 U]	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Sodium	- -	- -	ug/L	7,250	14,700 [14,700]	10,900	NA	12,000	11,700	12,100	8,950	12,900	12,600
Thallium	2	0.16	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	5 U	5 U [5 U]	7.3	NA	5 U	1.6 J	5 U	2.4 J	5 U	3.2 J
Zinc	- -	4,700	ug/L	7.5 J	20 U [20 U]	20 U	NA	20 U	4 J	20 U	3.9 J	20 U	12.6 J
Detected Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	200 U	NA	NA	NA	200 U
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	1 U	NA	NA	NA	1 U
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	2 U	NA	NA	NA	2 U
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	45.2	NA	NA	NA	39.5
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	6.5 J	NA	NA	NA	50 U
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	5 U	NA	NA	NA	5 U
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	60,400	NA	NA	NA	54,200
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	15 U	NA	NA	NA	15 U
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	5 U	NA	NA	NA	5 U
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	10 U	NA	NA	NA	10 U
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	200 U	NA	NA	NA	200 U
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	5.7 J	NA	NA	NA	10 J
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	18,000	NA	NA	NA	25,100
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	5 U	NA	NA	NA	3.7 J
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	0.2 U	NA	NA	NA	0.2 U
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	10 U	NA	NA	NA	0.97 J
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	1,590	NA	NA	NA	5,420
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	11,700	NA	NA	NA	12,400
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	0.5 U	NA	NA	NA	0.5 U
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	5 U	NA	NA	NA	5 U
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	20 U	NA	NA	NA	20 U

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW49	BMW52D	BMW53A	BMW53B	BMW53B	BMW53D	BMW53E	BMW53F	BMW54D	BMW55D
Sample Depth(FT):													
Date Collected:				04/02/12	04/03/12	04/03/12	11/17/11	04/03/12	04/03/12	04/03/12	04/03/12	04/04/12	04/05/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Detected Miscellaneous													
Bromide	- -	- -	ug/L	2,500 U	NA	NA	NA	NA	2,500 U	NA	NA	NA	NA
Chloride	- -	- -	ug/L	13,900	34,100	21,200	NA	28,400	28,600	26,700	27,600	33,900	24,100
Nitrate-N	10,000	25,000	ug/L	2,100	3,700	2,700	NA	3,600	3,600	3,700	3,800	3,500	5,600
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	13,900	10,200	16,600	NA	26,100	21,500	25,700	7,100	12,600	13,900
Total Dissolved Solids	- -	- -	ug/L	460,000	280,000	150,000	NA	267,000	273,000	202,000	224,000	255,000	297,000
Detected Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	0.25 U	0.26 U [0.25 U]	0.25 U	NA	0.25 U	0.24 U	0.24 U	0.24 U	0.25 U	0.24 U
2,4,5-T	- -	120	ug/L	0.0056 J	0.011 U [0.01 U]	0.0031 J	NA	0.0099 U	0.0098 U	0.0096 U	0.003 J	0.0099 U	0.0032 J
2,4,5-TP	50	84	ug/L	0.0099 U	0.011 U [0.01 U]	0.01 U	NA	0.0099 U	0.0098 U	0.0096 U	0.0096 U	0.0099 U	0.0097 U
2,4-D	70	130	ug/L	0.099 U	0.11 U [0.1 U]	0.1 U	NA	0.099 U	0.098 U	0.096 U	0.096 U	0.099 U	0.097 U
2,4-DB	- -	91	ug/L	0.2 U	0.21 U [0.2 U]	0.2 U	NA	0.2 U	0.2 U	0.19 U	0.19 U	0.2 U	0.19 U
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	200 U	210 U [200 U]	200 U	NA	200 U	200 U	190 U	190 U	200 U	190 U
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	0.99 U	1.1 U [1 U]	1 U	NA	0.99 U	0.98 U	0.96 U	0.96 U	0.99 U	0.97 U
Dicamba	- -	440	ug/L	0.059 U	0.063 U [0.061 U]	0.061 U	NA	0.059 U	0.059 U	0.057 U	0.058 U	0.06 U	0.058 U
Dichlorprop	- -	- -	ug/L	0.099 U	0.11 U [0.1 U]	0.1 U	NA	0.099 U	0.098 U	0.096 U	0.096 U	0.099 U	0.097 U
Dinoseb	7	11	ug/L	0.099 U	0.11 U [0.1 U]	0.1 U	NA	0.099 U	0.098 U	0.096 U	0.096 U	0.099 U	0.097 U
Diuron	- -	28	ug/L	0.11	NA	NA	NA	NA	0.015 U	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	0.01 U	NA	NA	NA	NA	0.01 U	NA	NA	NA	NA
MCPP	- -	12	ug/L	40 U	42 U [40 U]	41 U	NA	39 U	39 U	38 U	39 U	40 U	39 U
Monuron	- -	- -	ug/L	0.01 U	NA	NA	NA	NA	0.009 J	NA	NA	NA	NA
Detected Pesticides													
4,4'-DDD	- -	0.28	ug/L	0.02 U	0.021 U [0.02 U]	0.021 U	NA	0.021 U	0.02 U	0.019 U	0.019 U	0.022 U	0.019 U
4,4'-DDE	- -	0.2	ug/L	0.02 U	0.021 U [0.02 U]	0.021 U	NA	0.021 U	0.02 U	0.019 U	0.019 U	0.022 U	0.019 U
4,4'-DDT	- -	0.2	ug/L	0.02 U	0.021 U [0.02 U]	0.021 U	NA	0.021 U	0.02 U	0.019 U	0.019 U	0.022 U	0.019 U
Aldrin	- -	0.00021	ug/L	0.0099 U	0.01 U [0.01 U]	0.011 U	NA	0.01 U	0.0099 U	0.0097 U	0.0096 U	0.011 U	0.0096 U
Alpha-BHC	- -	0.0062	ug/L	0.0099 U	0.01 U [0.01 U]	0.011 U	NA	0.01 U	0.0099 U	0.0097 U	0.0096 U	0.011 U	0.0096 U
Alpha-Chlordane	- -	- -	ug/L	0.0099 U	0.01 U [0.01 U]	0.011 U	NA	0.01 U	0.0099 U	0.0097 U	0.0096 U	0.011 U	0.0096 U
Beta-BHC	- -	0.022	ug/L	0.0099 U	0.01 U [0.01 U]	0.011 U	NA	0.01 U	0.0099 U	0.0097 U	0.0096 U	0.011 U	0.0096 U
Delta-BHC	- -	- -	ug/L	0.0099 U	0.01 U [0.01 U]	0.011 U	NA	0.01 U	0.0099 U	0.0097 U	0.0096 U	0.011 U	0.0096 U
Gamma-BHC (Lindane)	0.2	0.036	ug/L	0.0099 U	0.01 U [0.01 U]	0.011 U	NA	0.01 U	0.0099 U	0.0097 U	0.0096 U	0.011 U	0.0096 U
Gamma-Chlordane	- -	- -	ug/L	0.02 U	0.021 U [0.02 U]	0.021 U	NA	0.021 U	0.02 U	0.019 U	0.019 U	0.022 U	0.019 U
Heptachlor	0.4	0.0018	ug/L	0.0099 U	0.01 U [0.01 U]	0.011 U	NA	0.01 U	0.0099 U	0.0097 U	0.0096 U	0.011 U	0.0096 U
Detected Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	4.28 BJ	NA	NA	NA	NA	2.78 BJ	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	1.25 BJQ	NA	NA	NA	NA	1.41 BJ	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	0.456 BJQ	NA	NA	NA	NA	0.449 BJ	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	0.295 BJ	NA	NA	NA	NA	0.206 BJQ	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	0.553 BJQ	NA	NA	NA	NA	0.291 BJQ	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	0.34 BJQ	NA	NA	NA	NA	0.498 BJQ	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	0.294 BJQ	NA	NA	NA	NA	0.365 BJQ	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	0.635 BJ	NA	NA	NA	NA	9.88 U	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	0.296 BJQ	NA	NA	NA	NA	0.458 BJQ	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	0.429 BJ	NA	NA	NA	NA	0.508 BJQ	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	0.266 BJQ	NA	NA	NA	NA	0.543 BJQ	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	0.402 BJ	NA	NA	NA	NA	0.403 BJ	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	0.618 BJ	NA	NA	NA	NA	0.526 BJQ	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	0.321 BJQ	NA	NA	NA	NA	1.98 U	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	1.98 U	NA	NA	NA	NA	1.98 U	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	1.48 BJQ	NA	NA	NA	NA	1.42 BJ	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	40.9 B	NA	NA	NA	NA	6.1 BJ	NA	NA	NA	NA
Detected Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW56D	BMW56D	BMW57D	BMW57D	BMW58D	BMW58D	BMW59D	BMW59D	BMW61	BMW62
Sample Depth(FT):													
Date Collected:				11/21/11	04/09/12	11/18/11	04/10/12	11/18/11	04/06/12	11/18/11	04/06/12	04/04/12	04/02/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Detected PCBs													
None Detected	- -	- -	- -	NA	- -	NA	- -	NA	- -	NA	- - [- -]	- -	- -
Detected Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	17	59	21	24	1.2	8.2	0.7	0.7 [0.7]	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	**0.9 J**	**2.9 J**	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	2.1 J	25 U	3.9 J	4.6 J	0.3 J	1.1	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	**1 J**	25 U	**1.2 J**	10 U	0.5 U	**0.4 J**	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	**4.6**	**13 J**	**8.5**	**7.9 J**	0.2 J	1 J	0.1 J	0.5 U [0.5 U]	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	59	220	90	100	4.6	30	2.5	2.3 [2.3]	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	5.2	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	NA	50 U	NA	**1.8 J**	NA	**0.1 J**	NA	1 U [1 U]	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	**9.9**	**69**	**26**	**37**	0.2 J	1 U	0.2 J	0.5 U [0.5 U]	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	2.5 U	25 U	1.4 J	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	**6.1**	**22 J**	**14**	**16**	**0.5 J**	**2.6**	**0.3 J**	**0.3 J [0.3 J]**	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	**0.5 J**	25 U	**2.3 J**	**2.3 J**	0.5 U	0.2 J	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	**0.6 J**	25 U	**1.1 J**	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	25 U	250 U	50 U	100 U	5 U	10 U	5 U	5 U [5 U]	5 U	5 U
Acetone	- -	12,000	ug/L	25 U	250 U	50 U	100 U	5 U	10 U	5 U	5 U [5 U]	5 U	5 U
Benzene	5	0.39	ug/L	**10**	**40**	**25**	**26**	0.1 J	0.2 J	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	1 J	25 U	2.4 J	2.8 J	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**90**	**380**	**200**	**230**	**17**	**100**	**9.9**	**9.9 [10]**	**0.5**	0.5 U
Chloromethane	- -	190	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	**130**	**440**	**230**	**270**	4	14	1.5	1.3 [1.4]	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.7 J	25 U	1.8 J	2.4 J	0.5 U	0.3 J	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	**2.8**	**14 J**	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Methyl tert-butyl ether	- -	12	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	2.9	9.8 J	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	**25**	**110**	**72**	**93**	1.9	7.2	0.9	0.9 [0.9]	0.5 U	0.5 U
Toluene	1,000	860	ug/L	0.5 J	25 U	5 U	10 U	0.5 U	1 U	0.1 J	0.5 U [0.5 U]	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	2.5 U	25 U	5 U	10 U	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**840**	**3,300**	**1,500**	**1,900**	**54**	**360**	**26**	**25 [26]**	**2.9**	0.5 U
Trichlorofluoromethane	- -	1,100	ug/L	27	150	81	110	12	68	8.2	9.7 [9.8]	0.3 J	0.5 U
Vinyl Chloride	2	0.015	ug/L	**4.3**	**16 J**	**12**	**11**	0.5 U	1 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U
Detected Semivolatile Organics													
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	**72**	NA	**32**	NA	1 U	NA	1 U [1 U]	1 U	1 U
1,2-Dichlorobenzene	600	280	ug/L	NA	2	NA	2	NA	1 U	NA	1 U [1 U]	1 U	1 U
1,4-Dichlorobenzene	75	0.42	ug/L	NA	**2**	NA	**1**	NA	1 U	NA	1 U [1 U]	1 U	1 U
1,4-Dioxane	- -	0.67	ug/L	NA	**33**	NA	**53**	NA	**7**	NA	5 U [5 U]	5 U	5 U
2,4,5-Trichlorophenol	- -	890	ug/L	NA	7	NA	2	NA	1 U	NA	1 U [1 U]	1 U	1 U
2,4-Dichlorophenol	- -	35	ug/L	NA	8	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
2,4-Dimethylphenol	- -	270	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
2-Chlorophenol	- -	71	ug/L	NA	1	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
2-Methylnaphthalene	- -	27	ug/L	NA	0.4 J	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	1	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
4-Methylphenol	- -	1,400	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
Acetophenone	- -	1,500	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	0.6 U	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Benzoic Acid	- -	58,000	ug/L	NA	18 U	NA	15 U	NA	14 U	NA	15 U [15 U]	15 U	15 U
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	6 U	NA	5 U	NA	5 U	NA	5 U [5 U]	5 U	5 U
Fluoranthene	- -	630	ug/L	NA	0.6 U	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Fluorene	- -	220	ug/L	NA	0.1 J	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Hexachlorobutadiene	- -	0.26	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
Naphthalene	- -	0.14	ug/L	NA	**11**	NA	**1**	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Pentachlorophenol	1	0.17	ug/L	NA	6 U	NA	5 U	NA	5 U	NA	5 U [5 U]	5 U	5 U
Phenanthrene	- -	- -	ug/L	NA	0.6 U	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Phenol	- -	4,500	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
Pyrene	- -	87	ug/L	NA	0.6 U	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Detected Inorganics													
Aluminum	- -	16,000	ug/L	NA	200 U	NA	1,040	NA	200 U	NA	200 U [200 U]	200 U	109 J
Antimony	6	6	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	1 U [1 U]	1 U	1 U
Arsenic	10	0.045	ug/L	NA	**3.9**	NA	**1.6 J**	NA	2 U	NA	2 U [2 U]	2 U	2 U
Barium	2,000	2,900	ug/L	NA	162	NA	350	NA	142	NA	62.3 [60.4]	89.2	20.7
Beryllium	4	16	ug/L	NA	0.5 U	NA	0.25 J	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Boron	- -	3,100	ug/L	NA	37.5 J	NA	18.1 J	NA	5.5 J	NA	50 U [50 U]	12.5 J	6.6 J
Cadmium	5	- -	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	5 U [5 U]	5 U	5 U
Calcium	- -	- -	ug/L	NA	154,000	NA	112,000	NA	58,800	NA	48,400 [47,200]	90,200	58,300
Chromium	100	- -	ug/L	NA	15 U	NA	1.6 J	NA	15 U	NA	1.7 J [1.4 J]	15 U	1.1 J
Cobalt	- -	4.7	ug/L	NA	**16.2**	NA	**7.7**	NA	5 U	NA	5 U [5 U]	5 U	5 U
Copper	1,300	620	ug/L	NA	10 U	NA	1.2 J	NA	10 U	NA	10 U [10 U]	10 U	10 U
Iron	- -	11,000	ug/L	NA	6,760	NA	**17,300**	NA	147 J	NA	63.6 J [49 J]	21.5 J	184 J
Lead	15	- -	ug/L	NA	13.5 J	NA	14.4 J	NA	8.7 J	NA	6.7 J [5.4 J]	4.2 J	11.1 J
Magnesium	- -	- -	ug/L	NA	32,500	NA	35,100	NA	23,900	NA	20,900 [20,000]	14,800	4,870
Manganese	- -	- -	ug/L	NA	1,480	NA	2,030	NA	20	NA	2.1 J [1.9 J]	2.8 J	6.3
Mercury	2	0.63	ug/L	NA	0.2 U	NA	0.2 U	NA	0.2 U	NA	0.2 U [0.033 J]	0.2 U	0.2 U
Nickel	- -	300	ug/L	NA	15.2	NA	10.4	NA	10 U	NA	10 U [10 U]	10 U	10 U
Potassium	- -	- -	ug/L	NA	6,360	NA	7,340	NA	1,580	NA	1,430 [1,340]	2,420	1,390
Silver	- -	71	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	5 U [5 U]	5 U	5 U
Sodium	- -	- -	ug/L	NA	21,900	NA	15,200	NA	14,600	NA	16,800 [16,000]	22,100	3,880
Thallium	2	0.16	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	0.5 U [0.5 U]	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	NA	5 U	NA	2.7 J	NA	5 U	NA	5 U [5 U]	5 U	5 U
Zinc	- -	4,700	ug/L	NA	6.4 J	NA	12.4 J	NA	20 U	NA	20 U [20 U]	20 U	20 U
Detected Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	200 U	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	1 U	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	**1.1 J**	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	327	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	16.5 J	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	5 U	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	114,000	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	15 U	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	**6.4**	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	10 U	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	**12,500**	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	9.3 J	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	35,200	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	2,200	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	0.2 U	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	6.2 J	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	7,130	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	14,800	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	5 U	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	20 U	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW56D	BMW56D	BMW57D	BMW57D	BMW58D	BMW58D	BMW59D	BMW59D	BMW61	BMW62
Sample Depth(FT):													
Date Collected:				11/21/11	04/09/12	11/18/11	04/10/12	11/18/11	04/06/12	11/18/11	04/06/12	04/04/12	04/02/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Detected Miscellaneous													
Bromide	- -	- -	ug/L	NA	2,500 U	NA	2,500 U	NA	2,500 U	NA	2,500 U	NA	NA
Chloride	- -	- -	ug/L	NA	64,100	NA	47,800	NA	39,100	NA	42,700 [44,200]	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	500 U	NA	500 U	NA	3,200	NA	4,300 [4,000]	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	62,400	NA	24,700	NA	10,600	NA	11,500 [7,600]	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	680,000	NA	519,000	NA	294,000	NA	283,000 [273,000]	NA	NA
Detected Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	0.24 U	NA	2.6 U	NA	0.17 J	NA	0.079 J [0.079 J]	NA	0.27 U
2,4,5-T	- -	120	ug/L	NA	0.09 U	NA	0.13	NA	0.0031 J	NA	0.01 U [0.0045 J]	NA	0.011 U
2,4,5-TP	50	84	ug/L	NA	0.27 U	NA	0.49	NA	0.0099 U	NA	0.01 U [0.0099 U]	NA	0.011 U
2,4-D	70	130	ug/L	NA	0.65	NA	1 U	NA	0.099 U	NA	0.1 U [0.099 U]	NA	0.11 U
2,4-DB	- -	91	ug/L	NA	0.1 J	NA	2.1 U	NA	0.2 U	NA	0.21 U [0.2 U]	NA	0.21 U
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	**150 J**	NA	2,100 U	NA	200 U	NA	210 U [200 U]	NA	210 U
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	51	NA	31	NA	1.1 U	NA	1 U [0.99 U]	NA	1.1 U
Dicamba	- -	440	ug/L	NA	0.94	NA	0.27 J	NA	0.06	NA	0.063 U [0.06 U]	NA	0.064 U
Dichlorprop	- -	- -	ug/L	NA	0.25 U	NA	0.67 J	NA	0.099 U	NA	0.1 U [0.099 U]	NA	0.11 U
Dinoseb	7	11	ug/L	NA	0.095 U	NA	1 U	NA	0.099 U	NA	0.1 U [0.099 U]	NA	0.11 U
Diuron	- -	28	ug/L	NA	0.11	NA	0.043	NA	0.015 U	NA	0.015 U	NA	NA
Fenuron	- -	- -	ug/L	NA	0.051	NA	0.18	NA	0.011	NA	0.01 U	NA	NA
MCPP	- -	12	ug/L	NA	**67**	NA	420 U	NA	39 U	NA	42 U [40 U]	NA	43 U
Monuron	- -	- -	ug/L	NA	1.7	NA	0.98	NA	0.072	NA	0.008 J	NA	NA
Detected Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	0.019 U	NA	0.019 U	NA	0.02 U	NA	0.02 U [0.02 U]	0.021 U	0.021 U
4,4'-DDE	- -	0.2	ug/L	NA	0.019 U	NA	0.019 U	NA	0.02 U	NA	0.02 U [0.02 U]	0.021 U	0.021 U
4,4'-DDT	- -	0.2	ug/L	NA	0.019 U	NA	0.019 U	NA	0.02 U	NA	0.02 U [0.02 U]	0.021 U	0.021 U
Aldrin	- -	0.00021	ug/L	NA	0.0097 U	NA	0.0097 U	NA	0.0098 U	NA	0.01 U [0.01 U]	0.01 U	0.01 U
Alpha-BHC	- -	0.0062	ug/L	NA	0.0097 U	NA	0.0097 U	NA	0.0098 U	NA	0.01 U [0.01 U]	0.01 U	0.01 U
Alpha-Chlordane	- -	- -	ug/L	NA	0.0097 U	NA	0.0097 U	NA	0.0098 U	NA	0.01 U [0.01 U]	0.01 U	0.01 U
Beta-BHC	- -	0.022	ug/L	NA	0.0097 U	NA	0.0045 J	NA	0.0098 U	NA	0.01 U [0.01 U]	0.01 U	0.01 U
Delta-BHC	- -	- -	ug/L	NA	0.0063 J	NA	0.0097 U	NA	0.0098 U	NA	0.01 U [0.01 U]	0.01 U	0.01 U
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	0.0038 J	NA	0.0041 J	NA	0.0098 U	NA	0.01 U [0.01 U]	0.01 U	0.01 U
Gamma-Chlordane	- -	- -	ug/L	NA	0.019 U	NA	0.019 U	NA	0.02 U	NA	0.02 U [0.02 U]	0.021 U	0.021 U
Heptachlor	0.4	0.0018	ug/L	NA	**0.0051 J**	NA	0.0097 U	NA	0.0098 U	NA	0.01 U [0.01 U]	0.01 U	0.01 U
Detected Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	3 BJ	NA	3.54 BJ	NA	2.68 BJ	NA	2.59 BJ	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	1.46 BJ	NA	1.34 BJ	NA	0.88 BJ	NA	1.02 BJ	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	0.289 BJQ	NA	0.397 BJ	NA	0.338 BJQ	NA	0.479 BJ	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	0.26 BJ	NA	0.383 BJ	NA	0.319 BJ	NA	0.348 BJ	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	0.422 BJ	NA	0.394 BJ	NA	0.326 BJ	NA	0.495 BJ	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	0.58 BJ	NA	0.848 BJQ	NA	0.551 BJ	NA	0.718 BJ	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	0.681 BJQ	NA	0.548 BJ	NA	0.329 BJ	NA	0.479 BJ	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	0.572 BJQ	NA	0.638 BJQ	NA	0.249 BJ	NA	0.512 BJ	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	0.345 BJQ	NA	0.471 BJ	NA	0.249 BJ	NA	0.646 BJ	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	0.282 BJ	NA	0.607 BJQ	NA	0.253 BJ	NA	0.793 BJ	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	0.612 BJQ	NA	0.482 BJQ	NA	0.37 BJ	NA	0.612 BJ	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	0.579 BJ	NA	0.464 BJQ	NA	0.249 BJ	NA	0.537 BJ	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	0.309 BJ	NA	0.657 BJQ	NA	0.426 BJ	NA	0.788 BJ	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	**0.557 BJ**	NA	1.9 U	NA	0.251 BJQ	NA	2.01 U	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	1.96 U	NA	0.382 BJQ	NA	0.204 J	NA	0.411 J	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	1.27 BJ	NA	1.32 BJ	NA	0.845 BJ	NA	1.05 BJQ	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	10.9 BJ	NA	28.7 B	NA	5.51 BJ	NA	5.06 BJ	NA	NA
Detected Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW63	BMW64	BMW65A	BMW65B	BMW66B	BMW66D	BMW66D	BMW67A	BMW67A	BMW67B
Sample Depth(FT):													
Date Collected:				04/02/12	04/03/12	04/11/12	04/10/12	04/04/12	11/18/11	04/04/12	11/18/11	04/11/12	04/11/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Detected PCBs													
None Detected	- -	- -	- -	- -	- -	- -	- -	- -	NA	- -	NA	- -	- - [- -]
Detected Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.4 J	10 [20]	32	440 [570]
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.4 J [4.9 J]	14	83 [120]
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	**10 J [13 J]**
1,1-Dichloroethane	- -	2.4	ug/L	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [1.9 J]	2.3 J	**22 J [27 J]**
1,1-Dichloroethene	7	260	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.8	1	30 [60]	85	**810 [1,000]**
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
1,2,3-Trichloropropane	- -	0.00065	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	**1.1 J**	100 U [100 U]
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	**150 [170]**
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	**25 [48]**	**67**	**55 [64]**
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.2 J [4 J]**	10 U	50 U [50 U]
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
1,4-Dichlorobenzene	75	0.42	ug/L	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
2-Butanone	- -	4,900	ug/L	5 U	5 U	3.2 J	5 U	5 U	5 U	5 U	50 U [50 U]	100 U	500 U [500 U]
Acetone	- -	12,000	ug/L	5 U	5 U	29	5 U	5 U	5 U	5 U	50 U [50 U]	100 U	500 U [500 U]
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.4 J [4.6 J]**	**3.7 J**	**45 J [55]**
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**18 [37]**	**48**	50 U [50 U]
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**5 U [1.6 J]**	**2.7 J**	50 U [50 U]
Chlorobenzene	100	72	ug/L	1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
Chloroethane	- -	21,000	ug/L	1.2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
Chloroform	70	0.19	ug/L	**0.5**	**0.2 J**	**1.6**	**0.5 J**	**0.5 J**	**2.7**	**3.1**	**1,200 [2,400]**	**3,000**	**1,500 [1,700]**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.7	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
cis-1,2-Dichloroethene	70	28	ug/L	0.6	0.5 U	0.5 U	0.5 U	0.5 U	1	1	**17 [33]**	**38**	**870 [1,100]**
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.6 J [3.4 J]**	10 U	50 U [50 U]
Dichlorodifluoromethane	- -	190	ug/L	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 J [2.4 J]	3.9 J	50 U [50 U]
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	**37 J [72]**
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.3 J	0.2 J	0.5 U	0.1 J	0.5 U	5 U [5 U]	10 U	120 [270]
Methyl tert-butyl ether	- -	12	ug/L	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
Methylene Chloride	5	9.9	ug/L	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.2 J [4 J]	10 U	50 U [50 U]
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.1 J	0.1 J	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	120 [170]
Tetrachloroethene	5	9.7	ug/L	0.5 U	0.5 U	6.6	1.1	0.1 J	0.5 J	0.9	**18 [36]**	**49**	**190 [210]**
Toluene	1,000	860	ug/L	0.5 U	0.5 U	2.8	0.8	0.5 U	0.3 J	0.5 U	5 U [5 U]	10 U	12 J [19 J]
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
Trichloroethene	5	0.44	ug/L	0.5 U	0.5 U	0.2 J	**0.8**	**1**	**9.5**	**14**	**990 [2,000]**	**2,500**	**11,000 [14,000]**
Trichlorofluoromethane	- -	1,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 J	2.6	5.3	500 [990]	**1,400**	**1,400 [1,800]**
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U	5 U [5 U]	10 U	50 U [50 U]
Detected Semivolatile Organics													
1,2,4-Trichlorobenzene	70	0.99	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	0.8 J	**150 [170]**
1,2-Dichlorobenzene	600	280	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	0.7 J	1 [1]
1,4-Dichlorobenzene	75	0.42	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	**0.5 J [0.5 J]**
1,4-Dioxane	- -	0.67	ug/L	**2 J**	5 U	5 U	5 U	5 U	NA	5 U	NA	**39**	**50 [46]**
2,4,5-Trichlorophenol	- -	890	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	0.9 J	13 [15]
2,4-Dichlorophenol	- -	35	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	13 [15]
2,4-Dimethylphenol	- -	270	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [0.9 J]
2-Chlorophenol	- -	71	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
2-Methylnaphthalene	- -	27	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.6 [0.8]
4-Chloro-3-Methylphenol	- -	1,100	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
4-Methylphenol	- -	1,400	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [1 U]
Acetophenone	- -	1,500	ug/L	1 U	1 U	0.6 J	1 U	1 U	NA	1 U	NA	1 U	1 [0.8 J]
Benzo(a)pyrene	0.2	0.0029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.5 U [0.5 U]
Benzoic Acid	- -	58,000	ug/L	16 U	15 U	16 U	16 U	15 U	NA	16 U	NA	16 U	15 U [15 U]
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	5 U	5 U	5 U	**3 J**	5 U	NA	5 U	NA	5 U	5 U [5 U]
Fluoranthene	- -	630	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.5 U [0.5 U]
Fluorene	- -	220	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.5 U [0.2 J]
Hexachlorobutadiene	- -	0.26	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	**0.6 J**	1 U [1 U]
Naphthalene	- -	0.14	ug/L	0.5 U	0.5 U	**0.2 J**	0.1 J	0.5 U	NA	0.5 U	NA	0.1 J	**3 [4]**
Pentachlorophenol	1	0.17	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U [5 U]
Phenanthrene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.5 U [0.5 U]
Phenol	- -	4,500	ug/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1 U	1 U [0.7 J]
Pyrene	- -	87	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	0.5 U [0.5 U]
Detected Inorganics													
Aluminum	- -	16,000	ug/L	200 U	200 U	382	1,850	2,050	NA	200 U	NA	200 U	6,890 [367]
Antimony	6	6	ug/L	1 U	1 U	0.63 J	1 U	1 U	NA	1 U	NA	1 U	0.49 J [1 U]
Arsenic	10	0.045	ug/L	2 U	2 U	2 U	2 U	**1.2 J**	NA	2 U	NA	2 U	**3.9 [2.7]**
Barium	2,000	2,900	ug/L	182	77.5	33.5	81.4	91.5	NA	63.9	NA	93.7	203 [180]
Beryllium	4	16	ug/L	0.5 U	0.5 U	0.5 U	0.21 J	0.31 J	NA	0.5 U	NA	0.5 U	1.5 [0.5 U]
Boron	- -	3,100	ug/L	52.5	14.8 J	5.1 J	13.9 J	8 J	NA	7 J	NA	23.6 J	14.9 J [18.8 J]
Cadmium	5	- -	ug/L	5 U	5 U	5 U	5 U	0.33 J	NA	5 U	NA	5 U	5 U [5 U]
Calcium	- -	- -	ug/L	132,000	90,400	64,200	26,500	79,100	NA	60,100	NA	132,000	135,000 [122,000]
Chromium	100	- -	ug/L	15 U	15 U	2 J	6.5 J	6 J	NA	1.1 J	NA	15 U	19.1 [7.8 J]
Cobalt	- -	4.7	ug/L	**9.5**	5 U	5 U	1 J	1.4 J	NA	5 U	NA	**4.8 J**	**8.9 [4.5 J]**
Copper	1,300	620	ug/L	10 U	10 U	3.5 J	4.6 J	3.7 J	NA	10 U	NA	10 U	10.2 [10 U]
Iron	- -	11,000	ug/L	3,050	15.9 J	69.9 J	2,360	5,270	NA	53.4 J	NA	579	**17,100 [2,100]**
Lead	15	- -	ug/L	14.3 J	12.6 J	12.6 J	16.5	10.3 J	NA	9.4 J	NA	9.8 J	25.9 [12.7 J]
Magnesium	- -	- -	ug/L	36,400	22,600	577	2,090	9,330	NA	15,600	NA	34,500	38,000 [35,400]
Manganese	- -	- -	ug/L	2,980	1.2 J	2.1 J	49.5	242	NA	5.4	NA	1,680	2,120 [2,760]
Mercury	2	0.63	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	NA	0.2 U	NA	0.2 U	0.12 J [0.2 U]
Nickel	- -	300	ug/L	10	10 U	3.7 J	4.1 J	5.8 J	NA	10 U	NA	13.9	26.9 [12.8]
Potassium	- -	- -	ug/L	3,110	1,930	21,500	5,650	1,860	NA	1,570	NA	3,380	5,530 [4,440]
Silver	- -	71	ug/L	5 U	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U [0.91 J]
Sodium	- -	- -	ug/L	17,400	9,530	97,500	67,800	11,800	NA	11,200	NA	9,270	9,710 [10,400]
Thallium	2	0.16	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U	**0.31 J [0.17 J]**
Vanadium	- -	- -	ug/L	5 U	5 U	9.8	6.4	6	NA	5 U	NA	5 U	17.9 [1.6 J]
Zinc	- -	4,700	ug/L	5.3 J	20 U	20 U	29.8	12.9 J	NA	20 U	NA	20 U	112 [6.5 J]
Detected Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	200 U	200 U	NA	NA	NA	NA	123 J [131 J]
Antimony	6	6	ug/L	NA	NA	NA	1 U	1 U	NA	NA	NA	NA	1 U [1 U]
Arsenic	10	0.045	ug/L	NA	NA	NA	2 U	2 U	NA	NA	NA	NA	**2.8 [3]**
Barium	2,000	2,900	ug/L	NA	NA	NA	45.5	63.7	NA	NA	NA	NA	108 [109]
Boron	- -	3,100	ug/L	NA	NA	NA	11.8 J	6.5 J	NA	NA	NA	NA	13.5 J [13.4 J]
Cadmium	5	- -	ug/L	NA	NA	NA	5 U	5 U	NA	NA	NA	NA	5 U [5 U]
Calcium	- -	- -	ug/L	NA	NA	NA	19,800	77,600	NA	NA	NA	NA	91,100 [93,600]
Chromium	100	- -	ug/L	NA	NA	NA	15 U	15 U	NA	NA	NA	NA	3.9 J [3.7 J]
Cobalt	- -	4.7	ug/L	NA	NA	NA	5 U	5 U	NA	NA	NA	NA	0.63 J [0.66 J]
Copper	1,300	620	ug/L	NA	NA	NA	10 U	10 U	NA	NA	NA	NA	10 U [10 U]
Iron	- -	11,000	ug/L	NA	NA	NA	200 U	200 U	NA	NA	NA	NA	200 U [200 U]
Lead	15	- -	ug/L	NA	NA	NA	7.9 J	6 J	NA	NA	NA	NA	10.1 J [11.6 J]
Magnesium	- -	- -	ug/L	NA	NA	NA	1,180	8,860	NA	NA	NA	NA	28,700 [29,400]
Manganese	- -	- -	ug/L	NA	NA	NA	3.1 J	4.6 J	NA	NA	NA	NA	607 [640]
Mercury	2	0.63	ug/L	NA	NA	NA	0.029 J	0.2 U	NA	NA	NA	NA	0.2 U [0.2 U]
Nickel	- -	300	ug/L	NA	NA	NA	10 U	1.6 J	NA	NA	NA	NA	7.6 J [8.3 J]
Potassium	- -	- -	ug/L	NA	NA	NA	4,350	1,560	NA	NA	NA	NA	4,880 [4,820]
Sodium	- -	- -	ug/L	NA	NA	NA	102,000	11,600	NA	NA	NA	NA	10,000 [10,100]
Thallium	2	0.16	ug/L	NA	NA	NA	0.5 U	0.5 U	NA	NA	NA	NA	0.15 J [0.5 U]
Vanadium	- -	- -	ug/L	NA	NA	NA	1.5 J	5 U	NA	NA	NA	NA	1.8 J [1.7 J]
Zinc	- -	4,700	ug/L	NA	NA	NA	20 U	20 U	NA	NA	NA	NA	20 U [20 U]

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW63	BMW64	BMW65A	BMW65B	BMW66B	BMW66D	BMW66D	BMW67A	BMW67A	BMW67B
Sample Depth(FT):													
Date Collected:				04/02/12	04/03/12	04/11/12	04/10/12	04/04/12	11/18/11	04/04/12	11/18/11	04/11/12	04/11/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Detected Miscellaneous													
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	2,500 U	2,500 U [2,500 U]
Chloride	- -	- -	ug/L	NA	NA	26,000	9,300	30,900	NA	29,700	NA	31,600	60,300 [63,800]
Nitrate-N	10,000	25,000	ug/L	NA	NA	500 U	500 U	1,900	NA	4,100	NA	2,400	710 [730]
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	NA	106,000	73,800	18,300	NA	11,800	NA	181,000	59,500 [63,500]
Total Dissolved Solids	- -	- -	ug/L	NA	NA	578,000	292,000	298,000	NA	270,000	NA	641,000	396,000 [513,000]
Detected Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	0.26 U	0.25 U	0.25 U	0.25 U	0.25 U	NA	0.26 U	NA	1.2 U	1.2 U [2.5 U]
2,4,5-T	- -	120	ug/L	0.0081 J	0.01 U	0.0099 U	0.0099 U	0.01 U	NA	0.01 U	NA	0.37	0.32 [0.67]
2,4,5-TP	50	84	ug/L	0.014	0.01 U	0.088	0.011 U	0.01 U	NA	0.01 U	NA	0.86	0.078 [0.099 U]
2,4-D	70	130	ug/L	0.1 U	0.1 U	0.23	0.099 U	0.1 U	NA	0.1 U	NA	0.5 U	0.49 U [0.99 U]
2,4-DB	- -	91	ug/L	0.12 J	0.2 U	0.37 U	0.2 U	0.2 U	NA	0.21 U	NA	0.99 U	0.97 U [2 U]
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	200 U	200 U	200 U	200 U	200 U	NA	210 U	NA	990 U	970 U [2,000 U]
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	1 U	1 U	0.99 U	0.99 U	1 U	NA	1 U	NA	6.1	28 [27]
Dicamba	- -	440	ug/L	0.061 U	0.06 U	0.059 U	0.059 U	0.061 U	NA	0.062 U	NA	2	1.4 [1.7]
Dichlorprop	- -	- -	ug/L	0.12	0.1 U	0.099 U	0.099 U	0.1 U	NA	0.1 U	NA	0.67	0.49 U [0.99 U]
Dinoseb	7	11	ug/L	0.1 U	0.1 U	0.099 U	0.099 U	0.1 U	NA	0.1 U	NA	0.5 U	0.49 U [0.99 U]
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	0.015 U	0.015 U [0.015 U]
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	0.009 J	0.051 [0.036]
MCPP	- -	12	ug/L	41 U	40 U	**120**	**46**	41 U	NA	41 U	NA	200 U	**960 [400 U]**
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	0.6	0.52 [0.45]
Detected Pesticides													
4,4'-DDD	- -	0.28	ug/L	0.021 U	0.02 U	0.021 U	0.02 U	0.023 U	NA	0.02 U	NA	0.021 U	0.0067 J [0.01 J]
4,4'-DDE	- -	0.2	ug/L	0.021 U	0.02 U	0.021 U	0.02 U	0.023 U	NA	0.02 U	NA	0.021 U	0.019 U [0.021 U]
4,4'-DDT	- -	0.2	ug/L	0.021 U	0.02 U	0.021 U	0.02 U	0.023 U	NA	0.02 U	NA	0.021 U	0.019 U [0.021 U]
Aldrin	- -	0.00021	ug/L	0.011 U	0.01 U	0.011 U	0.0099 U	0.012 U	NA	0.01 U	NA	0.011 U	**0.0097 U [0.0021 J**
Alpha-BHC	- -	0.0062	ug/L	0.011 U	0.01 U	0.011 U	0.0099 U	0.012 U	NA	0.01 U	NA	0.011 U	**0.011 [0.0096 J]**
Alpha-Chlordane	- -	- -	ug/L	0.011 U	0.01 U	0.011 U	0.0099 U	0.012 U	NA	0.01 U	NA	0.011 U	0.0097 U [0.01 U]
Beta-BHC	- -	0.022	ug/L	0.011 U	0.01 U	0.011 U	0.0099 U	0.012 U	NA	0.01 U	NA	0.011 U	0.0097 U [0.004 J]
Delta-BHC	- -	- -	ug/L	0.011 U	0.01 U	0.011 U	0.0099 U	0.012 U	NA	0.01 U	NA	0.011 U	0.0049 J [0.0076 J]
Gamma-BHC (Lindane)	0.2	0.036	ug/L	0.011 U	0.01 U	0.011 U	0.0099 U	0.012 U	NA	0.01 U	NA	0.03 U	**0.029 [0.045]**
Gamma-Chlordane	- -	- -	ug/L	0.021 U	0.02 U	0.021 U	0.02 U	0.023 U	NA	0.02 U	NA	0.021 U	0.019 U [0.021 U]
Heptachlor	0.4	0.0018	ug/L	0.011 U	0.01 U	0.011 U	0.0099 U	0.012 U	NA	0.01 U	NA	0.011 U	0.0097 U [0.01 U]
Detected Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	3.6 BJ	4.18 BJ [3.5 BJ]
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	1.77 BJ	1.85 BJ [1.59 BJ]
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.568 BJQ	492 BJQ [0.656 BJ]
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.506 BJQ	.232 BJQ [0.425 B]
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.798 BJ	71 BJQ [0.572 BJ]
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.651 BJQ	0.541 BJ [0.671 BJ]
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.65 BJ	0.474 BJQ [0.56 BJ]
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.698 BJ	0.933 BJ [0.546 BJ]
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.31 BJQ	.612 BJQ [0.378 B]
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.472 BJQ	543 BJQ [0.477 BJ]
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.653 BJQ	564 BJQ [0.416 BJ]
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.841 BJ	.657 BJ [0.597 BJ]
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.726 BJ	1.09 BJ [0.723 BJ]
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	2 U	0.368 JQ [0.184 JQ]
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	0.211 BJQ	1.99 U [1.95 U]
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	1.56 BJ	1.3 BJ [1.45 BJ]
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	12.7 BJ	100 B [18.8 BJ]
Detected Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW67C	BMW67D	BMW68A	BMW68B	BMW68C	BMW68D	BMW68E	BMW69A	BMW70A	BMW70A
Sample Depth(FT):													
Date Collected:				04/11/12	04/11/12	04/10/12	04/09/12	04/10/12	04/10/12	04/09/12	04/04/12	11/17/11	04/04/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Detected PCBs													
None Detected	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	NA	- -
Detected Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	650	8.4	18	23	35	42	29	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	110	2.3	10 U	4 J	5.7 J	7.2 J	4.7 J	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	**32 J**	0.5 J	**6.5 J**	**9 J**	**7.6 J**	**7.2 J**	**3.6 J**	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	**1,100**	19	85	110	120	130	110	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	5.2	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	200 U	**0.1 J**	20 U	20 U	**1.5 J**	**1.4 J**	20 U	1 U	NA	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	**220**	0.2 J	**18**	**26**	**28**	**21**	10 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	**75 J**	**2**	**7.8 J**	**9.3 J**	**21**	**22**	**13**	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	100 U	0.3 J	10 U	10 U	**2.6 J**	**2.8 J**	**2.3 J**	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	1,000 U	10 U	100 U	100 U	100 U	100 U	100 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	1,000 U	10 U	100 U	100 U	100 U	100 U	100 U	5 U	5 U	5 U
Benzene	5	0.39	ug/L	**71 J**	1 U	**12**	**15**	**20**	**26**	10 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	**2.1 J**	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	100 U	1 U	10 U	10 U	2.6 J	10 U	10 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**1,700**	**170**	**120**	**130**	**350**	**420**	**300**	0.5 U	0.1 J	0.1 J
Chloromethane	- -	190	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	**1,300**	18	**140**	**180**	**250**	**190**	**96**	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	100 U	0.7 J	10 U	10 U	2.9 J	3.4 J	2.9 J	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	**94 J**	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	290	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	- -	12	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	100 U	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	**230**	1 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	**240**	**14**	**30**	**38**	**85**	**67**	**50**	0.5 U	0.5 U	0.5 U
Toluene	1,000	860	ug/L	27 J	0.4 J	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	100 U	1 U	10 U	10 U	10 U	2.6 J	10 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**15,000**	**360**	**1,500**	**1,800**	**2,200**	**2,700**	**1,800**	0.5 U	0.2 J	**0.7**
Trichlorofluoromethane	- -	1,100	ug/L	**1,500**	140	60	68	180	240	220	0.5 U	0.5 U	0.5 U
Vinyl Chloride	2	0.015	ug/L	100 U	1 U	**6.3 J**	**8.7 J**	**5.9 J**	**3.3 J**	10 U	0.5 U	0.5 U	0.5 U
Detected Semivolatile Organics													
1,2,4-Trichlorobenzene	70	0.99	ug/L	**240**	1 U	**17**	**24**	**28**	**21**	1 U	1 U	NA	1 U
1,2-Dichlorobenzene	600	280	ug/L	1	1 U	0.6 J	0.8 J	2	1	1 U	1 U	NA	1 U
1,4-Dichlorobenzene	75	0.42	ug/L	**0.6 J**	1 U	**0.8 J**	**0.9 J**	**1**	**0.8 J**	1 U	1 U	NA	1 U
1,4-Dioxane	- -	0.67	ug/L	**46**	**11**	**20**	**25**	**63**	**54**	**43**	5 U	NA	5 U
2,4,5-Trichlorophenol	- -	890	ug/L	13	1 U	1	1	2	1 U	1 U	1 U	NA	1 U
2,4-Dichlorophenol	- -	35	ug/L	11	1 U	1 U	1	0.6 J	1 U	1 U	1 U	NA	1 U
2,4-Dimethylphenol	- -	270	ug/L	0.7 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
2-Chlorophenol	- -	71	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
2-Methylnaphthalene	- -	27	ug/L	1	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
4-Chloro-3-Methylphenol	- -	1,100	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
4-Methylphenol	- -	1,400	ug/L	0.6 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
Acetophenone	- -	1,500	ug/L	0.6 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
Benzo(a)pyrene	0.2	0.0029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.1 J**	NA	0.5 U
Benzoic Acid	- -	58,000	ug/L	15 U	15 U	14 U	15 U	15 U	15 U	15 U	14 U	NA	15 U
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	5 U	5 U	5 U	5 U	5 U	**5 J**	5 U	5 U	NA	5 U
Fluoranthene	- -	630	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Fluorene	- -	220	ug/L	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Hexachlorobutadiene	- -	0.26	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
Naphthalene	- -	0.14	ug/L	**4**	0.1 J	**2**	**2**	**0.4 J**	**0.3 J**	0.1 J	0.5 U	NA	0.5 U
Pentachlorophenol	1	0.17	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U
Phenanthrene	- -	- -	ug/L	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Phenol	- -	4,500	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U
Pyrene	- -	87	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Detected Inorganics													
Aluminum	- -	16,000	ug/L	200 U	203	200 U	200 U	139 J	**23,100**	739	200 U	NA	200 U
Antimony	6	6	ug/L	1 U	1 U	1 U	1 U	1 U	3.8	1 U	1 U	NA	1 U
Arsenic	10	0.045	ug/L	**3**	2 U	2 U	**1.6 J**	2 U	**24.9**	2 U	2 U	NA	2 U
Barium	2,000	2,900	ug/L	310	78.8	232	283	140	621	94.4	190	NA	77.4
Beryllium	4	16	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5	0.5 U	0.5 U	NA	0.5 U
Boron	- -	3,100	ug/L	26.4 J	50 U	13.7 J	17.1 J	10.5 J	45.7 J	50 U	9.8 J	NA	14.1 J
Cadmium	5	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U
Calcium	- -	- -	ug/L	123,000	60,000	132,000	129,000	75,400	398,000	57,900	92,600	NA	87,700
Chromium	100	- -	ug/L	1.8 J	10.1 J	15 U	15 U	5.5 J	74.1	4.2 J	15 U	NA	15 U
Cobalt	- -	4.7	ug/L	**10**	5 U	3.6 J	**21**	5 U	**9.9**	1 J	2.4 J	NA	5 U
Copper	1,300	620	ug/L	10 U	1.1 J	10 U	10 U	1 J	153	2.4 J	10 U	NA	10 U
Iron	- -	11,000	ug/L	2,010	200 U	284	7,680	47.6 J	**31,300**	1,470	200 U	NA	200 U
Lead	15	- -	ug/L	13.6 J	10 J	9.5 J	11.6 J	14.6 J	138	12.4 J	6.6 J	NA	6.3 J
Magnesium	- -	- -	ug/L	44,300	11,900	25,500	33,800	34,500	46,400	30,900	6,960	NA	11,000
Manganese	- -	- -	ug/L	4,580	5 U	1,080	3,750	9	1,030	38	197	NA	1 J
Mercury	2	0.63	ug/L	0.076 J	0.2 U	0.2 U	0.035 J	0.2 U	0.091 J	0.039 J	0.047 J	NA	0.2 U
Nickel	- -	300	ug/L	25.9	10 U	6.3 J	22.1	10 U	40.8	2.2 J	1.8 J	NA	10 U
Potassium	- -	- -	ug/L	3,080	10,800	12,200	9,960	8,910	10,300	1,800	3,790	NA	1,730
Silver	- -	71	ug/L	1.1 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U
Sodium	- -	- -	ug/L	11,300	9,750	24,500	17,300	15,200	12,100	6,330	36,100	NA	20,200
Thallium	2	0.16	ug/L	**0.36 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.63**	0.5 U	0.5 U	NA	0.5 U
Vanadium	- -	- -	ug/L	5 U	1.2 J	5 U	5 U	5 U	50	2.1 J	5 U	NA	5 U
Zinc	- -	4,700	ug/L	18.9 J	5.9 J	5.8 J	9.4 J	20 U	419	23.7	20 U	NA	20 U
Detected Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	200 U	200 U	200 U	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	1 U	0.7 J	1 U	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	2 U	2 U	2 U	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	136	240	86.7	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	10.4 J	10.5 J	50 U	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	5 U	5 U	5 U	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	68,200	107,000	56,200	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	5.2 J	11.7 J	15 U	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	5 U	5 U	5 U	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	10 U	10 U	10 U	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	200 U	200 U	24.4 J	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	11.3 J	8.3 J	9 J	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	33,000	590	30,200	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	5.3	5 U	7.7	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	0.2 U	0.031 J	0.033 J	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	10 U	10 U	10 U	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	8,860	10,700	1,740	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	14,900	12,400	6,390	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	0.5 U	0.16 J	0.5 U	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	1 J	1.2 J	5 U	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	20 U	20 U	7.8 J	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(FT): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	BMW67C 04/11/12 Area B Monitoring wells	BMW67D 04/11/12 Area B Monitoring wells	BMW68A 04/10/12 Area B Monitoring wells	BMW68B 04/09/12 Area B Monitoring wells	BMW68C 04/10/12 Area B Monitoring wells	BMW68D 04/10/12 Area B Monitoring wells	BMW68E 04/09/12 Area B Monitoring wells	BMW69A 04/04/12 Area B Monitoring wells	BMW70A 11/17/11 Area B Monitoring wells	BMW70A 04/04/12 Area B Monitoring wells
Detected Miscellaneous													
Bromide	- -	- -	ug/L	2,500 U	2,500 U	2,500 U	2,500 U	2,500 U	2,500 U	2,500 U	NA	NA	NA
Chloride	- -	- -	ug/L	83,300	17,700	53,300	60,000	45,200	40,400	31,200	62,800	NA	41,000
Nitrate-N	10,000	25,000	ug/L	540	1,900	500 U	500 U	540	350 J	1,900	1,000	NA	980
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	90,300	35,200	55,200	34,900	19,200	24,400	8,100	32,300	NA	21,900
Total Dissolved Solids	- -	- -	ug/L	669,000	163,000	538,000	557,000	248,000	392,000	311,000	366,000	NA	330,000
Detected Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	2.5 U	0.25 J	0.25 U	1.3 U	0.26 U	0.25 U	0.085 J	0.24 U	NA	0.25 U
2,4,5-T	- -	120	ug/L	0.53	0.0097 U	0.12 U	0.14	0.014	0.045	0.01 U	0.0098 U	NA	0.01 U
2,4,5-TP	50	84	ug/L	0.12 U	0.0097 U	0.21	0.83	0.67	0.5	0.11	0.0098 U	NA	0.01 U
2,4-D	70	130	ug/L	1 U	0.043 J	0.22 U	0.51 U	0.13	0.15	0.1 U	0.098 U	NA	0.1 U
2,4-DB	- -	91	ug/L	2 U	0.19 U	0.57 U	1 U	0.21 U	0.25	0.2 U	0.2 U	NA	0.2 U
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	2,000 U	190 U	200 U	1,000 U	210 U	200 U	200 U	200 U	NA	200 U
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	28	4.9 U	8.7	12	22	15	6.7	0.98 U	NA	1 U
Dicamba	- -	440	ug/L	1.9	0.05 J	0.3	0.47	0.25	0.24	0.09	0.059 U	NA	0.06 U
Dichlorprop	- -	- -	ug/L	1 U	0.097 U	1.7	2.5	0.32	0.45	0.1 U	0.098 U	NA	0.1 U
Dinoseb	7	11	ug/L	1 U	0.097 U	0.15	0.51 U	0.11 U	0.099 U	0.1 U	0.098 U	NA	0.1 U
Diuron	- -	28	ug/L	0.015 U	0.015 U	0.042	0.056	0.075	0.055	0.017	NA	NA	NA
Fenuron	- -	- -	ug/L	0.037	0.009 J	0.17	0.19	0.34	0.34	0.078	NA	NA	NA
MCPP	- -	12	ug/L	400 U	39 U	40 U	200 U	42 U	**66**	40 U	39 U	NA	40 U
Monuron	- -	- -	ug/L	0.51	0.11	0.39	0.45	1.2	1	0.62	NA	NA	NA
Detected Pesticides													
4,4'-DDD	- -	0.28	ug/L	0.011 J	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	NA	0.021 U
4,4'-DDE	- -	0.2	ug/L	0.011 J	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	NA	0.021 U
4,4'-DDT	- -	0.2	ug/L	0.02 U	0.0083 J	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	NA	0.021 U
Aldrin	- -	0.00021	ug/L	**0.0027 J**	0.0098 U	0.0099 U	0.01 U	0.01 U	0.01 U	0.011 U	0.0098 U	NA	0.011 U
Alpha-BHC	- -	0.0062	ug/L	**0.011**	0.0098 U	0.0099 U	0.0044 J	0.0031 J	0.0043 J	0.011 U	0.0098 U	NA	0.011 U
Alpha-Chlordane	- -	- -	ug/L	0.0098 U	0.0098 U	0.0099 U	0.01 U	0.01 U	0.01 U	0.011 U	0.0098 U	NA	0.011 U
Beta-BHC	- -	0.022	ug/L	0.0046 J	0.0098 U	0.0099 U	0.0041 J	0.01 U	0.0091 J	0.004 J	0.0098 U	NA	0.011 U
Delta-BHC	- -	- -	ug/L	0.0082 J	0.0098 U	0.0099 U	0.01 U	0.01 U	0.01 U	0.011 U	0.0098 U	NA	0.011 U
Gamma-BHC (Lindane)	0.2	0.036	ug/L	**0.048**	0.0098 U	0.0026 J	0.0033 J	0.0046 J	0.0023 J	0.0034 J	0.0098 U	NA	0.011 U
Gamma-Chlordane	- -	- -	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	NA	0.021 U
Heptachlor	0.4	0.0018	ug/L	0.0098 U	0.0098 U	0.0099 U	0.01 U	0.01 U	0.01 U	0.011 U	0.0098 U	NA	0.011 U
Detected Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	2.54 BJ	7.81 BJ	4.59 BJ	3.6 BJ	3.14 BJ	13 B	3.45 BJ	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	1.5 BJ	3.65 BJ	1.79 BJQ	1.18 BJ	1.57 BJ	4.78 BJ	1.36 BJ	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	0.523 BJ	1.04 BJ	0.483 BJ	0.353 BJ	0.639 BJQ	2.23 BJ	0.464 BJ	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	0.174 BJ	0.491 BJ	0.466 BJ	0.168 BJ	0.547 BJ	9.94 U	0.481 BJQ	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	0.56 BJQ	0.907 BJ	0.447 BJQ	0.414 BJ	0.649 BJ	1.1 BJ	0.492 BJ	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	0.467 BJQ	0.687 BJ	0.493 BJQ	0.375 BJQ	0.698 BJ	0.751 BJ	0.737 BJQ	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	0.447 BJ	9.75 U	0.529 BJ	0.268 BJQ	0.508 BJ	2.59 BJ	0.481 BJ	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	0.32 BJ	0.766 BJ	0.544 BJ	0.462 BJ	0.407 BJ	1.97 BJ	0.364 BJ	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	0.519 BJQ	0.536 BJ	0.68 BJ	10.2 U	0.354 BJ	0.56 BJ	9.61 U	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	0.303 BJ	9.75 U	1.03 BJQ	0.267 BJ	0.69 BJQ	0.832 BJ	9.61 U	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	0.418 BJQ	0.571 BJ	0.324 BJQ	0.162 BJ	0.549 BJQ	0.81 BJ	0.411 BJQ	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	0.702 BJ	1.21 BJ	0.777 BJ	0.398 BJ	0.769 BJ	1.76 BJ	0.495 BJQ	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	0.743 BJ	0.518 BJ	0.71 BJQ	0.456 BJ	0.742 BJ	1.08 BJ	0.857 BJ	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	2 U	0.461 J	1.97 U	0.519 BJ	0.258 JQ	1.99 U	**0.657 BJQ**	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	0.159 BJQ	1.95 U	0.232 BJQ	0.224 BJ	0.164 BJ	1.99 U	0.231 BJQ	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	1.21 BJQ	2.21 BJ	1.23 BJQ	1.12 BJ	1.4 BJ	5.68 BJ	1.32 BJ	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	8.27 BJ	18.6 BJ	12.7 BJ	20.9 B	6.78 BJ	152 B	19.7 B	NA	NA	NA
Detected Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW70B	BMW70C	BMW71A	BMW71A	BMW71B	BMW71C	BMW71C	BMW72	BMW72	BMW72 0 - 27
Sample Depth(FT):													
Date Collected:				04/04/12	04/04/12	11/15/11	03/28/12	03/28/12	03/29/12	04/13/12	03/29/12	04/13/12	06/08/11
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Detected PCBs													
None Detected	- -	- -	- -	- -	- -	NA	- -	- -	- -	NA	- - [- -]	NA	NA
Detected Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.5 U	0.5 U	0.3 J	0.3 J	0.2 J	0.2 J	NA	0.5 U [0.5 U]	NA	0.5 U
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	NA	0.5 U [0.5 U]	NA	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U [5 U]	NA	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U [5 U]	NA	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Chloroform	70	0.19	ug/L	0.5 U	**0.3 J**	**1.2**	**1.1**	**1.1**	**0.6**	NA	**0.5 J [0.4 J]**	NA	**0.2 J**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.5 U	0.5 U	0.4 J	0.3 J	0.1 J	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.1 J
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.6
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.2 J
Tetrachloroethene	5	9.7	ug/L	0.5 U	0.5 U	0.2 J	0.3 J	0.3 J	0.3 J	NA	0.2 J [0.2 J]	NA	0.5 U
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	1.2
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Trichloroethene	5	0.44	ug/L	0.5 U	0.5 U	**3.2**	**3.5**	**2.6**	**1.3**	NA	**0.8 [0.8]**	NA	0.5 U
Trichlorofluoromethane	- -	1,100	ug/L	0.5 U	0.2 J	1.8	2.5	1.3	1.2	NA	2.4 [2.4]	NA	0.5 U
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	0.5 U
Detected Semivolatile Organics													
1,2,4-Trichlorobenzene	70	0.99	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
1,2-Dichlorobenzene	600	280	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
1,4-Dichlorobenzene	75	0.42	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
1,4-Dioxane	- -	0.67	ug/L	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U [5 U]	NA	NA
2,4,5-Trichlorophenol	- -	890	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
2,4-Dichlorophenol	- -	35	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
2,4-Dimethylphenol	- -	270	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
2-Chlorophenol	- -	71	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
2-Methylnaphthalene	- -	27	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
4-Chloro-3-Methylphenol	- -	1,100	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
4-Methylphenol	- -	1,400	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
Acetophenone	- -	1,500	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
Benzo(a)pyrene	0.2	0.0029	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Benzoic Acid	- -	58,000	ug/L	16 U	15 U	NA	15 U	15 U	15 U	NA	15 U [15 U]	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U [5 U]	NA	NA
Fluoranthene	- -	630	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Fluorene	- -	220	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Hexachlorobutadiene	- -	0.26	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
Naphthalene	- -	0.14	ug/L	0.5 U	0.5 U	NA	0.1 J	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Pentachlorophenol	1	0.17	ug/L	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U [5 U]	NA	NA
Phenanthrene	- -	- -	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Phenol	- -	4,500	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U [1 U]	NA	NA
Pyrene	- -	87	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Detected Inorganics													
Aluminum	- -	16,000	ug/L	423	206	NA	1,310	1,750	200 U	NA	642 [575]	NA	NA
Antimony	6	6	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA	0.64 J [0.63 J]	NA	NA
Arsenic	10	0.045	ug/L	2 U	2 U	NA	**1.7 J**	**3.3**	**5.5**	NA	2 U [2 U]	NA	NA
Barium	2,000	2,900	ug/L	235	151	NA	123	303	211	NA	95.2 [91.1]	NA	NA
Beryllium	4	16	ug/L	0.5 U	0.5 U	NA	0.5 U	0.16 J	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Boron	- -	3,100	ug/L	12.6 J	8.9 J	NA	15.7 J	16.6 J	33.4 J	NA	12 J [35.9 J]	NA	NA
Cadmium	5	- -	ug/L	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U [5 U]	NA	NA
Calcium	- -	- -	ug/L	88,400	89,200	NA	76,600	36,500	39,200	NA	107,000 [96,300]	NA	NA
Chromium	100	- -	ug/L	15 U	6.4 J	NA	9 J	3.7 J	15 U	NA	34.5 [34.8]	NA	NA
Cobalt	- -	4.7	ug/L	5 U	5 U	NA	1.6 J	5 U	5 U	NA	5 U [5 U]	NA	NA
Copper	1,300	620	ug/L	10 U	10 U	NA	1.6 J	10 U	1.5 J	NA	10 U [1.9 J]	NA	NA
Iron	- -	11,000	ug/L	238	200 U	NA	3,350	464	200 U	NA	200 U [200 U]	NA	NA
Lead	15	- -	ug/L	12.2 J	7.9 J	NA	11.7 J	10.2 J	8.6 J	NA	5.4 J [2.7 J]	NA	NA
Magnesium	- -	- -	ug/L	8,540	9,390	NA	19,400	22,500	22,100	NA	4,700 [5,330]	NA	NA
Manganese	- -	- -	ug/L	12.1	0.68 J	NA	170	5.4	5 U	NA	5 U [5 U]	NA	NA
Mercury	2	0.63	ug/L	0.2 U	0.06 J	NA	0.27 U	0.2 U	0.2 U	NA	0.2 U [0.2 U]	NA	NA
Nickel	- -	300	ug/L	10 U	10 U	NA	7.1 J	1.8 J	10 U	NA	10 U [10 U]	NA	NA
Potassium	- -	- -	ug/L	2,310	5,760	NA	1,860	3,720	1,660	NA	3,810 [3,410]	NA	NA
Silver	- -	71	ug/L	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U [5 U]	NA	NA
Sodium	- -	- -	ug/L	23,100	13,200	NA	9,760	20,400	3,870	NA	3,560 [3,360]	NA	NA
Thallium	2	0.16	ug/L	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	NA	0.5 U [0.5 U]	NA	NA
Vanadium	- -	- -	ug/L	5 U	5 U	NA	6	1.1 J	5 U	NA	2.5 J [2.1 J]	NA	NA
Zinc	- -	4,700	ug/L	20 U	20 U	NA	11.3 J	3.8 J	20 U	NA	20 U [20 U]	NA	NA
Detected Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	178 J	NA	200 U	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	2 U	NA	**1.1 J**	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	53.2	NA	116	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	8.7 J	NA	16.1 J	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	5 U	NA	5 U	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	29,200	NA	69,100	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	6.1 J	NA	15 U	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	5 U	NA	5 U	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	10 U	NA	1.1 J	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	200 U	NA	200 U	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	4.9 J	NA	5.5 J	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	9,090	NA	17,800	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	5 U	NA	94.1	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	0.2 U	NA	0.2 U	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	10 U	NA	3.2 J	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	5,830	NA	1,440	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	13,300	NA	9,540	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	1.2 J	NA	1.8 J	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	20 U	NA	20 U	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW70B	BMW70C	BMW71A	BMW71A	BMW71B	BMW71C	BMW71C	BMW72	BMW72	BMW72
Sample Depth(FT):													0 - 27
Date Collected:				04/04/12	04/04/12	11/15/11	03/28/12	03/28/12	03/29/12	04/13/12	03/29/12	04/13/12	06/08/11
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Detected Miscellaneous													
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	2,500 U [2,500 U]	NA	NA
Chloride	- -	- -	ug/L	40,900	34,600	NA	33,000	15,000	3,200	NA	12,300 [18,300]	NA	NA
Nitrate-N	10,000	25,000	ug/L	750	1,700	NA	5,300	4,500	NA	3,600	NA	3,500	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	27,000	18,800	NA	18,100	33,900	1,600	NA	23,900 [23,800]	NA	NA
Total Dissolved Solids	- -	- -	ug/L	333,000	121,000	NA	290,000	252,000	202,000	NA	269,000 [233,000]	NA	NA
Detected Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	0.26 U	0.25 U	NA	0.25 U	0.25 U	0.25 U	NA	0.25 U [0.19 J]	NA	NA
2,4,5-T	- -	120	ug/L	0.01 U	0.0033 J	NA	0.0098 U	0.01 U	0.0099 U	NA	0.01 U [0.0098 U]	NA	NA
2,4,5-TP	50	84	ug/L	0.01 U	0.01 U	NA	0.0098 U	0.01 U	0.0024 J	NA	0.01 U [0.0098 U]	NA	NA
2,4-D	70	130	ug/L	0.1 U	0.1 U	NA	0.098 U	0.1 U	0.099 U	NA	0.1 U [0.098 U]	NA	NA
2,4-DB	- -	91	ug/L	0.21 U	0.2 U	NA	0.2 U	0.2 U	0.2 U	NA	0.2 U [0.2 U]	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	210 U	200 U	NA	200 U	200 U	200 U	NA	200 U [200 U]	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	1 U	1 U	NA	0.98 U	1 U	0.99 U	NA	1 U [0.98 U]	NA	NA
Dicamba	- -	440	ug/L	0.062 U	0.06 U	NA	0.059 U	0.061 U	0.059 U	NA	0.06 U [0.059 U]	NA	NA
Dichlorprop	- -	- -	ug/L	0.1 U	0.1 U	NA	0.098 U	0.1 U	0.099 U	NA	0.1 U [0.098 U]	NA	NA
Dinoseb	7	11	ug/L	0.1 U	0.1 U	NA	0.098 U	0.1 U	0.099 U	NA	0.1 U [0.098 U]	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	0.015 U [0.015 U]	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	0.01 U [0.01 U]	NA	NA
MCPP	- -	12	ug/L	41 U	40 U	NA	39 U	40 U	40 U	NA	40 U [39 U]	NA	NA
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	0.01 U [0.01 U]	NA	NA
Detected Pesticides													
4,4'-DDD	- -	0.28	ug/L	0.022 U	0.021 U	NA	0.021 U	0.02 U	0.02 U	NA	0.022 U [0.02 U]	NA	NA
4,4'-DDE	- -	0.2	ug/L	0.022 U	0.021 U	NA	0.021 U	0.02 U	0.02 U	NA	0.022 U [0.02 U]	NA	NA
4,4'-DDT	- -	0.2	ug/L	0.022 U	0.021 U	NA	0.021 U	0.02 U	0.02 U	NA	0.022 U [0.02 U]	NA	NA
Aldrin	- -	0.00021	ug/L	0.011 U	0.011 U	NA	0.011 U	0.0099 U	0.0098 U	NA	0.011 U [0.01 U]	NA	NA
Alpha-BHC	- -	0.0062	ug/L	0.011 U	0.011 U	NA	0.011 U	0.0099 U	0.0098 U	NA	0.011 U [0.01 U]	NA	NA
Alpha-Chlordane	- -	- -	ug/L	0.011 U	0.011 U	NA	0.011 U	0.0099 U	0.0098 U	NA	0.011 U [0.01 U]	NA	NA
Beta-BHC	- -	0.022	ug/L	0.011 U	0.011 U	NA	0.011 U	0.0099 U	0.0098 U	NA	0.011 U [0.01 U]	NA	NA
Delta-BHC	- -	- -	ug/L	0.011 U	0.011 U	NA	0.011 U	0.0099 U	0.0098 U	NA	0.011 U [0.01 U]	NA	NA
Gamma-BHC (Lindane)	0.2	0.036	ug/L	0.011 U	0.011 U	NA	0.011 U	0.0099 U	0.0098 U	NA	0.011 U [0.01 U]	NA	NA
Gamma-Chlordane	- -	- -	ug/L	0.022 U	0.021 U	NA	0.021 U	0.02 U	0.02 U	NA	0.022 U [0.02 U]	NA	NA
Heptachlor	0.4	0.0018	ug/L	0.011 U	0.011 U	NA	0.011 U	0.0099 U	0.0098 U	NA	0.011 U [0.01 U]	NA	NA
Detected Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	2.97 BJ [2.76 BJQ]	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	.86 BJQ [1.32 BJQ	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	0.776 BJQ [0.44 B	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	.368 BJQ [0.203 B	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	584 BJQ [0.374 BJ	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	486 BJQ [0.427 BJ	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	401 BJQ [0.557 BJ	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	389 BJQ [0.465 BJ	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	.613 BJQ [0.354 B	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	282 BJQ [0.344 BJ	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	.354 BJQ [0.316 B	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	487 BJQ [0.573 BJ	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	287 BJQ [0.422 BJ	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	0.282 JQ [2.04 U]	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	1.97 U [0.233 BJ]	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	1.21 BJ [1.05 BJ]	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	6.56 BJ [7.05 BJ]	NA	NA
Detected Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	0.72	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	0.39	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW72	BMW72	BMW72	BMW73	BMW73	BMW74	BMW74	BMW076	BMW76	BMW76
Sample Depth(FT):				45 - 55	58 - 68	85 - 95				59 - 69			97 - 103
Date Collected:				06/07/11	06/07/11	06/07/11	09/13/11	04/10/12	04/05/12	07/25/11	11/15/11	04/02/12	06/05/11
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Detected PCBs													
None Detected	- -	- -	- -	NA	NA	NA	NA	- -	- -	NA	NA	- -	NA
Detected Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U	0.3 J	0.3 J	0.1 J	0.1 J	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.5 U	0.5 U	0.5 U	0.8	1	0.4 J	0.5 J	0.1 J	0.4 J	1.4
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	**0.3 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U	5 U	5 U	3.1 J	3.3 J	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**0.2 J**	**0.2 J**	**0.4 J**	**7.3**	**6.5**	**1.9**	**2**	**0.3 J**	**0.3 J**	0.5 U
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.5 U	0.5 U	0.5 U	8.5	8.3	0.2 J	0.3 J	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.1 J	0.1 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 J	0.5 J	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.2 J	0.1 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.5 U	0.5 U	0.2 J	8.7	6.7	0.2 J	0.4 J	0.5 U	0.5 U	0.5 U
Toluene	1,000	860	ug/L	1.8	2.1	1.2	0.5 U	0.5 U	0.1 J	0.5 J	0.5 U	0.5 U	0.4 J
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	0.5 U	0.1 J	0.4 J	**24**	**21**	**18**	**25**	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	- -	1,100	ug/L	0.5 J	0.8	0.6	1.8	2.3	2.5	2.1	0.5 U	0.5 U	0.5 U
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Detected Semivolatile Organics													
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
1,2-Dichlorobenzene	600	280	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
1,4-Dichlorobenzene	75	0.42	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
1,4-Dioxane	- -	0.67	ug/L	NA	NA	NA	NA	**2 J**	5 U	NA	NA	5 U	NA
2,4,5-Trichlorophenol	- -	890	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
2,4-Dichlorophenol	- -	35	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
2,4-Dimethylphenol	- -	270	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
2-Chlorophenol	- -	71	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
2-Methylnaphthalene	- -	27	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
4-Methylphenol	- -	1,400	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
Acetophenone	- -	1,500	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Benzoic Acid	- -	58,000	ug/L	NA	NA	NA	NA	15 U	32	NA	NA	15 U	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA
Fluoranthene	- -	630	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Fluorene	- -	220	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Hexachlorobutadiene	- -	0.26	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
Naphthalene	- -	0.14	ug/L	NA	NA	NA	NA	0.1 J	0.5 U	NA	NA	0.5 U	NA
Pentachlorophenol	1	0.17	ug/L	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA
Phenanthrene	- -	- -	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Phenol	- -	4,500	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
Pyrene	- -	87	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Detected Inorganics													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	200 U	893	NA	NA	200 U	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	1 U	1 U	NA	NA	1 U	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	2 U	**2.8**	NA	NA	**1.1 J**	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	49.5	42.1	NA	NA	63.3	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	14.3 J	12.7 J	NA	NA	50 U	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	75,300	62,600	NA	NA	31,300	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	1.7 J	10.8 J	NA	NA	1.3 J	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	10 U	10 U	NA	NA	10 U	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	23.5 J	341	NA	NA	34.3 J	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	12.7 J	7 J	NA	NA	8.5 J	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	30,500	10,400	NA	NA	15,300	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	0.58 J	8.6	NA	NA	1.6 J	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	0.028 J	0.2 U	NA	NA	0.2 U	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	2.6 J	10 U	NA	NA	10 U	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	2,810	26,000	NA	NA	1,210	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	13,300	22,400	NA	NA	4,610	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	5 U	5.3	NA	NA	1.5 J	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	20 U	20 U	NA	NA	4.9 J	NA
Detected Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW72	BMW72	BMW72	BMW73	BMW73	BMW74	BMW74	BMW076	BMW76	BMW76
Sample Depth(FT):				45 - 55	58 - 68	85 - 95				59 - 69			97 - 103
Date Collected:				06/07/11	06/07/11	06/07/11	09/13/11	04/10/12	04/05/12	07/25/11	11/15/11	04/02/12	06/05/11
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells
Detected Miscellaneous													
Bromide	- -	- -	ug/L	NA	NA	NA	NA	2,500 U	2,500 U	NA	NA	29,400	NA
Chloride	- -	- -	ug/L	NA	NA	NA	NA	20,500	45,300	NA	NA	11,600	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA	NA	3,900	6,900	NA	NA	500 U	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	NA	NA	NA	15,300	36,600	NA	NA	11,400	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA	NA	362,000	209,000	NA	NA	173,000	NA
Detected Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA	NA	0.25 U	0.25 U	NA	NA	0.25 U	NA
2,4,5-T	- -	120	ug/L	NA	NA	NA	NA	0.01 U	0.0033 J	NA	NA	0.01 U	NA
2,4,5-TP	50	84	ug/L	NA	NA	NA	NA	0.0038 J	0.0022 J	NA	NA	0.01 U	NA
2,4-D	70	130	ug/L	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	0.1 U	NA
2,4-DB	- -	91	ug/L	NA	NA	NA	NA	0.2 U	0.2 U	NA	NA	0.2 U	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA	NA	200 U	200 U	NA	NA	200 U	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA	NA	0.74 J	1 U	NA	NA	1 U	NA
Dicamba	- -	440	ug/L	NA	NA	NA	NA	0.06 U	0.06 U	NA	NA	0.061 U	NA
Dichlorprop	- -	- -	ug/L	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	0.1 U	NA
Dinoseb	7	11	ug/L	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	0.1 U	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	0.015 U	0.015 U	NA	NA	0.015 U	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	0.01 U	0.01 U	NA	NA	0.01 U	NA
MCPP	- -	12	ug/L	NA	NA	NA	NA	40 U	40 U	NA	NA	40 U	NA
Monuron	- -	- -	ug/L	NA	NA	NA	NA	0.056	0.005 J	NA	NA	0.01 U	NA
Detected Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	NA	NA	NA	0.02 U	0.02 U	NA	NA	0.022 U	NA
4,4'-DDE	- -	0.2	ug/L	NA	NA	NA	NA	0.02 U	0.02 U	NA	NA	0.022 U	NA
4,4'-DDT	- -	0.2	ug/L	NA	NA	NA	NA	0.02 U	0.02 U	NA	NA	0.022 U	NA
Aldrin	- -	0.00021	ug/L	NA	NA	NA	NA	0.0099 U	0.01 U	NA	NA	0.011 U	NA
Alpha-BHC	- -	0.0062	ug/L	NA	NA	NA	NA	0.0099 U	0.01 U	NA	NA	0.011 U	NA
Alpha-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	0.0099 U	0.01 U	NA	NA	0.011 U	NA
Beta-BHC	- -	0.022	ug/L	NA	NA	NA	NA	0.0099 U	0.01 U	NA	NA	0.011 U	NA
Delta-BHC	- -	- -	ug/L	NA	NA	NA	NA	0.0099 U	0.01 U	NA	NA	0.011 U	NA
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	NA	NA	NA	0.0099 U	0.01 U	NA	NA	0.011 U	NA
Gamma-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	0.02 U	0.02 U	NA	NA	0.022 U	NA
Heptachlor	0.4	0.0018	ug/L	NA	NA	NA	NA	0.0099 U	0.01 U	NA	NA	0.011 U	NA
Detected Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	3.45 BJ	3.35 BJ	NA	NA	3.45 BJ	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	1.17 BJ	1.04 BJ	NA	NA	1.6 BJ	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	0.296 BJQ	0.448 BJ	NA	NA	0.563 BJ	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	0.224 BJ	0.367 BJ	NA	NA	0.568 BJ	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	0.604 BJ	0.494 BJ	NA	NA	0.664 BJ	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	0.491 BJQ	0.63 BJ	NA	NA	0.537 BJ	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	0.534 BJ	0.26 BJ	NA	NA	0.491 BJQ	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	0.516 BJ	0.427 BJQ	NA	NA	0.693 BJ	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	0.392 BJ	0.832 BJ	NA	NA	0.52 BJQ	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	0.402 BJ	0.566 BJ	NA	NA	0.715 BJ	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	0.666 BJQ	0.474 BJQ	NA	NA	0.561 BJQ	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	0.485 BJ	0.452 BJ	NA	NA	0.633 BJ	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	0.671 BJ	0.567 BJQ	NA	NA	1.14 BJ	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	1.93 U	**1.39 BJQ**	NA	NA	0.403 JQ	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	0.241 BJ	0.213 J	NA	NA	1.96 U	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	0.928 BJ	1.13 BJ	NA	NA	1.09 BJ	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	7.21 BJ	7.33 BJ	NA	NA	8.36 BJ	NA
Detected Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	1.4	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	0	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW077	BMW77	BMW77 40 - 50	BMW77 56 - 71	BMW78A	BMW78B	CC001	CC002	CC003A	CC003B
Sample Depth(FT):													
Date Collected:				11/15/11	04/02/12	06/06/11	06/06/11	04/03/12	04/03/12	04/19/12	04/19/12	04/20/12	04/20/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey
Detected PCBs													
None Detected	- -	- -	- -	NA	- -	NA	NA	- -	- -	NA	- -	- -	NA
Detected Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.4 J	0.5 U	0.3 J	0.3 J	0.3 J
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.3 J	0.2 J	0.5 U	0.2 J	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	3.1	3.1	0.4 J	1.4	0.8	1.1	0.5 U	0.8	0.9	0.8
1,2,3-Trichlorobenzene	- -	5.2	ug/L	1.6	1.9	0.2 J	1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	NA	1 U	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	**3.1**	**4.9**	0.4 J	**2.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.1 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.1 J	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.2 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.2 J	0.2 J	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.2 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**0.5**	**0.5 J**	**0.4 J**	**0.5 J**	**2.1**	**3.7**	**2.6**	**2.7**	**2.9**	**2.7**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	1.5	1.5	0.3 J	0.9	1.7	2.1	0.5 U	1	1.2	1
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.7	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	3	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.9	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	**15**	**18**	2.3	8.9	1	1.1	0.5 U	0.7	0.9	0.7
Toluene	1,000	860	ug/L	0.5 U	0.5 U	2	4.8	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**5.5**	**5.7**	**0.7**	**3**	**14**	**18**	**0.7**	**12**	**13**	**12**
Trichlorofluoromethane	- -	1,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	1.3	2.5	0.6	3.4	3.8	3.3
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Detected Semivolatile Organics													
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	**5**	NA	NA	1 U	1 U	NA	1 U	1 U	NA
1,2-Dichlorobenzene	600	280	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
1,4-Dichlorobenzene	75	0.42	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
1,4-Dioxane	- -	0.67	ug/L	NA	**1 J**	NA	NA	5 U	5 U	NA	5 U	5 U	NA
2,4,5-Trichlorophenol	- -	890	ug/L	NA	2	NA	NA	1 U	1 U	NA	1 U	1 U	NA
2,4-Dichlorophenol	- -	35	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
2,4-Dimethylphenol	- -	270	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
2-Chlorophenol	- -	71	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
2-Methylnaphthalene	- -	27	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
4-Methylphenol	- -	1,400	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
Acetophenone	- -	1,500	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Benzoic Acid	- -	58,000	ug/L	NA	15 U	NA	NA	15 U	14 U	NA	16 U	15 U	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	5 U	NA	NA	5 U	5 U	NA	5 U	5 U	NA
Fluoranthene	- -	630	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Fluorene	- -	220	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Hexachlorobutadiene	- -	0.26	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
Naphthalene	- -	0.14	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Pentachlorophenol	1	0.17	ug/L	NA	**24**	NA	NA	5 U	5 U	NA	5 U	5 U	NA
Phenanthrene	- -	- -	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Phenol	- -	4,500	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
Pyrene	- -	87	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Detected Inorganics													
Aluminum	- -	16,000	ug/L	NA	99.7 J	NA	NA	396	200 U	NA	200 U	790	NA
Antimony	6	6	ug/L	NA	1 U	NA	NA	1 U	1 U	NA	1 U	1 U	NA
Arsenic	10	0.045	ug/L	NA	2 U	NA	NA	2 U	**1.1 J**	NA	2 U	2 U	NA
Barium	2,000	2,900	ug/L	NA	98.3	NA	NA	57.7	82	NA	63.3	73.6	NA
Beryllium	4	16	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Boron	- -	3,100	ug/L	NA	24.9 J	NA	NA	9.2 J	4.1 J	NA	6.6 J	4.3 J	NA
Cadmium	5	- -	ug/L	NA	5 U	NA	NA	5 U	5 U	NA	5 U	5 U	NA
Calcium	- -	- -	ug/L	NA	117,000	NA	NA	68,800	40,000	NA	68,700	65,600	NA
Chromium	100	- -	ug/L	NA	3.9 J	NA	NA	19.9	7.4 J	NA	1.3 J	1.8 J	NA
Cobalt	- -	4.7	ug/L	NA	5 U	NA	NA	5 U	5 U	NA	0.79 J	1.3 J	NA
Copper	1,300	620	ug/L	NA	10 U	NA	NA	10 U	10 U	NA	10 U	1 J	NA
Iron	- -	11,000	ug/L	NA	128 J	NA	NA	200 U	200 U	NA	46.8 J	1,180	NA
Lead	15	- -	ug/L	NA	11.9 J	NA	NA	8.3 J	12.3 J	NA	15 U	15 U	NA
Magnesium	- -	- -	ug/L	NA	32,500	NA	NA	10,600	11,700	NA	15,600	16,700	NA
Manganese	- -	- -	ug/L	NA	21.6	NA	NA	5 U	5 U	NA	1.2 J	56	NA
Mercury	2	0.63	ug/L	NA	0.2 U	NA	NA	0.2 U	0.2 U	NA	0.2 U	0.2 U	NA
Nickel	- -	300	ug/L	NA	10 U	NA	NA	10 U	10 U	NA	10 U	10 U	NA
Potassium	- -	- -	ug/L	NA	3,200	NA	NA	3,400	11,200	NA	1,650	1,770	NA
Silver	- -	71	ug/L	NA	5 U	NA	NA	5 U	5 U	NA	5 U	5 U	NA
Sodium	- -	- -	ug/L	NA	12,000	NA	NA	8,310	21,000	NA	12,300	12,000	NA
Thallium	2	0.16	ug/L	NA	0.5 U	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Vanadium	- -	- -	ug/L	NA	1.5 J	NA	NA	2.5 J	3.1 J	NA	5 U	1.3 J	NA
Zinc	- -	4,700	ug/L	NA	20 U	NA	NA	20 U	20 U	NA	3.5 J	7.8 J	NA
Detected Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	147 J	200 U	NA	200 U	200 U	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	1 U	1 U	NA	1 U	1 U	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	2 U	**1.1 J**	NA	2 U	2 U	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	55.7	82.3	NA	63.5	61.1	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	10.3 J	3.3 J	NA	13.4 J	9.2 J	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	5 U	5 U	NA	5 U	0.44 J	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	47,800	40,200	NA	69,500	64,500	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	7.7 J	6.1 J	NA	15 U	15 U	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	5 U	5 U	NA	5 U	5 U	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	10 U	10 U	NA	2 J	2.5 J	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	200 U	200 U	NA	18 J	200 U	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	8.7 J	8.6 J	NA	15 U	15 U	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	14,200	11,700	NA	15,700	15,500	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	5 U	5 U	NA	5 U	5 U	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	0.2 U	0.2 U	NA	0.2 U	0.2 U	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	10 U	10 U	NA	10 U	10 U	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	3,730	11,200	NA	1,590	1,580	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	8,610	20,500	NA	12,400	11,300	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	1.8 J	3 J	NA	5 U	5 U	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	20 U	20 U	NA	20 U	20 U	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		BMW077	BMW77	BMW77	BMW77	BMW78A	BMW78B	CC001	CC002	CC003A	CC003B
Sample Depth(FT):						40 - 50	56 - 71						
Date Collected:				11/15/11	04/02/12	06/06/11	06/06/11	04/03/12	04/03/12	04/19/12	04/19/12	04/20/12	04/20/12
Sampling Area:	(shade)	(bold)	Units	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Area B Monitoring wells	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey
Detected Miscellaneous													
Bromide	- -	- -	ug/L	NA	2,500 U	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	ug/L	NA	22,500	NA	NA	18,100	18,900	NA	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	470 J	NA	NA	3,000	2,800	NA	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	49,100	NA	NA	13,200	43,000	NA	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	486,000	NA	NA	135,000	224,000	NA	NA	NA	NA
Detected Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	0.25 U	NA	NA	0.25 U	0.43	NA	NA	NA	NA
2,4,5-T	- -	120	ug/L	NA	0.17	NA	NA	0.0099 U	0.0033 J	NA	NA	NA	NA
2,4,5-TP	50	84	ug/L	NA	4.6	NA	NA	0.0099 U	0.0099 U	NA	NA	NA	NA
2,4-D	70	130	ug/L	NA	0.14 U	NA	NA	0.099 U	0.099 U	NA	NA	NA	NA
2,4-DB	- -	91	ug/L	NA	0.2 U	NA	NA	0.2 U	0.2 U	NA	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	200 U	NA	NA	200 U	200 U	NA	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	6	NA	NA	0.99 U	0.99 U	NA	NA	NA	NA
Dicamba	- -	440	ug/L	NA	0.06 U	NA	NA	0.059 U	0.059 U	NA	NA	NA	NA
Dichlorprop	- -	- -	ug/L	NA	0.1 U	NA	NA	0.099 U	0.099 U	NA	NA	NA	NA
Dinoseb	7	11	ug/L	NA	2.2	NA	NA	0.099 U	0.099 U	NA	NA	NA	NA
Diuron	- -	28	ug/L	NA	0.015	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	0.01 U	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	- -	12	ug/L	NA	40 U	NA	NA	39 U	40 U	NA	NA	NA	NA
Monuron	- -	- -	ug/L	NA	0.009 J	NA	NA	NA	NA	NA	NA	NA	NA
Detected Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	0.021 U	NA	NA	0.02 U	0.02 U	NA	0.022 U	0.02 U	NA
4,4'-DDE	- -	0.2	ug/L	NA	0.021 U	NA	NA	0.02 U	0.02 U	NA	0.022 U	0.02 U	NA
4,4'-DDT	- -	0.2	ug/L	NA	0.021 U	NA	NA	0.02 U	0.02 U	NA	0.022 U	0.02 U	NA
Aldrin	- -	0.00021	ug/L	NA	0.01 U	NA	NA	0.0098 U	0.0099 U	NA	0.011 U	0.0098 U	NA
Alpha-BHC	- -	0.0062	ug/L	NA	0.01 U	NA	NA	0.0098 U	0.0099 U	NA	0.011 U	0.0098 U	NA
Alpha-Chlordane	- -	- -	ug/L	NA	0.01 U	NA	NA	0.0098 U	0.0099 U	NA	0.011 U	0.0098 U	NA
Beta-BHC	- -	0.022	ug/L	NA	0.01 U	NA	NA	0.0098 U	0.0099 U	NA	0.0039 J	0.0041 J	NA
Delta-BHC	- -	- -	ug/L	NA	0.01 U	NA	NA	0.0098 U	0.0099 U	NA	0.011 U	0.0098 U	NA
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	0.01 U	NA	NA	0.0098 U	0.0099 U	NA	0.011 U	0.0098 U	NA
Gamma-Chlordane	- -	- -	ug/L	NA	0.021 U	NA	NA	0.02 U	0.02 U	NA	0.022 U	0.02 U	NA
Heptachlor	0.4	0.0018	ug/L	NA	0.01 U	NA	NA	0.0098 U	0.0099 U	NA	0.011 U	0.0098 U	NA
Detected Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	2.56 BJ	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	1.22 BJ	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	0.365 BJQ	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	0.358 BJ	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	0.423 BJQ	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	0.261 BJQ	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	0.209 BJ	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	0.231 BJQ	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	0.224 BJQ	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	9.68 U	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	0.24 BJQ	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	0.436 BJ	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	0.514 BJ	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	1.94 U	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	1.94 U	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	0.646 BJQ	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	8.78 BJ	NA	NA	NA	NA	NA	NA	NA	NA
Detected Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	2.1	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	7.8	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Sample Depth(FT): / Date Collected: / Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	CC003C 04/20/12 Springs/Seeps Identified During Stream Survey	CC004 04/20/12 Springs/Seeps Identified During Stream Survey	CC006/Sewerline Spring 04/19/12 Named Springs	CC007/Upsurgent Spring 04/19/12 Named Springs	CC008/Spearmint Spring A 04/19/12 Named Springs	CC008A/Spearmint Spring B 04/19/12 Named Springs	CC009 04/19/12 Springs/Seeps Identified During Stream Survey	CC010 04/19/12 Springs/Seeps Identified During Stream Survey	CC011 04/20/12 Springs/Seeps Identified During Stream Survey	CC013 04/20/12 Springs/Seeps Identified During Stream Survey
Detected PCBs													
None Detected	- -	- -	- -	NA	- -	- -	- -	- -	NA	NA	NA	- -	NA
Detected Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.3 J	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.9	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	0.4 J
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**2.8**	**1.7**	**3.7**	**7.4**	**5.7**	**6.7**	**0.6**	**2.5**	**1**	**1**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	1.1	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.4 J	0.5 J
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.9	0.4 J	0.2 J	0.4 J	0.1 J	0.5 U	0.1 J	0.1 J	0.4 J	0.4 J
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**13**	**6.5**	**1.4**	**1.3**	**2.9**	**3.5**	**1.1**	**0.7**	**4**	**4.3**
Trichlorofluoromethane	- -	1,100	ug/L	3.8	1.8	0.1 J	0.5 U	0.1 J	0.1 J	0.4 J	0.6	2.9	3
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Detected Semivolatile Organics													
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
1,2-Dichlorobenzene	600	280	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
1,4-Dichlorobenzene	75	0.42	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
1,4-Dioxane	- -	0.67	ug/L	NA	5 U	5 U	5 U	5 U	NA	NA	NA	5 U	NA
2,4,5-Trichlorophenol	- -	890	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
2,4-Dichlorophenol	- -	35	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
2,4-Dimethylphenol	- -	270	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
2-Chlorophenol	- -	71	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
2-Methylnaphthalene	- -	27	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
4-Methylphenol	- -	1,400	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
Acetophenone	- -	1,500	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Benzoic Acid	- -	58,000	ug/L	NA	15 U	16 U	14 U	14 U	NA	NA	NA	15 U	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	5 U	5 U	5 U	5 U	NA	NA	NA	5 U	NA
Fluoranthene	- -	630	ug/L	NA	0.2 J	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Fluorene	- -	220	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Hexachlorobutadiene	- -	0.26	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
Naphthalene	- -	0.14	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Pentachlorophenol	1	0.17	ug/L	NA	5 U	5 U	5 U	5 U	NA	NA	NA	5 U	NA
Phenanthrene	- -	- -	ug/L	NA	0.2 J	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Phenol	- -	4,500	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
Pyrene	- -	87	ug/L	NA	0.2 J	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Detected Inorganics													
Aluminum	- -	16,000	ug/L	NA	14,900	200 U	359	460	NA	NA	NA	717	NA
Antimony	6	6	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
Arsenic	10	0.045	ug/L	NA	**2.4**	2 U	2 U	2 U	NA	NA	NA	2 U	NA
Barium	2,000	2,900	ug/L	NA	221	54.8	36.4	40.2	NA	NA	NA	72.6	NA
Beryllium	4	16	ug/L	NA	0.76	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Boron	- -	3,100	ug/L	NA	7.8 J	24.5 J	40.3 J	19.3 J	NA	NA	NA	10.9 J	NA
Cadmium	5	- -	ug/L	NA	0.57 J	0.29 J	5 U	0.38 J	NA	NA	NA	5 U	NA
Calcium	- -	- -	ug/L	NA	74,500	103,000	73,400	86,400	NA	NA	NA	66,900	NA
Chromium	100	- -	ug/L	NA	16.3	15 U	1.3 J	1.4 J	NA	NA	NA	1.9 J	NA
Cobalt	- -	4.7	ug/L	NA	**9.9**	5 U	**9.2**	0.95 J	NA	NA	NA	5 U	NA
Copper	1,300	620	ug/L	NA	11.7	10 U	9.1 J	1.4 J	NA	NA	NA	1.7 J	NA
Iron	- -	11,000	ug/L	NA	**21,100**	54.3 J	416	406	NA	NA	NA	1,090	NA
Lead	15	- -	ug/L	NA	22.3	15 U	15 U	15 U	NA	NA	NA	4 J	NA
Magnesium	- -	- -	ug/L	NA	19,600	10,500	9,670	9,460	NA	NA	NA	17,200	NA
Manganese	- -	- -	ug/L	NA	396	1.1 J	5.4	6.8	NA	NA	NA	17.3	NA
Mercury	2	0.63	ug/L	NA	0.2 U	0.2 U	0.2 U	0.2 U	NA	NA	NA	0.2 U	NA
Nickel	- -	300	ug/L	NA	11.6	10 U	5.9 J	10 U	NA	NA	NA	10 U	NA
Potassium	- -	- -	ug/L	NA	4,600	2,840	3,320	3,600	NA	NA	NA	1,810	NA
Silver	- -	71	ug/L	NA	5 U	5 U	5 U	5 U	NA	NA	NA	5 U	NA
Sodium	- -	- -	ug/L	NA	14,000	81,200	111,000	71,400	NA	NA	NA	10,900	NA
Thallium	2	0.16	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Vanadium	- -	- -	ug/L	NA	20.6	5 U	5 U	5 U	NA	NA	NA	5 U	NA
Zinc	- -	4,700	ug/L	NA	52.1	20 U	4.2 J	5.3 J	NA	NA	NA	5.2 J	NA
Detected Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	200 U	200 U	200 U	200 U	NA	NA	NA	200 U	NA
Antimony	6	6	ug/L	NA	1 U	1 U	1 U	1 U	NA	NA	NA	1 U	NA
Arsenic	10	0.045	ug/L	NA	2 U	2 U	2 U	2 U	NA	NA	NA	2 U	NA
Barium	2,000	2,900	ug/L	NA	65.7	53	32.5	37.1	NA	NA	NA	63.6	NA
Boron	- -	3,100	ug/L	NA	8.8 J	30.3 J	43.7 J	25.3 J	NA	NA	NA	10.3 J	NA
Cadmium	5	- -	ug/L	NA	5 U	5 U	0.31 J	0.33 J	NA	NA	NA	5 U	NA
Calcium	- -	- -	ug/L	NA	68,900	104,000	74,100	81,500	NA	NA	NA	70,600	NA
Chromium	100	- -	ug/L	NA	15 U	1.5 J	1.3 J	1.5 J	NA	NA	NA	15 U	NA
Cobalt	- -	4.7	ug/L	NA	5 U	5 U	**7.7**	5 U	NA	NA	NA	5 U	NA
Copper	1,300	620	ug/L	NA	10 U	6 J	8.5 J	3.4 J	NA	NA	NA	10 U	NA
Iron	- -	11,000	ug/L	NA	200 U	200 U	20.7 J	200 U	NA	NA	NA	200 U	NA
Lead	15	- -	ug/L	NA	15 U	15 U	15 U	15 U	NA	NA	NA	15 U	NA
Magnesium	- -	- -	ug/L	NA	15,800	10,200	9,350	9,170	NA	NA	NA	15,900	NA
Manganese	- -	- -	ug/L	NA	14.6	5 U	2.1 J	3.6 J	NA	NA	NA	5 U	NA
Mercury	2	0.63	ug/L	NA	0.2 U	0.2 U	0.2 U	0.2 U	NA	NA	NA	0.2 U	NA
Nickel	- -	300	ug/L	NA	10 U	10 U	5.5 J	10 U	NA	NA	NA	10 U	NA
Potassium	- -	- -	ug/L	NA	2,400	2,810	3,010	3,330	NA	NA	NA	1,570	NA
Sodium	- -	- -	ug/L	NA	13,400	80,200	112,000	67,700	NA	NA	NA	10,200	NA
Thallium	2	0.16	ug/L	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Vanadium	- -	- -	ug/L	NA	5 U	5 U	5 U	5 U	NA	NA	NA	5 U	NA
Zinc	- -	4,700	ug/L	NA	20 U	20 U	5.1 J	19.3 J	NA	NA	NA	20 U	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(FT): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	CC003C 04/20/12 Springs/Seeps Identified During Stream Survey	CC004 04/20/12 Springs/Seeps Identified During Stream Survey	CC006/Sewerline Spring 04/19/12 Named Springs	CC007/Upsurgent Spring 04/19/12 Named Springs	CC008/Spearmint Spring A 04/19/12 Named Springs	CC008A/Spearmint Spring B 04/19/12 Named Springs	CC009 04/19/12 Springs/Seeps Identified During Stream Survey	CC010 04/19/12 Springs/Seeps Identified During Stream Survey	CC011 04/20/12 Springs/Seeps Identified During Stream Survey	CC013 04/20/12 Springs/Seeps Identified During Stream Survey
Detected Miscellaneous													
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-T	- -	120	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TP	50	84	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	70	130	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DB	- -	91	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dicamba	- -	440	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorprop	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dinoseb	7	11	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	- -	12	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	0.02 U	0.02 U	0.019 U	0.019 U	NA	NA	NA	0.021 U	NA
4,4'-DDE	- -	0.2	ug/L	NA	0.02 U	0.02 U	0.019 U	0.019 U	NA	NA	NA	0.021 U	NA
4,4'-DDT	- -	0.2	ug/L	NA	0.035	0.02 U	0.019 U	0.019 U	NA	NA	NA	0.021 U	NA
Aldrin	- -	0.00021	ug/L	NA	0.01 U	0.01 U	0.0095 U	0.0097 U	NA	NA	NA	0.011 U	NA
Alpha-BHC	- -	0.0062	ug/L	NA	0.01 U	0.01 U	0.0095 U	0.0097 U	NA	NA	NA	0.011 U	NA
Alpha-Chlordane	- -	- -	ug/L	NA	0.01 U	0.01 U	0.0082 J	0.0042 J	NA	NA	NA	0.011 U	NA
Beta-BHC	- -	0.022	ug/L	NA	0.01 U	0.0077 J	0.0037 J	0.0097 U	NA	NA	NA	0.011 U	NA
Delta-BHC	- -	- -	ug/L	NA	0.01 U	0.01 U	0.0095 U	0.0097 U	NA	NA	NA	0.011 U	NA
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	0.01 U	0.01 U	0.0095 U	0.0097 U	NA	NA	NA	0.011 U	NA
Gamma-Chlordane	- -	- -	ug/L	NA	0.02 U	0.02 U	0.0043 J	0.019 U	NA	NA	NA	0.021 U	NA
Heptachlor	0.4	0.0018	ug/L	NA	0.01 U	0.01 U	0.0095 U	0.0097 U	NA	NA	NA	0.011 U	NA
Detected Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		CC015	CC018	CC019	CC020	CC021	CC022	CC023	CC024	DGRAN-18	DWELL-66
Sample Depth(FT):													
Date Collected:				04/20/12	04/20/12	04/20/12	04/20/12	04/19/12	04/20/12	04/20/12	04/20/12	04/20/12	11/16/11
Sampling Area:	(shade)	(bold)	Units	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Residential Wells	Residential Wells
Detected PCBs													
None Detected	- -	- -	- -	NA	- -	NA	- -	NA	- -	NA	NA	NA	NA
Detected Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.3 J	0.3 J	0.5 U	0.5 U	0.5 U [0.5 U]
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,1-Dichloroethene	7	260	ug/L	0.2 J	0.5 U	0.5 U	0.5 U	0.7	0.8	0.8	0.5 U	0.5 U	0.5 U [0.5 U]
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,2,3-Trichloropropane	- -	0.00065	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
Acetone	- -	12,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Chloroform	70	0.19	ug/L	**0.7**	**0.7**	**0.5**	**0.3 J**	**2.6**	**2.7**	**2.9**	**0.5**	0.5 U	0.5 U [0.5 U]
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
cis-1,2-Dichloroethene	70	28	ug/L	0.2 J	0.5 U	0.5 U	0.5 U	0.9	0.9	1	0.5 U	0.5 U	0.5 U [0.5 U]
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J [0.2 J]
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Tetrachloroethene	5	9.7	ug/L	0.2 J	0.1 J	0.5 U	0.5 U	0.7	0.7	0.8	0.5 U	0.5 U	0.5 U [0.5 U]
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Trichloroethene	5	0.44	ug/L	**2.1**	**0.6**	0.3 J	0.5 U	**11**	**12**	**13**	0.2 J	0.5 U	0.5 U [0.5 U]
Trichlorofluoromethane	- -	1,100	ug/L	2.5	1	0.8	0.9	3	3.2	3.5	1	0.5 U	0.5 U [0.5 U]
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]
Detected Semivolatile Organics													
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
1,2-Dichlorobenzene	600	280	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
1,4-Dichlorobenzene	75	0.42	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
1,4-Dioxane	- -	0.67	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
2,4,5-Trichlorophenol	- -	890	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
2,4-Dichlorophenol	- -	35	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
2,4-Dimethylphenol	- -	270	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
2-Chlorophenol	- -	71	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
2-Methylnaphthalene	- -	27	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
4-Methylphenol	- -	1,400	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
Acetophenone	- -	1,500	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Benzoic Acid	- -	58,000	ug/L	NA	15 U	NA	15 U	NA	14 U	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Fluoranthene	- -	630	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Fluorene	- -	220	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Hexachlorobutadiene	- -	0.26	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
Naphthalene	- -	0.14	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Pentachlorophenol	1	0.17	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Phenanthrene	- -	- -	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Phenol	- -	4,500	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
Pyrene	- -	87	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Detected Inorganics													
Aluminum	- -	16,000	ug/L	NA	1,730	NA	1,050	NA	455	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	2 U	NA	2 U	NA	2 U	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	75.4	NA	79.3	NA	69.6	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	8.8 J	NA	8.3 J	NA	6.8 J	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	68,100	NA	78,100	NA	62,200	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	2.4 J	NA	1.6 J	NA	1.5 J	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	1.2 J	NA	5 U	NA	0.88 J	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	2.3 J	NA	1.4 J	NA	0.97 J	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	2,180	NA	1,370	NA	727	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	4.2 J	NA	3.8 J	NA	15 U	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	17,000	NA	15,300	NA	14,600	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	13.6	NA	14.3	NA	22.6	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	0.2 U	NA	0.2 U	NA	0.2 U	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	1.6 J	NA	1.3 J	NA	10 U	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	1,950	NA	1,720	NA	2,170	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	11,700	NA	20,500	NA	14,700	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	1.5 J	NA	1.3 J	NA	5 U	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	14.3 J	NA	6.7 J	NA	3.9 J	NA	NA	NA	NA
Detected Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	200 U	NA	200 U	NA	200 U	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	1 U	NA	1 U	NA	1 U	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	2 U	NA	2 U	NA	2 U	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	59.8	NA	70.3	NA	62	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	8.8 J	NA	7.8 J	NA	12.4 J	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	79,000	NA	88,800	NA	61,400	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	15 U	NA	1.2 J	NA	15 U	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	10 U	NA	10 U	NA	1.9 J	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	200 U	NA	200 U	NA	20.7 J	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	15 U	NA	15 U	NA	15 U	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	16,600	NA	14,900	NA	14,000	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	0.72 J	NA	5 U	NA	5	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	0.2 U	NA	0.2 U	NA	0.2 U	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	1,610	NA	1,430	NA	1,980	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	11,600	NA	20,200	NA	14,400	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	7.1 J	NA	20 U	NA	20 U	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		CC015	CC018	CC019	CC020	CC021	CC022	CC023	CC024	DGRAN-18	DWELL-66
Sample Depth(FT):													
Date Collected:				04/20/12	04/20/12	04/20/12	04/20/12	04/19/12	04/20/12	04/20/12	04/20/12	04/20/12	11/16/11
Sampling Area:	(shade)	(bold)	Units	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Residential Wells	Residential Wells
Detected Miscellaneous													
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-T	- -	120	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TP	50	84	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	70	130	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DB	- -	91	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dicamba	- -	440	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorprop	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dinoseb	7	11	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	- -	12	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	0.02 U	NA	0.02 U	NA	0.02 U	NA	NA	NA	NA
4,4'-DDE	- -	0.2	ug/L	NA	0.02 U	NA	0.02 U	NA	0.02 U	NA	NA	NA	NA
4,4'-DDT	- -	0.2	ug/L	NA	0.02 U	NA	0.02 U	NA	0.02 U	NA	NA	NA	NA
Aldrin	- -	0.00021	ug/L	NA	0.0098 U	NA	0.0098 U	NA	0.0098 U	NA	NA	NA	NA
Alpha-BHC	- -	0.0062	ug/L	NA	0.0098 U	NA	0.0098 U	NA	0.0098 U	NA	NA	NA	NA
Alpha-Chlordane	- -	- -	ug/L	NA	0.0098 U	NA	0.0032 J	NA	0.0098 U	NA	NA	NA	NA
Beta-BHC	- -	0.022	ug/L	NA	0.0098 U	NA	0.0098 U	NA	0.0093 J	NA	NA	NA	NA
Delta-BHC	- -	- -	ug/L	NA	0.0098 U	NA	0.0098 U	NA	0.0098 U	NA	NA	NA	NA
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	0.0098 U	NA	0.0098 U	NA	0.0098 U	NA	NA	NA	NA
Gamma-Chlordane	- -	- -	ug/L	NA	0.02 U	NA	0.02 U	NA	0.02 U	NA	NA	NA	NA
Heptachlor	0.4	0.0018	ug/L	NA	0.0098 U	NA	0.0098 U	NA	0.0098 U	NA	NA	NA	NA
Detected Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		DWELL-66	DWELL-77	DWELL-77	DWELL-314	DWELL-314	DWELL-600	DWELL-600	DWGRAN-17	DWGRAN-18	DWGRAN-18
Sample Depth(FT):													
Date Collected:				04/20/12	11/16/11	04/20/12	11/16/11	04/20/12	11/16/11	04/20/12	05/30/12	11/16/11	04/20/12
Sampling Area:	(shade)	(bold)	Units	Residential Wells	Residential Wells	Residential Wells	Residential Wells	Residential Wells	Residential Wells	Residential Wells	Residential Wells	Residential Wells	Residential Wells
Detected PCBs													
None Detected	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	NA	NA	NA	NA	NA	NA	NA	1 U	NA	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	- -	12	ug/L	0.2 J	0.1 J	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	- -	1,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U
Detected Semivolatile Organics													
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	600	280	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	75	0.42	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dioxane	- -	0.67	ug/L	NA	NA	NA	NA	NA	NA	NA	5 U	NA	NA
2,4,5-Trichlorophenol	- -	890	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	- -	35	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	- -	270	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	- -	27	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	- -	1,400	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	- -	1,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic Acid	- -	58,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	- -	630	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	- -	220	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	- -	0.26	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	- -	0.14	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	1	0.17	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	- -	4,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	- -	87	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Inorganics													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(FT): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	DWELL-66 04/20/12 Residential Wells	DWELL-77 11/16/11 Residential Wells	DWELL-77 04/20/12 Residential Wells	DWELL-314 11/16/11 Residential Wells	DWELL-314 04/20/12 Residential Wells	DWELL-600 11/16/11 Residential Wells	DWELL-600 04/20/12 Residential Wells	DWGRAN-17 05/30/12 Residential Wells	DWGRAN-18 11/16/11 Residential Wells	DWGRAN-18 04/20/12 Residential Wells
Detected Miscellaneous													
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-T	- -	120	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TP	50	84	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	70	130	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DB	- -	91	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dicamba	- -	440	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorprop	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dinoseb	7	11	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	- -	12	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	- -	0.00021	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-BHC	- -	0.0062	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beta-BHC	- -	0.022	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta-BHC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	0.4	0.0018	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		DWGRAW-18	DWSRD-1	DWSRD-26	PZ-01	PZ-02	PZ-03	PZ-05	PZ-06	PZ-07	PZ-08
Sample Depth(FT):													
Date Collected:				11/16/11	04/24/12	04/24/12	03/12/12	03/12/12	03/12/12	03/12/12	03/12/12	03/12/12	03/09/12
Sampling Area:	(shade)	(bold)	Units	Residential Wells	Residential Wells	Residential Wells	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers
Detected PCBs													
None Detected	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	NA	1 U	1 U [1 U]	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U [5 U]	5 U	3 J	5 U	5 U	5 U	3.3 J	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	0.5 U	**0.4 J**	**0.5 J [0.5 J]**	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.5 U	0.2 J	0.1 J [0.1 J]	0.1 J	4.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	0.5 U	**2**	**1.1 [1.1]**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	- -	1,100	ug/L	0.5 U	0.4 J	0.5 J [0.5 J]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Detected Semivolatile Organics													
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	600	280	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	75	0.42	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dioxane	- -	0.67	ug/L	NA	6 U	5 U [5 U]	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	- -	890	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	- -	35	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	- -	270	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	- -	27	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	- -	1,400	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	- -	1,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic Acid	- -	58,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	- -	630	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	- -	220	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	- -	0.26	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	- -	0.14	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	1	0.17	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	- -	4,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	- -	87	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Inorganics													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(FT): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	DWGRAW-18 11/16/11 Residential Wells	DWSRD-1 04/24/12 Residential Wells	DWSRD-26 04/24/12 Residential Wells	PZ-01 03/12/12 DPT/ Piezometers	PZ-02 03/12/12 DPT/ Piezometers	PZ-03 03/12/12 DPT/ Piezometers	PZ-05 03/12/12 DPT/ Piezometers	PZ-06 03/12/12 DPT/ Piezometers	PZ-07 03/12/12 DPT/ Piezometers	PZ-08 03/09/12 DPT/ Piezometers
Detected Miscellaneous													
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-T	- -	120	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TP	50	84	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	70	130	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DB	- -	91	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dicamba	- -	440	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorprop	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dinoseb	7	11	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	- -	12	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	- -	0.00021	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-BHC	- -	0.0062	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beta-BHC	- -	0.022	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta-BHC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	0.4	0.0018	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		PZ-09	PZ-11	PZ-14	PZ-16	PZ-20	PZ-21	PZ-22	PZ-23	PZ-24	PZ-26
Sample Depth(FT):													
Date Collected:				03/13/12	03/13/12	03/20/12	03/06/12	03/07/12	03/07/12	03/22/12	03/19/12	03/22/12	03/20/12
Sampling Area:	(shade)	(bold)	Units	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers
Detected PCBs													
None Detected	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.1 J	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.1 J	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.1 J	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	3.9 J	5 U	5 U	5 U	5 U	5 U	4 J	5 U	3 J
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	1.2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**1.2**	0.5 U	**1.7**	0.5 U	**0.3 J**	**0.3 J**	0.1 J	0.5 U	0.5 U	**0.6**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.3 J	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.2 J	0.5 U	0.5 U	0.2 J	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.4 J	0.5 U	0.7	0.5 U	9.1	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J
Toluene	1,000	860	ug/L	0.5 U	0.2 J	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**5.3**	0.5 U	**7.4**	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	**1.5**
Trichlorofluoromethane	- -	1,100	ug/L	1.5	0.5 U	2.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Detected Semivolatile Organics													
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	600	280	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	75	0.42	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dioxane	- -	0.67	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	- -	890	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	- -	35	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	- -	270	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	- -	27	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	- -	1,400	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	- -	1,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic Acid	- -	58,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	- -	630	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	- -	220	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	- -	0.26	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	- -	0.14	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	1	0.17	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	- -	4,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	- -	87	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Inorganics													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(FT): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	PZ-09 03/13/12 DPT/ Piezometers	PZ-11 03/13/12 DPT/ Piezometers	PZ-14 03/20/12 DPT/ Piezometers	PZ-16 03/06/12 DPT/ Piezometers	PZ-20 03/07/12 DPT/ Piezometers	PZ-21 03/07/12 DPT/ Piezometers	PZ-22 03/22/12 DPT/ Piezometers	PZ-23 03/19/12 DPT/ Piezometers	PZ-24 03/22/12 DPT/ Piezometers	PZ-26 03/20/12 DPT/ Piezometers
Detected Miscellaneous													
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-T	- -	120	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TP	50	84	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	70	130	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DB	- -	91	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dicamba	- -	440	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorprop	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dinoseb	7	11	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	- -	12	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	- -	0.00021	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-BHC	- -	0.0062	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beta-BHC	- -	0.022	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta-BHC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	0.4	0.0018	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		PZ-27	PZ-29	PZ-30	PZ-31	PZ-33	PZ-34	PZ-36	PZ-37	PZ-38	PZ-39
Sample Depth(FT):													
Date Collected:				03/19/12	02/29/12	02/28/12	02/28/12	03/08/12	03/09/12	03/20/12	03/22/12	03/05/12	02/29/12
Sampling Area:	(shade)	(bold)	Units	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers
Detected PCBs													
None Detected	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.5 U	0.1 J
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.1 J	0.3 J	0.1 J	0.5 U	0.5 U	0.5 U	0.2 J	0.7	0.5 U	0.2 J
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	1.9 J	5 U	5 U	5	5 U	5 U	5 U	5 U	6.4	3.2 J
Acetone	- -	12,000	ug/L	16	5 U	5 U	11	5 U	5 U	5 U	5 U	18	7.6
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**0.9**	**1.5**	**1.8**	0.5 U	**1**	0.5 U	**1.3**	**3.1**	**0.2 J**	**1.3**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.1 J	0.4 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.7	0.5 U	0.5
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.2 J	0.1 J	0.5 U	0.5 U	0.5 U	0.2 J	0.1 J
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.2 J	**26**	0.2 J	0.5 U	0.5 U	0.5 U	0.3 J	0.7	0.5 U	0.3 J
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.5 U	0.4 J	0.1 J	0.5 U	0.5 U	0.5 U	0.3 J	0.2 J
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**2.1**	**4.9**	**1.8**	0.5 U	0.5 U	0.5 U	**3.5**	**12**	**0.5 J**	**3.8**
Trichlorofluoromethane	- -	1,100	ug/L	0.5	2.1	1.2	0.5 U	0.5 U	0.5 U	0.9	2.6	0.1 J	1.4
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Detected Semivolatile Organics													
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	600	280	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	75	0.42	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dioxane	- -	0.67	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	- -	890	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	- -	35	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	- -	270	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	- -	27	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	- -	1,400	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	- -	1,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic Acid	- -	58,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	- -	630	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	- -	220	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	- -	0.26	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	- -	0.14	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	1	0.17	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	- -	4,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	- -	87	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Inorganics													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		PZ-27	PZ-29	PZ-30	PZ-31	PZ-33	PZ-34	PZ-36	PZ-37	PZ-38	PZ-39
Sample Depth(FT):													
Date Collected:				03/19/12	02/29/12	02/28/12	02/28/12	03/08/12	03/09/12	03/20/12	03/22/12	03/05/12	02/29/12
Sampling Area:	(shade)	(bold)	Units	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers
Detected Miscellaneous													
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-T	- -	120	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TP	50	84	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	70	130	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DB	- -	91	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dicamba	- -	440	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorprop	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dinoseb	7	11	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	- -	12	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	- -	0.00021	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-BHC	- -	0.0062	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beta-BHC	- -	0.022	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta-BHC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	0.4	0.0018	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		PZ-40	PZ-44	PZ-45	PZ-46	PZ-49	PZ-52	PZ-54	PZ-55A	PZ-55B	PZ-56
Sample Depth(FT):													
Date Collected:				03/01/12	03/05/12	03/02/12	03/01/12	03/09/12	03/01/12	03/21/12	03/21/12	03/20/12	03/21/12
Sampling Area:	(shade)	(bold)	Units	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers
Detected PCBs													
None Detected	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.1 J	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	5 U	1.1 J	5 U	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**0.9**	**1.4**	0.5 U	**2.2**	**5.3**	**2.3**	**1.2**	0.1 J	0.1 J	**0.2 J**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.3 J	0.4 J	0.5 U	0.1 J	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.3 J	0.3 J	0.5 U	0.2 J	0.5 U	0.1 J	0.1 J	0.5 U	0.5 U	0.5 U
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**2.1**	**5**	0.5 U	**1.2**	**1.7**	**0.7**	**1.7**	0.5 U	0.2 J	0.5 U
Trichlorofluoromethane	- -	1,100	ug/L	1	1.5	0.5 U	0.9	0.5 U	0.4 J	0.5 U	0.5 U	0.1 J	0.5 U
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Detected Semivolatile Organics													
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	600	280	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	75	0.42	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dioxane	- -	0.67	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	- -	890	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	- -	35	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	- -	270	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	- -	27	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	- -	1,400	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	- -	1,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic Acid	- -	58,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	- -	630	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	- -	220	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	- -	0.26	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	- -	0.14	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	1	0.17	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	- -	4,500	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	- -	87	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Inorganics													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	- -	71	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	6	6	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	3,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1,300	620	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	11,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2	0.63	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	300	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	2	0.16	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		PZ-40	PZ-44	PZ-45	PZ-46	PZ-49	PZ-52	PZ-54	PZ-55A	PZ-55B	PZ-56
Sample Depth(FT):													
Date Collected:				03/01/12	03/05/12	03/02/12	03/01/12	03/09/12	03/01/12	03/21/12	03/21/12	03/20/12	03/21/12
Sampling Area:	(shade)	(bold)	Units	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers	DPT/ Piezometers
Detected Miscellaneous													
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-T	- -	120	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TP	50	84	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	70	130	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DB	- -	91	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dicamba	- -	440	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorprop	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dinoseb	7	11	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	- -	12	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	- -	0.2	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	- -	0.00021	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-BHC	- -	0.0062	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beta-BHC	- -	0.022	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta-BHC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	0.4	0.0018	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		PZ-58	PZ-59	RISP-3/Robinson Box Spring	RISP-3/Robinson Box Spring	RISP-4/Robinson Rock Spring	S2-001	S2-002	S2-003	S2-004	STR5SW-30/North Armory Spring
Sample Depth(FT):													
Date Collected:				03/21/12	03/08/12	11/16/11	04/20/12	04/20/12	04/19/12	04/19/12	04/20/12	04/20/12	04/16/12
Sampling Area:	(shade)	(bold)	Units	DPT/ Piezometers	DPT/ Piezometers	Named Springs	Named Springs	Named Springs	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Named Springs
Detected PCBs													
None Detected	- -	- -	- -	NA	NA	NA	NA	- -	- - [- -]	NA	NA	- -	- -
Detected Volatile Organics													
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.2 J	NA	0.1 J	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.5 U	0.5 U	0.6	NA	0.4 J	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.3 J
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U	NA	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U	NA	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**3.6**	0.5 U	**1.9**	NA	**1.5**	**0.6 [0.6]**	**0.6**	0.5 U	0.5 U	**0.7**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.5 U	0.5 U	1	NA	0.7	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.1 J
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.2 J	0.5 U	0.6	NA	0.6	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.3 J
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**2.1**	0.5 U	**9.4**	NA	**6.9**	**0.6 [0.6]**	**0.6**	0.5 U	0.5 U	**1.9**
Trichlorofluoromethane	- -	1,100	ug/L	0.5 U	0.5 U	2.8	NA	2.8	0.2 J [0.2 J]	0.2 J	0.5 U	0.5 U	3.5
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U
Detected Semivolatile Organics													
1,2,4-Trichlorobenzene	70	0.99	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
1,2-Dichlorobenzene	600	280	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
1,4-Dichlorobenzene	75	0.42	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
1,4-Dioxane	- -	0.67	ug/L	NA	NA	NA	NA	5 U	5 U [5 U]	NA	NA	5 U	6 U
2,4,5-Trichlorophenol	- -	890	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
2,4-Dichlorophenol	- -	35	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
2,4-Dimethylphenol	- -	270	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
2-Chlorophenol	- -	71	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
2-Methylnaphthalene	- -	27	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
4-Chloro-3-Methylphenol	- -	1,100	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
4-Methylphenol	- -	1,400	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
Acetophenone	- -	1,500	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
Benzo(a)pyrene	0.2	0.0029	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
Benzoic Acid	- -	58,000	ug/L	NA	NA	NA	NA	14 U	16 U [16 U]	NA	NA	16 U	17 U
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	NA	NA	NA	NA	5 U	5 U [5 U]	NA	NA	5 U	6 U
Fluoranthene	- -	630	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
Fluorene	- -	220	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
Hexachlorobutadiene	- -	0.26	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
Naphthalene	- -	0.14	ug/L	NA	NA	NA	NA	0.1 J	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
Pentachlorophenol	1	0.17	ug/L	NA	NA	NA	NA	5 U	5 U [5 U]	NA	NA	5 U	6 U
Phenanthrene	- -	- -	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.6 U
Phenol	- -	4,500	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
Pyrene	- -	87	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.1 J	0.6 U
Detected Inorganics													
Aluminum	- -	16,000	ug/L	NA	NA	NA	NA	991	4,620 [4,660]	NA	NA	1,100	1,400
Antimony	6	6	ug/L	NA	NA	NA	NA	1 U	1 U [1 U]	NA	NA	1 U	1 U
Arsenic	10	0.045	ug/L	NA	NA	NA	NA	2 U	**1.4 J [1.1 J]**	NA	NA	2 U	2 U
Barium	2,000	2,900	ug/L	NA	NA	NA	NA	106	129 [126]	NA	NA	45	84.3
Beryllium	4	16	ug/L	NA	NA	NA	NA	0.15 J	0.3 J [0.27 J]	NA	NA	0.5 U	0.5 U
Boron	- -	3,100	ug/L	NA	NA	NA	NA	24.3 J	11.1 J [9.8 J]	NA	NA	20 J	10.5 J
Cadmium	5	- -	ug/L	NA	NA	NA	NA	0.28 J	5 U [0.27 J]	NA	NA	5 U	5 U
Calcium	- -	- -	ug/L	NA	NA	NA	NA	84,500	130,000 [131,000]	NA	NA	17,900	65,700
Chromium	100	- -	ug/L	NA	NA	NA	NA	2 J	6.3 J [6.1 J]	NA	NA	15 U	2.3 J
Cobalt	- -	4.7	ug/L	NA	NA	NA	NA	5 U	3.8 J [4 J]	NA	NA	1.1 J	0.99 B
Copper	1,300	620	ug/L	NA	NA	NA	NA	3.1 J	5.7 J [5.8 J]	NA	NA	2 J	2.6 J
Iron	- -	11,000	ug/L	NA	NA	NA	NA	1,220	8,260 [8,430]	NA	NA	1,730	2,250 J
Lead	15	- -	ug/L	NA	NA	NA	NA	2.9 J	7.5 J [9.3 J]	NA	NA	15 U	12.8 J
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	18,100	14,300 [14,400]	NA	NA	6,080	17,200
Manganese	- -	- -	ug/L	NA	NA	NA	NA	162	93.2 [100]	NA	NA	25.9	25 J
Mercury	2	0.63	ug/L	NA	NA	NA	NA	0.2 U	0.032 J [0.049 J]	NA	NA	0.2 U	0.2 U
Nickel	- -	300	ug/L	NA	NA	NA	NA	2.4 J	4.2 J [4.6 J]	NA	NA	1.5 J	1.7 J
Potassium	- -	- -	ug/L	NA	NA	NA	NA	2,710	2,850 [2,750]	NA	NA	2,910	1,880
Silver	- -	71	ug/L	NA	NA	NA	NA	5 U	5 U [5 U]	NA	NA	5 U	5 U
Sodium	- -	- -	ug/L	NA	NA	NA	NA	11,000	40,000 [41,300]	NA	NA	29,600	11,800
Thallium	2	0.16	ug/L	NA	NA	NA	NA	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	5.7	7.1 [7.4]	NA	NA	1.3 J	2.5 J
Zinc	- -	4,700	ug/L	NA	NA	NA	NA	40.4	28.7 [29.4]	NA	NA	10.8 J	10.2 J
Detected Inorganics-Filtered													
Aluminum	- -	16,000	ug/L	NA	NA	NA	200 U	200 U	200 U [200 U]	NA	NA	200 U	200 U
Antimony	6	6	ug/L	NA	NA	NA	1 U	1 U	1 U [1 U]	NA	NA	1 U	1 U
Arsenic	10	0.045	ug/L	NA	NA	NA	2 U	2 U	2 U [2 U]	NA	NA	2 U	2 U
Barium	2,000	2,900	ug/L	NA	NA	NA	65.6	58.2	68.2 [69.1]	NA	NA	34.4	66.4
Boron	- -	3,100	ug/L	NA	NA	NA	12.3 J	13.4 J	15.4 J [16.4 J]	NA	NA	19.7 J	10.7 J
Cadmium	5	- -	ug/L	NA	NA	NA	5 U	5 U	5 U [0.48 J]	NA	NA	5 U	5 U
Calcium	- -	- -	ug/L	NA	NA	NA	60,900	66,300	130,000 [126,000]	NA	NA	16,200	68,800
Chromium	100	- -	ug/L	NA	NA	NA	15 U	15 U	1.6 J [1.2 J]	NA	NA	15 U	15 U
Cobalt	- -	4.7	ug/L	NA	NA	NA	5 U	5 U	5 U [5 U]	NA	NA	5 U	5 U
Copper	1,300	620	ug/L	NA	NA	NA	10 U	10 U	1.7 J [2.1 J]	NA	NA	10 U	10 U
Iron	- -	11,000	ug/L	NA	NA	NA	200 U	200 U	49.2 J [49.3 J]	NA	NA	200 U	200 UJ
Lead	15	- -	ug/L	NA	NA	NA	15 U	15 U	15 U [15 U]	NA	NA	15 U	4 B
Magnesium	- -	- -	ug/L	NA	NA	NA	16,300	16,000	13,300 [13,200]	NA	NA	5,550	16,700
Manganese	- -	- -	ug/L	NA	NA	NA	24.5	1 J	10.9 [11]	NA	NA	2.2 J	2.3 J
Mercury	2	0.63	ug/L	NA	NA	NA	0.2 U	0.2 U	0.2 U [0.2 U]	NA	NA	0.2 U	0.2 U
Nickel	- -	300	ug/L	NA	NA	NA	10 U	10 U	10 U [10 U]	NA	NA	10 U	10 U
Potassium	- -	- -	ug/L	NA	NA	NA	1,690	1,800	2,130 [2,040]	NA	NA	2,650	1,560
Sodium	- -	- -	ug/L	NA	NA	NA	10,800	10,400	40,000 [39,200]	NA	NA	33,700	11,900
Thallium	2	0.16	ug/L	NA	NA	NA	0.5 U	0.5 U	0.5 U [0.5 U]	NA	NA	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	NA	NA	NA	5 U	5 U	5 U [5 U]	NA	NA	5 U	5 U
Zinc	- -	4,700	ug/L	NA	NA	NA	20 U	20 U	4.3 J [5 J]	NA	NA	20 U	20 U

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	MCL	RSL Tapwater		PZ-58	PZ-59	RISP-3/Robinson Box Spring	RISP-3/Robinson Box Spring	RISP-4/Robinson Rock Spring	S2-001	S2-002	S2-003	S2-004	STR5SW-30/North Armory Spring
Sample Depth(FT):													
Date Collected:				03/21/12	03/08/12	11/16/11	04/20/12	04/20/12	04/19/12	04/19/12	04/20/12	04/20/12	04/16/12
Sampling Area:	(shade)	(bold)	Units	DPT/ Piezometers	DPT/ Piezometers	Named Springs	Named Springs	Named Springs	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Springs/Seeps Identified During Stream Survey	Named Springs
Detected Miscellaneous													
Bromide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Herbicides													
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-T	- -	120	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TP	50	84	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	70	130	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DB	- -	91	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dicamba	- -	440	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorprop	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dinoseb	7	11	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	- -	12	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monuron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Pesticides													
4,4'-DDD	- -	0.28	ug/L	NA	NA	NA	NA	0.022 U	0.022 U [0.023 U]	NA	NA	0.02 U	0.022 U
4,4'-DDE	- -	0.2	ug/L	NA	NA	NA	NA	0.022 U	0.022 U [0.023 U]	NA	NA	0.02 U	0.022 U
4,4'-DDT	- -	0.2	ug/L	NA	NA	NA	NA	0.022 U	0.022 U [0.023 U]	NA	NA	0.02 U	0.022 UJ
Aldrin	- -	0.00021	ug/L	NA	NA	NA	NA	0.011 U	0.011 U [0.011 U]	NA	NA	0.0098 U	0.011 U
Alpha-BHC	- -	0.0062	ug/L	NA	NA	NA	NA	0.011 U	0.011 U [0.011 U]	NA	NA	0.0098 U	0.011 U
Alpha-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	0.011 U	0.011 U [0.011 U]	NA	NA	0.0098 U	0.011 U
Beta-BHC	- -	0.022	ug/L	NA	NA	NA	NA	0.011 U	0.011 U [0.011 U]	NA	NA	0.0098 U	0.011 U
Delta-BHC	- -	- -	ug/L	NA	NA	NA	NA	0.011 U	0.011 U [0.011 U]	NA	NA	0.0098 U	0.011 U
Gamma-BHC (Lindane)	0.2	0.036	ug/L	NA	NA	NA	NA	0.011 U	0.011 U [0.011 U]	NA	NA	0.0098 U	0.011 U
Gamma-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	0.022 U	0.022 U [0.023 U]	NA	NA	0.02 U	0.022 U
Heptachlor	0.4	0.0018	ug/L	NA	NA	NA	NA	0.011 U	0.011 U [0.011 U]	NA	NA	0.0098 U	0.011 U
Detected Dioxins													
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detected Radiochemistry													
Gross Alpha	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(FT): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	STR5SW-31/South Armory Spring 04/16/12 Named Springs	STR5SW-53/Dock Spring 04/16/12 Named Springs	UnnamedBoils0 04/17/12 Springs/Seeps Identified During Stream Survey
Detected PCBs						
None Detected	- -	- -	- -	- -	- -	- -
Detected Volatile Organics						
1,1,1-Trichloroethane	200	7,500	ug/L	0.5 U	0.5 U	0.2 J
1,1,2,2-Tetrachloroethane	- -	0.066	ug/L	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	53,000	ug/L	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	5	0.24	ug/L	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	2.4	ug/L	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	260	ug/L	0.3 J	0.4 J	0.5 J
1,2,3-Trichlorobenzene	- -	5.2	ug/L	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	0.00065	ug/L	1 U	1 U	1 U
1,2,4-Trichlorobenzene	70	0.99	ug/L	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	600	280	ug/L	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.15	ug/L	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	0.38	ug/L	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	75	0.42	ug/L	0.5 U	0.5 U	0.5 U
2-Butanone	- -	4,900	ug/L	5 U	5 U	5 U
Acetone	- -	12,000	ug/L	5 U	5 U	5 U
Benzene	5	0.39	ug/L	0.5 U	0.5 U	0.5 U
Bromodichloromethane	- -	0.12	ug/L	0.5 U	0.5 U	0.5 U
Bromoform	- -	7.9	ug/L	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	720	ug/L	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	5	0.39	ug/L	0.5 U	0.5 U	0.5 U
Chlorobenzene	100	72	ug/L	0.5 U	0.5 U	0.5 U
Chloroethane	- -	21,000	ug/L	0.5 U	0.5 U	0.5 U
Chloroform	70	0.19	ug/L	**0.8**	**1**	**2.2**
Chloromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	28	ug/L	0.2 J	0.3 J	0.5
Dibromochloromethane	- -	0.15	ug/L	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	190	ug/L	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	1.3	ug/L	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	- -	12	ug/L	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	9.9	ug/L	0.5 U	0.5 U	0.5 U
o-Xylene	- -	190	ug/L	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	9.7	ug/L	0.3 J	0.4 J	0.6
Toluene	1,000	860	ug/L	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	86	ug/L	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.44	ug/L	**2.3**	**3.8**	**7.3**
Trichlorofluoromethane	- -	1,100	ug/L	3.2	3.7	3.2
Vinyl Chloride	2	0.015	ug/L	0.5 U	0.5 U	0.5 U
Detected Semivolatile Organics						
1,2,4-Trichlorobenzene	70	0.99	ug/L	1 U	1 U	1 U
1,2-Dichlorobenzene	600	280	ug/L	1 U	1 U	1 U
1,4-Dichlorobenzene	75	0.42	ug/L	1 U	1 U	1 U
1,4-Dioxane	- -	0.67	ug/L	6 U	5 U	5 U
2,4,5-Trichlorophenol	- -	890	ug/L	1 U	1 U	1 U
2,4-Dichlorophenol	- -	35	ug/L	1 U	1 U	1 U
2,4-Dimethylphenol	- -	270	ug/L	1 U	1 U	1 U
2-Chlorophenol	- -	71	ug/L	1 U	1 U	1 U
2-Methylnaphthalene	- -	27	ug/L	0.6 U	0.5 U	0.5 U
4-Chloro-3-Methylphenol	- -	1,100	ug/L	1 U	1 U	1 U
4-Methylphenol	- -	1,400	ug/L	1 U	1 U	1 U
Acetophenone	- -	1,500	ug/L	1 U	1 U	1 U
Benzo(a)pyrene	0.2	0.0029	ug/L	0.6 U	0.5 U	0.5 U
Benzoic Acid	- -	58,000	ug/L	17 U	15 U	15 U
bis(2-Ethylhexyl)phthalate	6	0.071	ug/L	6 U	5 U	5 U
Fluoranthene	- -	630	ug/L	0.6 U	0.5 U	0.5 U
Fluorene	- -	220	ug/L	0.6 U	0.5 U	0.5 U
Hexachlorobutadiene	- -	0.26	ug/L	1 U	1 U	1 U
Naphthalene	- -	0.14	ug/L	0.6 U	0.5 U	0.5 U
Pentachlorophenol	1	0.17	ug/L	6 U	5 U	5 U
Phenanthrene	- -	- -	ug/L	0.6 U	0.5 U	0.5 U
Phenol	- -	4,500	ug/L	1 U	1 U	1 U
Pyrene	- -	87	ug/L	0.6 U	0.5 U	0.5 U
Detected Inorganics						
Aluminum	- -	16,000	ug/L	200 U	3,430	826
Antimony	6	6	ug/L	1 U	1 U	1 U
Arsenic	10	0.045	ug/L	2 U	2 U	2 U
Barium	2,000	2,900	ug/L	67.1	106	74.5
Beryllium	4	16	ug/L	0.5 U	0.24 J	0.5 U
Boron	- -	3,100	ug/L	10.4 J	9.1 J	10 B
Cadmium	5	- -	ug/L	5 U	5 U	5 U
Calcium	- -	- -	ug/L	64,800	64,900	71,100
Chromium	100	- -	ug/L	15 U	5.1 J	1.9 J
Cobalt	- -	4.7	ug/L	5 U	3.5 J	0.84 J
Copper	1,300	620	ug/L	10 U	4.4 J	1.3 B
Iron	- -	11,000	ug/L	200 UJ	5,880 J	1,220
Lead	15	- -	ug/L	7.9 J	19.7	11 J
Magnesium	- -	- -	ug/L	16,600	17,900	17,100
Manganese	- -	- -	ug/L	5 UJ	142 J	21.6
Mercury	2	0.63	ug/L	0.2 U	0.2 U	0.2 U
Nickel	- -	300	ug/L	10 U	3.9 J	10 U
Potassium	- -	- -	ug/L	1,600	2,370	2,590
Silver	- -	71	ug/L	5 U	5 U	5 U
Sodium	- -	- -	ug/L	11,300	11,000	18,000
Thallium	2	0.16	ug/L	0.5 U	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	5 U	5.9	1.1 J
Zinc	- -	4,700	ug/L	6.6 J	24.2	6.7 J
Detected Inorganics-Filtered						
Aluminum	- -	16,000	ug/L	89.3 J [200 U]	200 U	200 U
Antimony	6	6	ug/L	1 U [1 U]	1 U	1 U
Arsenic	10	0.045	ug/L	2 U [2 U]	2 U	2 U
Barium	2,000	2,900	ug/L	68.6 [66.5]	64.1	63.2
Boron	- -	3,100	ug/L	11.3 J [10.3 J]	9.4 J	8.2 J
Cadmium	5	- -	ug/L	5 U [5 U]	5 U	5 U
Calcium	- -	- -	ug/L	67,200 [65,400]	66,000	68,700
Chromium	100	- -	ug/L	15 U [15 U]	15 U	1.2 B
Cobalt	- -	4.7	ug/L	5 U [5 U]	5 U	5 U
Copper	1,300	620	ug/L	10 U [10 U]	10 U	10 U
Iron	- -	11,000	ug/L	96.4 J [200 UJ]	200 UJ	200 U
Lead	15	- -	ug/L	3.7 B [4.2 B]	4.8 B	7 B
Magnesium	- -	- -	ug/L	16,600 [16,300]	16,800	17,300
Manganese	- -	- -	ug/L	1.4 J [0.49 J]	5 UJ	13
Mercury	2	0.63	ug/L	0.2 U [0.2 U]	0.2 U	0.2 U
Nickel	- -	300	ug/L	10 U [10 U]	10 U	10 U
Potassium	- -	- -	ug/L	1,600 [1,550]	1,520	2,500
Sodium	- -	- -	ug/L	11,500 [11,300]	10,900	18,400
Thallium	2	0.16	ug/L	0.5 U [0.5 U]	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	5 U [5 U]	5 U	5 U
Zinc	- -	4,700	ug/L	6.2 J [5.7 J]	20 U	20 U

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Sample Depth(FT): Date Collected: Sampling Area:	MCL (shade)	RSL Tapwater (bold)	Units	STR5SW-31/South Armory Spring 04/16/12 Named Springs	STR5SW-53/Dock Spring 04/16/12 Named Springs	UnnamedBoils0 04/17/12 Springs/Seeps Identified During Stream Survey
Detected Miscellaneous						
Bromide	- -	- -	ug/L	NA	NA	NA
Chloride	- -	- -	ug/L	NA	NA	NA
Nitrate-N	10,000	25,000	ug/L	NA	NA	NA
Percent Moisture	- -	- -	%	NA	NA	51.4
Sulfate	- -	- -	ug/L	NA	NA	NA
Total Dissolved Solids	- -	- -	ug/L	NA	NA	NA
Detected Herbicides						
2,2-Dichloropropionic Acid	200	470	ug/L	NA	NA	NA
2,4,5-T	- -	120	ug/L	NA	NA	NA
2,4,5-TP	50	84	ug/L	NA	NA	NA
2,4-D	70	130	ug/L	NA	NA	NA
2,4-DB	- -	91	ug/L	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	- -	5.7	ug/L	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	500	1,100	ug/L	NA	NA	NA
Dicamba	- -	440	ug/L	NA	NA	NA
Dichlorprop	- -	- -	ug/L	NA	NA	NA
Dinoseb	7	11	ug/L	NA	NA	NA
Diuron	- -	28	ug/L	NA	NA	NA
Fenuron	- -	- -	ug/L	NA	NA	NA
MCPP	- -	12	ug/L	NA	NA	NA
Monuron	- -	- -	ug/L	NA	NA	NA
Detected Pesticides						
4,4'-DDD	- -	0.28	ug/L	0.022 U	0.024 U	0.022 U
4,4'-DDE	- -	0.2	ug/L	0.022 U	0.024 U	0.022 U
4,4'-DDT	- -	0.2	ug/L	0.022 UJ	0.024 UJ	0.022 U
Aldrin	- -	0.00021	ug/L	0.011 U	0.012 U	0.011 U
Alpha-BHC	- -	0.0062	ug/L	0.011 U	0.012 U	0.011 U
Alpha-Chlordane	- -	- -	ug/L	0.011 U	0.012 U	0.011 U
Beta-BHC	- -	0.022	ug/L	0.011 U	0.012 U	0.011 U
Delta-BHC	- -	- -	ug/L	0.011 U	0.012 U	0.011 U
Gamma-BHC (Lindane)	0.2	0.036	ug/L	0.011 U	0.012 U	0.011 U
Gamma-Chlordane	- -	- -	ug/L	0.022 U	0.024 U	0.022 U
Heptachlor	0.4	0.0018	ug/L	0.011 U	0.012 U	0.011 U
Detected Dioxins						
1,2,3,4,6,7,8-HpCDD	- -	- -	pg/L	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	pg/L	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	pg/L	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	pg/L	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	pg/L	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	pg/L	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	pg/L	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	pg/L	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	pg/L	NA	NA	NA
2,3,7,8-TCDD	30	0.52	pg/L	NA	NA	NA
2,3,7,8-TCDF	- -	- -	pg/L	NA	NA	NA
Octachlorodibenzofuran	- -	- -	pg/L	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	pg/L	NA	NA	NA
Detected Radiochemistry						
Gross Alpha	- -	- -	pci/l	NA	NA	NA
Gross Beta	- -	- -	pci/l	NA	NA	NA

Table A.7.5.4-3
Groundwater and Spring Analytcal Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Qualifier Type	Lab Qualifiers	Definition
Inorganic	B	Indicates an estimated value between the instrument detection limit and the Reporting Limit (RL).
Inorganic	J	Indicates an estimated value.
Inorganic	U	The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
Inorganic	UJ	The compound was analyzed for but not detected. The associated value is the compound quantitation limit. Indicates an estimated value.
Organic	B	Analyte was also detected in the associated method blank.
Organic	BJ	Analyte was also detected in the associated method blank. Indicates an estimated value.
Organic	BJQ	Analyte was also detected in the associated method blank. Indicates an estimated value.
Organic	E	Analyte exceeded calibration range.
Organic	J	Indicates an estimated value.
Organic	JQ	Indicates an estimated value.
Organic	U	The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
Organic	UJ	The compound was analyzed for but not detected. The associated value is the compound quantitation limit. Indicates an estimated value.

Table A.7.5.4-4
Analytical Parameters by Sample Location
Area B Groundwater
Fort Detrick, Maryland

Sample Location	Sample ID	Date Collected	Sample Matrix	TCL VOCs + 20 TICs; (EPA 8260B) (includes: Freons; 1,2,3-TCP; DBCP; 1,2,4-trimethylbenzene; 1,2,3-trichlorobenzene)	EDB (EPA 504.1/8011)	TCL SVOCs + 20 TICs (EPA 8270C) [includes: BCEE; 1,4-dioXane; Bis(2-chloro)isopropyl ether, 1,4-naphthoquinone]	TCL Pesticides/PCBs (EPA 8081A/8082)	TAL Metals + Boron (EPA 6010B/7470A) DISSOLVED	TAL Metals + Boron (EPA 6010B/7470A) TOTAL	Herbicides + Picloram (EPA 8151A)	Diquat (EPA 549.2)	Fenuron, Diuron, and Monuron (EPA 8321A)	Simazine (EPA 525.2/8270C SIM)	Endothall (EPA 548.1)	Cl, NO3, SO4 (Anions) (EPA 9056)	TDS (EPA 160.1)	Bromate (EPA 300.1B)	Cyanide (EPA 9012A/9013A)	Gross Alpha/Beta (EPA 900.0)	DioXins/Furans (8290)	Bromide (EPA 9056)
Monitoring Wells																					
BMW11	FTD72-BMW11(032912)	3/29/2012	WG	X		X	X		X						X	X					
BMW11D	FTD72-BMW11D(033012)	3/30/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW16	FTD72-BMW16(040612)	4/6/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW18	FTD72-BMW18(040512)	4/5/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW20	FTD72-BMW20(040512)	4/5/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW20D	FTD72-BMW20D(040512)	4/5/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW21	FTD72-BMW21(040512)	4/5/2012	WG	X		X	X	X	X						X	X					
BMW21D	FTD72-BMW21D(040612)	4/6/2012	WG	X		X	X		X						X	X					
BMW24	FTD72-BMW24(040512)	4/5/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW24D	FTD72-BMW24D(040512)	4/5/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW29A	FTD72-BMW29A(033012)	3/30/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW29B	FTD72-BMW29B(033012)	3/30/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW31	FTD72-BMW31(040412)	4/4/2012	WG	X		X	X		X	X											
BMW31D	FTD72-BMW31D(040512)	4/5/2012	WG	X		X	X		X	X											
BMW32D	FTD72-BMW32D(040512)	4/5/2012	WG	X		X	X		X	X											
BMW33	FTD72-BMW33(032912)	3/29/2012	WG	X		X	X		X	X											
BMW34	FTD72-BMW34(033012)	3/30/2012	WG	X		X	X		X	X											
BMW35	FTD72-BMW35(032912)	3/29/2012	WG	X		X	X	X	X	X											
BMW35D	FTD72-BMW35D(032912)	3/29/2012	WG	X		X	X		X	X											
BMW36	FTD72-BMW36(033012)	3/30/2012	WG	X		X	X		X	X											
BMW36D	FTD72-BMW36D(033012)	3/30/2012	WG	X		X	X		X	X											
BMW37	FTD72-BMW37(040912)	4/9/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW37D	FTD72-BMW37D(040912)	4/9/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW38	FTD72-BMW38(040512)	4/5/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW4	FTD72-BMW4(033012)	3/30/2012	WG	X		X	X		X												
BMW40	FTD72-BMW40(040312)	4/3/2012	WG	X		X	X		X	X											
BMW41D	FTD72-BMW41D(040212)	4/2/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW42	FTD72-BMW42(040212)	4/2/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW43	FTD72-BMW43(040212)	4/2/2012	WG	X		X	X		X	X											
BMW44	FTD72-BMW44(033012)	3/30/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW45	FTD72-BMW45(032912)	3/29/2012	WG	X		X	X		X	X											
BMW47D	FTD72-BMW47D(040612)	4/6/2012	WG	X		X	X	X	X	X					X	X					
BMW49	FTD72-BMW49(040212)	4/2/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW5	FTD72-BMW5(033012)	3/30/2012	WG	X		X	X		X						X	X					
BMW52D	FTD72-BMW52D(040312)	4/3/2012	WG	X		X	X		X						X	X					
BMW53A	FTD72-BMW53A(040312)	4/3/2012	WG	X		X	X		X						X	X					

Table A.7.5.4-4
Analytical Parameters by Sample Location
Area B Groundwater
Fort Detrick, Maryland

Sample Location	Sample ID	Date Collected	Sample Matrix	TCL VOCs + 20 TICs; (EPA 8260B) (includes: Freons; 1,2,3-TCP; DBCP; 1,2,4-trimethylbenzene; 1,2,3-trichlorobenzene)	EDB (EPA 504.1/8011)	TCL SVOCs + 20 TICs (EPA 8270C) [includes: BCEE; 1,4-dioXane; Bis(2-chloro)isopropyl ether, 1,4-naphthoquinone]	TCL Pesticides/PCBs (EPA 8081A/8082)	TAL Metals + Boron (EPA 6010B/7470A) DISSOLVED	TAL Metals + Boron (EPA 6010B/7470A) TOTAL	Herbicides + Picloram (EPA 8151A)	Diquat (EPA 549.2)	Fenuron, Diuron, and Monuron (EPA 8321A)	Simazine (EPA 525.2/8270C SIM)	Endothall (EPA 548.1)	Cl, NO3, SO4 (Anions) (EPA 9056)	TDS (EPA 160.1)	Bromate (EPA 300.1B)	Cyanide (EPA 9012A/9013A)	Gross Alpha/Beta (EPA 900.0)	DioXins/Furans (8290)	Bromide (EPA 9056)
BMW53B	FTD72-BMW53B(040312)	4/3/2012	WG	X		X	X		X						X	X					
BMW53D	FTD72-BMW53D(040312)	4/3/2012	WG	X		X	X		X						X	X					
BMW53E	FTD72-BMW53E(040312)	4/3/2012	WG	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BMW53F	FTD72-BMW53F(040312)	4/3/2012	WG	X		X	X		X						X	X					
BMW54D	FTD72-BMW54D(040412)	4/4/2012	WG	X		X	X		X						X	X					
BMW55D	FTD72-BMW55D(040512)	4/5/2012	WG	X		X	X	X	X						X	X					
BMW56D	FTD72-BMW56D(040912)	4/9/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW57D	FTD72-BMW57D(041012)	4/10/2012	WG	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BMW58D	FTD72-BMW58D(040612)	4/6/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW59D	FTD72-BMW59D(040612)	4/6/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW5D	FTD72-BMW5D(033012)	3/30/2012	WG	X		X	X		X						X	X					
BMW61	FTD72-BMW61(040412)	4/4/2012	WG	X		X	X		X	X											
BMW62	FTD72-BMW62(040212)	4/2/2012	WG	X		X	X		X	X											
BMW63	FTD72-BMW63(040212)	4/2/2012	WG	X		X	X		X	X											
BMW64	FTD72-BMW64(040312)	4/3/2012	WG	X		X	X		X	X											
BMW65A	FTD72-BMW65A(041112)	4/11/2012	WG	X		X	X		X						X	X					
BMW65B	FTD72-BMW65B(041012)	4/10/2012	WG	X		X	X	X	X						X	X					
BMW66B	FTD72-BMW66B(040412)	4/4/2012	WG	X		X	X	X	X						X	X					
BMW66D	FTD72-BMW66D(040412)	4/4/2012	WG	X		X	X		X						X	X					
BMW67A	FTD72-BMW67A(041112)	4/11/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW67B	FTD72-BMW67B(041112)	4/11/2012	WG	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BMW67C	FTD72-BMW67C(041112)	4/11/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW67D	FTD72-BMW67D(041112)	4/11/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW68A	FTD72-BMW68A(041012)	4/10/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW68B	FTD72-BMW68B(040912)	4/9/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW68C	FTD72-BMW68C(041012)	4/10/2012	WG	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BMW68D	FTD72-BMW68D(041012)	4/10/2012	WG	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BMW68E	FTD72-BMW68E(040912)	4/9/2012	WG	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BMW69A	FTD72-BMW69A(040412)	4/4/2012	WG	X		X	X		X						X	X					
BMW70A	FTD72-BMW70A(040412)	4/4/2012	WG	X		X	X		X						X	X					
BMW70B	FTD72-BMW70B(040412)	4/4/2012	WG	X		X	X		X						X	X					
BMW70C	FTD72-BMW70C(040412)	4/4/2012	WG	X		X	X	X	X						X	X					
BMW71A	FTD72-BMW71A(032812)	3/28/2012	WG	X		X	X	X	X						X	X					
BMW71B	FTD72-BMW71B(032812)	3/28/2012	WG	X		X	X		X						X	X					
BMW71C	FTD72-BMW71C(032912)	3/29/2012	WG	X		X	X		X						X	X					
BMW72	FTD72-BMW72(032912)	3/29/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW73	FTD72-BMW73(041012)	4/10/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW74	FTD72-BMW74(040512)	4/5/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW76	FTD72-BMW76(040212)	4/2/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW77	FTD72-BMW77(040212)	4/2/2012	WG	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
BMW78A	FTD72-BMW78A(040312)	4/3/2012	WG	X		X	X	X	X						X	X					
BMW78B	FTD72-BMW78B(040312)	4/3/2012	WG	X		X	X	X	X						X	X					
BMW9D	FTD72-BMW9D(040312)	4/3/2012	WG	X		X	X		X												

Table A.7.5.4-4
Analytical Parameters by Sample Location
Area B Groundwater
Fort Detrick, Maryland

Sample Location	Sample ID	Date Collected	Sample Matrix	TCL VOCs + 20 TICs; (EPA 8260B) (includes: Freons; 1,2,3-TCP; DBCP; 1,2,4-trimethylbenzene; 1,2,3-trichlorobenzene)	EDB (EPA 504.1/8011)	TCL SVOCs + 20 TICs (EPA 8270C) [includes: BCEE; 1,4-dioXane; Bis(2-chloro)isopropyl ether, 1,4-naphthoquinone]	TCL Pesticides/PCBs (EPA 8081A/8082)	TAL Metals + Boron (EPA 6010B/7470A) DISSOLVED	TAL Metals + Boron (EPA 6010B/7470A) TOTAL	Herbicides + Picloram (EPA 8151A)	Diquat (EPA 549.2)	Fenuron, Diuron, and Monuron (EPA 8321A)	Simazine (EPA 525.2/8270C SIM)	Endothall (EPA 548.1)	Cl, NO3, SO4 (Anions) (EPA 9056)	TDS (EPA 160.1)	Bromate (EPA 300.1B)	Cyanide (EPA 9012A/9013A)	Gross Alpha/Beta (EPA 900.0)	DioXins/Furans (8290)	Bromide (EPA 9056)
Private Wells																					
DWSRD-1	FTD72-DWSRD-1(042412)	4/24/2012	WG	X	X																
DWGRAN-17	FTD72-DWGRAN-17(053012)	5/30/2012	WG	X	X																
DWSRD-26	FTD72-DWSRD-26(042412)	4/24/2012	WG	X	X																
DPT/Hydropunch																					
PZ-01	PZ-01_031212	3/12/2012	WG	X																	
PZ-02	PZ-02_031212	3/12/2012	WG	X																	
PZ-03	PZ-03_031212	3/12/2012	WG	X																	
PZ-05	PZ-05_031212	3/12/2012	WG	X																	
PZ-06	PZ-06_031212	3/12/2012	WG	X																	
PZ-07	PZ-07_031212	3/12/2012	WG	X																	
PZ-08	PZ-08_030912	3/9/2012	WG	X																	
PZ-09	PZ-09_031312	3/13/2012	WG	X																	
PZ-11	PZ-11_031312	3/13/2012	WG	X																	
PZ-14	PZ-14_032012	3/20/2012	WG	X																	
PZ-16	PZ-16_030612	3/6/2012	WG	X																	
PZ-20	PZ-20_030712	3/7/2012	WG	X																	
PZ-21	PZ-21_030712	3/7/2012	WG	X																	
PZ-22	PZ-22_032212	3/22/2012	WG	X																	
PZ-23	PZ-23_031912	3/19/2012	WG	X																	
PZ-24	PZ-24_032212	3/22/2012	WG	X																	
PZ-26	PZ-26_032012	3/20/2012	WG	X																	
PZ-27	PZ-27_031912	3/19/2012	WG	X																	
PZ-29	PZ-29_022912	2/29/2012	WG	X																	
PZ-30	PZ-30_022812	2/28/2012	WG	X																	
PZ-31	PZ-31_022812	2/28/2012	WG	X																	
PZ-33	PZ-33_030812	3/8/2012	WG	X																	
PZ-34	PZ-34_030912	3/9/2012	WG	X																	
PZ-36	PZ-36_032012	3/20/2012	WG	X																	
PZ-37	PZ-37_032212	3/22/2012	WG	X																	
PZ-38	PZ-38_030512	3/5/2012	WG	X																	
PZ-39	PZ-39_022912	2/29/2012	WG	X																	
PZ-40	PZ-40_030112	3/1/2012	WG	X																	
PZ-44	PZ-44_030512	3/5/2012	WG	X																	
PZ-45	PZ-45_030212	3/2/2012	WG	X																	
PZ-46	PZ-46_030112	3/1/2012	WG	X																	
PZ-49	PZ-49_030912	3/9/2012	WG	X																	
PZ-52	PZ-52_030112	3/1/2012	WG	X																	
PZ-54	PZ-54_032112	3/21/2012	WG	X																	
PZ-55A	PZ-55A_032012	3/20/2012	WG	X																	
PZ-55B	PZ-55B_032012	3/20/2012	WG	X																	
PZ-56	PZ-56_032112	3/21/2012	WG	X																	

Table A.7.5.4-4
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Area B Groundwater
Fort Detrick, Maryland

Sample Location	Sample ID	Date Collected	Sample Matrix	TCL VOCs + 20 TICs; (EPA 8260B) (includes: Freons; 1,2,3-TCP; DBCP; 1,2,4-trimethylbenzene; 1,2,3-trichlorobenzene)	EDB (EPA 504.1/8011)	TCL SVOCs + 20 TICs (EPA 8270C) [includes: BCEE; 1,4-dioXane; Bis(2-chloro)isopropyl ether, 1,4-naphthoquinone]	TCL Pesticides/PCBs (EPA 8081A/8082)	TAL Metals + Boron (EPA 6010B/7470A) DISSOLVED	TAL Metals + Boron (EPA 6010B/7470A) TOTAL	Herbicides + Picloram (EPA 8151A)	Diquat (EPA 549.2)	Fenuron, Diuron, and Monuron (EPA 8321A)	Simazine (EPA 525.2/8270C SIM)	Endothall (EPA 548.1)	Cl, NO3, SO4 (Anions) (EPA 9056)	TDS (EPA 160.1)	Bromate (EPA 300.1B)	Cyanide (EPA 9012A/9013A)	Gross Alpha/Beta (EPA 900.0)	DioXins/Furans (8290)	Bromide (EPA 9056)
Springs/Seeps																					
RISP-3 (Robinson BoX Sp)	FTD72-RISP-3(042012)	4/20/2012	WG	X		X	X	X	X												
RISP-4 (Robinson Rock Sp)	FTD72-RISP-4(042012)	4/20/2012	WG	X		X	X	X	X												
SW-117 (Hospital Sp)	FTD72-SW-117(041712)	4/17/2012	WG	X		X	X	X	X												
STR5SW-53 (Dock Sp)	FTD72-STR5SW-53(041612)	4/16/2012	WG	X		X	X	X	X												
STR5SW-30 (N. Armory Sp)	FTD72-STR5SW-30(041612)	4/16/2012	WG	X		X	X	X	X												
STR5SW-31 (S. Armory Sp)	FTD72-STR5SW-31(041612)	4/16/2012	WG	X		X	X	X	X												
UnnamedBoils	FTD72-UNNAMEDBOILS(041712)	4/17/2012	WG	X		X	X	X	X												
S2-001	FTD72-S2-001(041912)	4/19/2012	WG	X		X	X	X	X												
S2-002	FTD72-S2-002(041912)	4/19/2012	WG	X																	
S2-003	FTD72-S2-003(042012)	4/20/2012	WG	X																	
S2-004	FTD72-S2-004(042012)	4/20/2012	WG	X		X	X	X	X												
CC001	FTD72-CC001(041912)	4/19/2012	WG	X																	
CC002	FTD72-CC002(041912)	4/19/2012	WG	X		X	X	X	X												
CC003A	FTD72-CC003A(042012)	4/20/2012	WG	X		X	X	X	X												
CC003B	FTD72-CC003B(042012)	4/20/2012	WG	X																	
CC003C	FTD72-CC003C(042012)	4/20/2012	WG	X																	
CC004	FTD72-CC004(042012)	4/20/2012	WG	X		X	X	X	X												
CC006 (Sewerline Sp)	FTD72-CC006(041912)	4/19/2012	WG	X		X	X	X	X												
CC007 (upsurgent Sp)	FTD72-CC007(041912)	4/19/2012	WG	X		X	X	X	X												
CC008 (Spearmint Sp)	FTD72-CC008(041912)	4/19/2012	WG	X		X	X	X	X												
CC008A	FTD72-CC008A(041912)	4/19/2012	WG	X																	
CC009	FTD72-CC009(041912)	4/19/2012	WG	X																	
CC010	FTD72-CC010(041912)	4/19/2012	WG	X																	
CC011	FTD72-CC011(042012)	4/20/2012	WG	X		X	X	X	X												
CC013	FTD72-CC013(042012)	4/20/2012	WG	X																	
CC015	FTD72-CC015(042012)	4/20/2012	WG	X																	
CC018	FTD72-CC018(042012)	4/20/2012	WG	X		X	X	X	X												
CC019	FTD72-CC019(042012)	4/20/2012	WG	X																	
CC020	FTD72-CC020(042012)	4/20/2012	WG	X		X	X	X	X												
CC021	FTD72-CC021(041912)	4/19/2012	WG	X																	
CC022	FTD72-CC022(042012)	4/20/2012	WG	X		X	X	X	X												
CC023	FTD72-CC023(042012)	4/20/2012	WG	X																	
CC024	FTD72-CC024(042012)	4/20/2012	WG	X																	

Table A.7.5.4-4
Analytical Parameters by Sample Location
Area B Groundwater
Fort Detrick, Maryland

Sample Location	Sample ID	Date Collected	Sample Matrix	TCL VOCs + 20 TICs; (EPA 8260B) (includes: Freons; 1,2,3-TCP; DBCP; 1,2,4-trimethylbenzene; 1,2,3-trichlorobenzene)	EDB (EPA 504.1/8011)	TCL SVOCs + 20 TICs (EPA 8270C) [includes: BCEE; 1,4-dioXane; Bis(2-chloro)isopropyl ether, 1,4-naphthoquinone]	TCL Pesticides/PCBs (EPA 8081A/8082)	TAL Metals + Boron (EPA 6010B/7470A) DISSOLVED	TAL Metals + Boron (EPA 6010B/7470A) TOTAL	Herbicides + Picloram (EPA 8151A)	Diquat (EPA 549.2)	Fenuron, Diuron, and Monuron (EPA 8321A)	Simazine (EPA 525.2/8270C SIM)	Endothall (EPA 548.1)	Cl, NO3, SO4 (Anions) (EPA 9056)	TDS (EPA 160.1)	Bromate (EPA 300.1B)	Cyanide (EPA 9012A/9013A)	Gross Alpha/Beta (EPA 900.0)	DioXins/Furans (8290)	Bromide (EPA 9056)
Surface Water																					
SW-101	FTD72-SW-101(041912)	4/19/2012	WG	X		X	X	X	X												
SW-102	FTD72-SW-102(041912)	4/19/2012	WG	X		X	X	X	X												
SW-103	FTD72-SW-103(041912)	4/19/2012	WG	X		X	X	X	X												
SW-104	FTD72-SW-104(041912)	4/19/2012	WG	X		X	X	X	X												
SW-105	FTD72-SW-105(041912)	4/19/2012	WG	X		X	X	X	X												
SW-106	FTD72-SW-106(041812)	4/18/2012	WG	X		X	X	X	X												
SW-107	FTD72-SW-107(041812)	4/18/2012	WG	X		X	X	X	X												
SW-108	FTD72-SW-108(041712)	4/17/2012	WG	X		X	X	X	X												
SW-109	FTD72-SW-109(041612)	4/16/2012	WG	X		X	X	X	X												
SW-110	FTD72-SW-110(041612)	4/16/2012	WG	X		X	X	X	X												
SW-111	FTD72-SW-111(041612)	4/16/2012	WG	X		X	X	X	X												
SW-112	FTD72-SW-112(041812)	4/18/2012	WG	X		X	X	X	X												
SW-113	FTD72-SW-113(041712)	4/17/2012	WG	X		X	X	X	X												
SW-114	FTD72-SW-114(041712)	4/17/2012	WG	X		X	X	X	X												
SW-115	FTD72-SW-115(041712)	4/17/2012	WG	X		X	X	X	X												
SW-116	FTD72-SW-116(041712)	4/17/2012	WG	X		X	X	X	X												
SW-118	FTD72-SW-118(041712)	4/17/2012	WG	X		X	X	X	X												
SW-119	FTD72-SW-119(041712)	4/17/2012	WG	X		X	X	X	X												
SW-120	FTD72-SW-120(041612)	4/16/2012	WG	X		X	X	X	X												
SW-121	FTD72-SW-121(041712)	4/17/2012	WG	X		X	X	X	X												
SW-122	FTD72-SW-122(041712)	4/17/2012	WG	X		X	X	X	X												
SW-123	FTD72-SW-123(041612)	4/16/2012	WG	X		X	X	X	X												
SW-124	FTD72-SW-124(041612)	4/16/2012	WG	X		X	X	X	X												
SW-126	FTD72-SW-126(041612)	4/16/2012	WG	X		X	X	X	X												
SW-127	FTD72-SW-127(041612)	4/16/2012	WG	X		X	X	X	X												
SW-128	FTD72-SW-128(041912)	4/19/2012	WG	X																	

Table A.7.5.4-4
Analytical Parameters by Sample Location
Area B Groundwater
Fort Detrick, Maryland

Sample Location	Sample ID	Date Collected	Sample Matrix	TCL VOCs + 20 TICs + Freons + 1,2,3-TCP + DBCP (EPA 8260B)	EDB (EPA 504.1/8011)	BCEE + 1,4-dioxane(EPA 8270C SIM)	Bis(2-chloro)isopropyl ehter (EPA 8270C SIM)	TCL SVOCs + 20 TICs (EPA 8270C)	TCL Pesticides/PCBs (EPA 8081A/8082)	TAL Metals (EPA 6010B/7470A/7471A)	Herbicides + Picloram (EPA 8151A)	Diquat (EPA 549.2)	Fenuron, Diuron, and Monuron (EPA 8321A)	Simazine (EPA 525.2/8270C SIM)	Endothall (EPA 548.1)	Alkalinity (Hach 8023 in field)	Cl, NO3, SO4 (Anions) (EPA 9056)	Bromate (EPA 300.1B)	Bromide (EPA 9056)	TAL Metals + Boron (EPA 6010B/7470A)	Gross Alpha/Beta (EPA 900.0)	Dioxins/Furans (8290)	1,4-naphthoquinone (8270C)	1,2,4-trimethylbenzene and 1,2,3-trichlorobenzene (8260B)
Sediment																								
RISP-3 (Robinson Box Sp)	FTD72-RISP-3(042012)	4/20/2012	SE	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x
STR5SW-53 (Dock Sp)	FTD72-STR5SD-53(041612)	4/16/2012	SE	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x
STR5SW-30 (N. Armory Sp)	FTD72-STR5SD-30(041612)	4/16/2012	SE	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x
STR5SW-31 (S. Armory Sp)	FTD72-STR5SD-31(041612)	4/16/2012	SE	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x
UnnamedBoils	FTD72-UNNAMEDBOILS(041712)	4/17/2012	SE	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x
SED-101	FTD72-SD-101(041912)	4/19/2012	SE	x		x	x	x	x	x														
SED-102	FTD72-SD-102(041912)	4/19/2012	SE	x		x	x	x	x	x														
SED-103	FTD72-SD-103(041912)	4/19/2012	SE	x		x	x	x	x	x														
SED-104	FTD72-SD-104(041912)	4/19/2012	SE	x			x	x	x	x														
SED-105	FTD72-SD-105(041912)	4/19/2012	SE	x		x	x	x	x	x														
SED-106	FTD72-SD-106(041812)	4/18/2012	SE	x		x	x	x	x	x														
SED-107	FTD72-SD-107(041812)	4/18/2012	SE	x		x	x	x	x	x														
SED-108	FTD72-SD-108(041712)	4/17/2012	SE	x		x	x	x	x	x														
SED-109	FTD72-SD-109(041612)	4/16/2012	SE	x			x	x	x	x														
SED-110	FTD72-SD-110(041612)	4/16/2012	SE	x			x	x	x	x														
SED-111	FTD72-SD-111(041612)	4/16/2012	SE	x			x	x	x	x														
SED-112	FTD72-SD-112(041812)	4/18/2012	SE	x		x	x	x	x	x														
SED-113	FTD72-SD-113(041712)	4/17/2012	SE	x		x	x	x	x	x														
SED-114	FTD72-SD-114(041712)	4/17/2012	SE	x		x	x	x	x	x														
SED-115	FTD72-SD-115(041712)	4/17/2012	SE	x		x	x	x	x	x														
SED-116	FTD72-SD-116(041712)	4/17/2012	SE	x		x	x	x	x	x														
SED-117	FTD72-SD-117(041712)	4/17/2012	SE	x		x	x	x	x	x														
SED-118	FTD72-SD-118(041712)	4/17/2012	SE	x		x	x	x	x	x														
SED-119	FTD72-SD-119(041712)	4/17/2012	SE	x		x	x	x	x	x														
SED-120	FTD72-SD-120(041612)	4/16/2012	SE	x		x	x	x	x	x														
SED-121	FTD72-SD-121(041712)	4/17/2012	SE	x		x	x	x	x	x														
SED-122	FTD72-SD-122(041712)	4/17/2012	SE	x		x	x	x	x	x														
SED-123	FTD72-SD-123(041612)	4/16/2012	SE	x			x	x	x	x														
SED-124	FTD72-SD-124(041612)	4/16/2012	SE	x			x	x	x	x														
SED-125	FTD72-SD-125(041612)	4/16/2012	SE	x			x	x	x	x														
SED-126	FTD72-SD-126(041612)	4/16/2012	SE	x		x	x	x	x	x														
SED-127	FTD72-SD-127(041612)	4/16/2012	SE	x		x	x	x	x	x														

Table A.7.5.4-4
Analytical Parameters by Sample Location
Area B Groundwater
Fort Detrick, Maryland

Location ID	Sample Name	Sampling Area	Matrix	Date Collected	Sample Type	TCL VOCs + 20 TICs; (EPA 8260B) (includes: Freons; 1,2,3-TCP; DBCP; 1,2,4-trimethylbenzene; 1,2,3-trichlorobenzene)	TCL SVOCs + 20 TICs (EPA 8270C) [includes: BCEE; 1,4-dioxane; Bis(2-chloro)isopropyl ether, 1,4-naphthoquinone]	Dioxins/Furans (8290)	Herbicides + Picloram (EPA 8151A)	TAL Metals + Boron (EPA 6010B/7470A) TOTAL	TAL Metals + Boron (EPA 6010B/7470A) DISSOLVED	Miscellaneous	PCBs (EPA 8081A/8082)	TCL Pesticides (EPA 8081A/8082)	Gross Alpha/Beta (EPA 900.0)
Area B Monitoring Wells															
BMW11	FTD72-BMW11(032912)	Area B Monitoring Wells	WG	3/29/2012	FS	X	X			X		X	X	X	
BMW11D	FTD72-BMW11D(033012)	Area B Monitoring Wells	WG	3/30/2012	FS	X	X	X	X	X		X	X	X	
BMW16	FTD72-BMW16(040612)	Area B Monitoring Wells	WG	4/6/2012	FS	X	X	X	X	X		X	X	X	
BMW18	FTD72-BMW18(040512)	Area B Monitoring Wells	WG	4/5/2012	FS	X	X	X	X	X		X	X	X	
BMW20	FTD72-BMW20(040512)	Area B Monitoring Wells	WG	4/5/2012	FS	X	X	X	X	X		X	X	X	
BMW20D	FTD72-BMW20D(040512)	Area B Monitoring Wells	WG	4/5/2012	FS	X	X	X	X	X		X	X	X	
BMW21	FTD72-BMW21(040512)	Area B Monitoring Wells	WG	4/5/2012	FS	X	X			X	X	X	X	X	
BMW21D	FTD72-BMW21D(040612)	Area B Monitoring Wells	WG	4/6/2012	FS	X	X			X		X	X	X	
BMW24	FTD72-BMW24(040512)	Area B Monitoring Wells	WG	4/5/2012	FS	X	X	X	X	X		X	X	X	
BMW24D	FTD72-BMW24D(040512)	Area B Monitoring Wells	WG	4/5/2012	FS	X	X	X	X	X		X	X	X	
BMW29A	FTD72-BMW29A(033012)	Area B Monitoring Wells	WG	3/30/2012	FS	X	X	X	X	X		X	X	X	
BMW29B	FTD72-BMW29B(033012)	Area B Monitoring Wells	WG	3/30/2012	FS	X	X	X	X	X		X	X	X	
BMW31	FTD72-BMW31(040412)	Area B Monitoring Wells	WG	4/4/2012	FS	X	X		X	X			X	X	
BMW31D	FTD72-BMW31D(040512)	Area B Monitoring Wells	WG	4/5/2012	FS	X	X		X	X			X	X	
BMW32D	FTD72-BMW32D(040512)	Area B Monitoring Wells	WG	4/5/2012	FS	X	X		X	X			X	X	
BMW33	FTD72-BMW33(032912)	Area B Monitoring Wells	WG	3/29/2012	FS	X	X		X	X			X	X	
BMW34	FTD72-BMW34(033012)	Area B Monitoring Wells	WG	3/30/2012	FS	X	X		X	X			X	X	
BMW35	FTD72-BMW35(032912)	Area B Monitoring Wells	WG	3/29/2012	FS	X	X		X	X	X		X	X	
BMW35D	FTD72-BMW35D(032912)	Area B Monitoring Wells	WG	3/29/2012	FS	X	X		X	X			X	X	
BMW36	FTD72-BMW36(033012)	Area B Monitoring Wells	WG	3/30/2012	FS	X	X		X	X			X	X	
BMW36D	FTD72-BMW36D(033012)	Area B Monitoring Wells	WG	3/30/2012	FS	X	X		X	X			X	X	
BMW37	FTD72-BMW37(040912)	Area B Monitoring Wells	WG	4/9/2012	FS	X	X	X	X	X		X	X	X	
BMW37D	FTD72-BMW37D(040912)	Area B Monitoring Wells	WG	4/9/2012	FS	X	X	X	X	X		X	X	X	
BMW38	FTD72-BMW38(040512)	Area B Monitoring Wells	WG	4/5/2012	FS	X	X	X	X	X		X	X	X	
BMW4	FTD72-BMW4(033012)	Area B Monitoring Wells	WG	3/30/2012	FS	X	X			X			X	X	
BMW40	FTD72-BMW40(040312)	Area B Monitoring Wells	WG	4/3/2012	FS	X	X		X	X			X	X	
BMW41D	FTD72-BMW41D(040212)	Area B Monitoring Wells	WG	4/2/2012	FS	X	X	X	X	X		X	X	X	
BMW42	FTD72-BMW42(040212)	Area B Monitoring Wells	WG	4/2/2012	FS	X	X	X	X	X		X	X	X	
BMW43	FTD72-BMW43(040212)	Area B Monitoring Wells	WG	4/2/2012	FS	X	X		X	X			X	X	
BMW44	FTD72-BMW44(033012)	Area B Monitoring Wells	WG	3/30/2012	FS	X	X	X	X	X		X	X	X	
BMW45	FTD72-BMW45(032912)	Area B Monitoring Wells	WG	3/29/2012	FS	X	X		X	X			X	X	
BMW47D	FTD72-BMW47D(040612)	Area B Monitoring Wells	WG	4/6/2012	FS	X	X		X	X	X	X	X	X	
BMW49	FTD72-BMW49(040212)	Area B Monitoring Wells	WG	4/2/2012	FS	X	X	X	X	X		X	X	X	
BMW5	FTD72-BMW5(033012)	Area B Monitoring Wells	WG	3/30/2012	FS	X	X			X		X	X	X	
BMW52D	FTD72-BMW52D(040312)	Area B Monitoring Wells	WG	4/3/2012	FS	X	X		X	X		X	X	X	
BMW53A	FTD72-BMW53A(040312)	Area B Monitoring Wells	WG	4/3/2012	FS	X	X		X	X		X	X	X	
BMW53B	FTD72-BMW53B(040312)	Area B Monitoring Wells	WG	4/3/2012	FS	X	X		X	X		X	X	X	
BMW53D	FTD72-BMW53D(040312)	Area B Monitoring Wells	WG	4/3/2012	FS	X	X	X	X	X	X	X	X	X	
BMW53E	FTD72-BMW53E(040312)	Area B Monitoring Wells	WG	4/3/2012	FS	X	X		X	X		X	X	X	

Table A.7.5.4-4
Analytical Parameters by Sample Location
Area B Groundwater
Fort Detrick, Maryland

Location ID	Sample Name	Sampling Area	Matrix	Date Collected	Sample Type	VOCs	SVOCs	Dioxins	Herbicides	Inorganics	Inorganics - Filtered	Miscellaneous	PCBs	Pesticides	Radiochemistry
BMW53F	FTD72-BMW53F(040312)	Area B Monitoring Wells	WG	4/3/2012	FS	X	X		X	X		X	X	X	
BMW54D	FTD72-BMW54D(040412)	Area B Monitoring Wells	WG	4/4/2012	FS	X	X		X	X		X	X	X	
BMW55D	FTD72-BMW55D(040512)	Area B Monitoring Wells	WG	4/5/2012	FS	X	X		X	X	X	X	X	X	
BMW56D	FTD72-BMW56D(040912)	Area B Monitoring Wells	WG	4/9/2012	FS	X	X	X	X	X		X	X	X	
BMW57D	FTD72-BMW57D(041012)	Area B Monitoring Wells	WG	4/10/2012	FS	X	X	X	X	X	X	X	X	X	
BMW58D	FTD72-BMW58D(040612)	Area B Monitoring Wells	WG	4/6/2012	FS	X	X	X	X	X		X	X	X	
BMW59D	FTD72-BMW59D(040612)	Area B Monitoring Wells	WG	4/6/2012	FS	X	X	X	X	X		X	X	X	
BMW5D	FTD72-BMW5D(033012)	Area B Monitoring Wells	WG	3/30/2012	FS	X	X			X		X	X	X	
BMW61	FTD72-BMW61(040412)	Area B Monitoring Wells	WG	4/4/2012	FS	X	X			X			X	X	
BMW62	FTD72-BMW62(040212)	Area B Monitoring Wells	WG	4/2/2012	FS	X	X		X	X			X	X	
BMW63	FTD72-BMW63(040212)	Area B Monitoring Wells	WG	4/2/2012	FS	X	X		X	X			X	X	
BMW64	FTD72-BMW64(040312)	Area B Monitoring Wells	WG	4/3/2012	FS	X	X		X	X			X	X	
BMW65A	FTD72-BMW65A(041112)	Area B Monitoring Wells	WG	4/11/2012	FS	X	X		X	X		X	X	X	
BMW65B	FTD72-BMW65B(041012)	Area B Monitoring Wells	WG	4/10/2012	FS	X	X		X	X	X	X	X	X	
BMW66B	FTD72-BMW66B(040412)	Area B Monitoring Wells	WG	4/4/2012	FS	X	X		X	X	X	X	X	X	
BMW66D	FTD72-BMW66D(040412)	Area B Monitoring Wells	WG	4/4/2012	FS	X	X		X	X		X	X	X	
BMW67A	FTD72-BMW67A(041112)	Area B Monitoring Wells	WG	4/11/2012	FS	X	X	X	X	X		X	X	X	
BMW67B	FTD72-BMW67B(041112)	Area B Monitoring Wells	WG	4/11/2012	FS	X	X	X	X	X	X	X	X	X	
BMW67B	FTD72-DUP-004(041112)FD	Area B Monitoring Wells	WG	4/11/2012	FD	X	X	X	X	X	X	X	X	X	
BMW67C	FTD72-BMW67C(041112)	Area B Monitoring Wells	WG	4/11/2012	FS	X	X	X	X	X		X	X	X	
BMW67D	FTD72-BMW67D(041112)	Area B Monitoring Wells	WG	4/11/2012	FS	X	X	X	X	X		X	X	X	
BMW68A	FTD72-BMW68A(041012)	Area B Monitoring Wells	WG	4/10/2012	FS	X	X	X	X	X		X	X	X	
BMW68B	FTD72-BMW68B(040912)	Area B Monitoring Wells	WG	4/9/2012	FS	X	X	X	X	X		X	X	X	
BMW68C	FTD72-BMW68C(041012)	Area B Monitoring Wells	WG	4/10/2012	FS	X	X	X	X	X	X	X	X	X	
BMW68D	FTD72-BMW68D(041012)	Area B Monitoring Wells	WG	4/10/2012	FS	X	X	X	X	X	X	X	X	X	
BMW68E	FTD72-BMW68E(040912)	Area B Monitoring Wells	WG	4/9/2012	FS	X	X	X	X	X	X	X	X	X	
BMW69A	FTD72-BMW69A(040412)	Area B Monitoring Wells	WG	4/4/2012	FS	X	X		X	X		X	X	X	
BMW70A	FTD72-BMW70A(040412)	Area B Monitoring Wells	WG	4/4/2012	FS	X	X		X	X		X	X	X	
BMW70B	FTD72-BMW70B(040412)	Area B Monitoring Wells	WG	4/4/2012	FS	X	X		X	X		X	X	X	
BMW70C	FTD72-BMW70C(040412)	Area B Monitoring Wells	WG	4/4/2012	FS	X	X		X	X	X	X	X	X	
BMW71A	FTD72-BMW71A(032812)	Area B Monitoring Wells	WG	3/28/2012	FS	X	X		X	X	X	X	X	X	
BMW71B	FTD72-BMW71B(032812)	Area B Monitoring Wells	WG	3/28/2012	FS	X	X		X	X		X	X	X	
BMW71C	FTD72-BMW71C(032912)	Area B Monitoring Wells	WG	3/29/2012	FS	X	X		X	X		X	X	X	
BMW71C	FTD72-BMW71C(041312)	Area B Monitoring Wells	WG	4/13/2012	FS							X			
BMW72	FTD72-BMW72(032912)	Area B Monitoring Wells	WG	3/29/2012	FS	X	X	X	X	X		X	X	X	
BMW72	FTD72-BMW72(041312)	Area B Monitoring Wells	WG	4/13/2012	FS							X			
BMW72	FTD72-DUP-001(032912)FD	Area B Monitoring Wells	WG	3/29/2012	FD	X	X	X	X	X		X	X	X	
BMW73	FTD72-BMW73(041012)	Area B Monitoring Wells	WG	4/10/2012	FS	X	X	X	X	X		X	X	X	
BMW74	FTD72-BMW74(040512)	Area B Monitoring Wells	WG	4/5/2012	FS	X	X	X	X	X		X	X	X	
BMW76	FTD72-BMW76(040212)	Area B Monitoring Wells	WG	4/2/2012	FS	X	X	X	X	X		X	X	X	
BMW77	FTD72-BMW77(040212)	Area B Monitoring Wells	WG	4/2/2012	FS	X	X	X	X	X		X	X	X	
BMW78A	FTD72-BMW78A(040312)	Area B Monitoring Wells	WG	4/3/2012	FS	X	X		X	X	X	X	X	X	
BMW78B	FTD72-BMW78B(040312)	Area B Monitoring Wells	WG	4/3/2012	FS	X	X		X	X	X	X	X	X	
BMW9D	FTD72-BMW9D(040312)	Area B Monitoring Wells	WG	4/3/2012	FS	X	X			X			X	X	

Table A.7.5.4-4
Analytical Parameters by Sample Location
Area B Groundwater
Fort Detrick, Maryland

Location ID	Sample Name	Sampling Area	Matrix	Date Collected	Sample Type	VOCs	SVOCs	Dioxins	Herbicides	Inorganics	Inorganics - Filtered	Miscellaneous	PCBs	Pesticides	Radiochemistry
Named Springs															
STR5SW-30/ N. Armory Sp.	FTD72-STR5SW-30(041612)	Named Springs	WG	4/16/2012	FS	X	X			X	X		X	X	
STR5SW-31/ S. Armory Sp.	FTD72-STR5SW-31(041612)	Named Springs	WG	4/16/2012	FS	X	X			X	X		X	X	
STR5SW-53/ CC-012/ Dock Sp.	FTD72-STR5SW-53(041612)	Named Springs	WG	4/16/2012	FS	X	X			X	X		X	X	
RISP-3/Robinson Box Sp.	FTD72-RISP-3(042012)	Named Springs	WG	4/20/2012	FS	X	X	X	X	X	X	X	X	X	
RISP-4/ Robinson Rock Sp.	FTD72-RISP-4(042012)	Named Springs	WG	4/20/2012	FS	X	X			X	X		X	X	
CC006/ Sewerline Sp.	FTD72-CC006(041912)	Named Springs	WG	4/19/2012	FS	X	X			X	X		X	X	
CC007/ Upsurgent Sp.	FTD72-CC007(041912)	Named Springs	WG	4/19/2012	FS	X	X			X	X		X	X	
CC008/ Spearmint Sp.	FTD72-CC008(041912)	Named Springs	WG	4/19/2012	FS	X	X			X	X		X	X	
Springs/Seeps Identified During Stream Survey															
UnnamedBoils	FTD72-UNNAMEDBOILS(041712)	Springs/Seeps Identified During Stream Survey	WG	4/17/2012	FS	X	X	X	X	X	X	X	X	X	
S2-001	FTD72-S2-001(041912)	Springs/Seeps Identified During Stream Survey	WG	4/19/2012	FS	X	X			X	X		X	X	
S2-002	FTD72-S2-002(041912)	Springs/Seeps Identified During Stream Survey	WG	4/19/2012	FS	X									
S2-003	FTD72-S2-003(042012)	Springs/Seeps Identified During Stream Survey	WG	4/20/2012	FS	X									
S2-004	FTD72-S2-004(042012)	Springs/Seeps Identified During Stream Survey	WG	4/20/2012	FS	X	X			X	X		X	X	
CC001	FTD72-CC001(041912)	Springs/Seeps Identified During Stream Survey	WG	4/19/2012	FS	X									
CC002	FTD72-CC002(041912)	Springs/Seeps Identified During Stream Survey	WG	4/19/2012	FS	X	X			X	X		X	X	
CC003A	FTD72-CC003A(042012)	Springs/Seeps Identified During Stream Survey	WG	4/20/2012	FS	X	X			X	X		X	X	
CC003B	FTD72-CC003B(042012)	Springs/Seeps Identified During Stream Survey	WG	4/20/2012	FS	X									
CC003C	FTD72-CC003C(042012)	Springs/Seeps Identified During Stream Survey	WG	4/20/2012	FS	X									
CC004	FTD72-CC004(042012)	Springs/Seeps Identified During Stream Survey	WG	4/20/2012	FS	X	X			X	X		X	X	
CC008A	FTD72-CC008A(041912)	Springs/Seeps Identified During Stream Survey	WG	4/19/2012	FS	X									
CC009	FTD72-CC009(041912)	Springs/Seeps Identified During Stream Survey	WG	4/19/2012	FS	X									
CC010	FTD72-CC010(041912)	Springs/Seeps Identified During Stream Survey	WG	4/19/2012	FS	X									
CC011	FTD72-CC011(042012)	Springs/Seeps Identified During Stream Survey	WG	4/20/2012	FS	X	X			X	X		X	X	
CC013	FTD72-CC013(042012)	Springs/Seeps Identified During Stream Survey	WG	4/20/2012	FS	X									
CC015	FTD72-CC015(042012)	Springs/Seeps Identified During Stream Survey	WG	4/20/2012	FS	X									
CC018	FTD72-CC018(042012)	Springs/Seeps Identified During Stream Survey	WG	4/20/2012	FS	X	X			X	X		X	X	
CC019	FTD72-CC019(042012)	Springs/Seeps Identified During Stream Survey	WG	4/20/2012	FS	X									
CC020	FTD72-CC020(042012)	Springs/Seeps Identified During Stream Survey	WG	4/20/2012	FS	X	X			X	X		X	X	
CC021	FTD72-CC021(041912)	Springs/Seeps Identified During Stream Survey	WG	4/19/2012	FS	X									
CC022	FTD72-CC022(042012)	Springs/Seeps Identified During Stream Survey	WG	4/20/2012	FS	X	X			X	X		X	X	
CC023	FTD72-CC023(042012)	Springs/Seeps Identified During Stream Survey	WG	4/20/2012	FS	X									
CC024	FTD72-CC024(042012)	Springs/Seeps Identified During Stream Survey	WG	4/20/2012	FS	X									
Residential Wells															
DWELL-314	FTD72-DWELL-314(042012)	Residential Wells	WG	4/20/2012	FS	X									
DWELL-314	FTD-DWELL-314(111611)	Residential Wells	WG	11/16/2011	FS	X									
DWELL-600	FTD72-DWELL-600(042012)	Residential Wells	WG	4/20/2012	FS	X									
DWELL-66	FTD-DUP(111611)	Residential Wells	WG	11/16/2011	FD	X									
DWELL-77	FTD72-DWELL-77(042012)	Residential Wells	WG	4/20/2012	FS	X									

Table A.7.5.4-4
Analytical Parameters by Sample Location
Area B Groundwater
Fort Detrick, Maryland

Location ID	Sample Name	Sampling Area	Matrix	Date Collected	Sample Type	VOCs	SVOCs	Dioxins	Herbicides	Inorganics	Inorganics - Filtered	Miscellaneous	PCBs	Pesticides	Radiochemistry
DWGRAN-18	FTD72-DWGRAN-18(042012)	Residential Wells	WG	4/20/2012	FS	X									
DWGRAN-18	FTD-DWGRAN-18(111611)	Residential Wells	WG	11/16/2011	FS	X									
DWGRAW-18	FTD-DWGRAW-18(111611)	Residential Wells	WG	11/16/2011	FS	X									
DWSRD-1	FTD72-DWSRD-1(042412)	Residential Wells	WG	4/24/2012	FS	X	X								
DWSRD-26	FTD72-DUP001(042412)FD	Residential Wells	WG	4/24/2012	FD	X	X								
DWSRD-26	FTD72-DWSRD-26(042412)	Residential Wells	WG	4/24/2012	FS	X	X								
Piezometers															
PZ-01	PZ-01_031212	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/12/2012	FS	X									
PZ-02	PZ-02_031212	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/12/2012	FS	X									
PZ-03	PZ-03_031212	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/12/2012	FS	X									
PZ-05	PZ-05_031212	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/12/2012	FS	X									
PZ-06	PZ-06_031212	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/12/2012	FS	X									
PZ-07	PZ-07_031212	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/12/2012	FS	X									
PZ-08	PZ-08_030912	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/9/2012	FS	X									
PZ-09	PZ-09_031312	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/13/2012	FS	X									
PZ-11	PZ-11_031312	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/13/2012	FS	X									
PZ-14	PZ-14_032012	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/20/2012	FS	X									
PZ-16	PZ-16_030612	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/6/2012	FS	X									
PZ-20	PZ-20_030712	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/7/2012	FS	X									
PZ-21	PZ-21_030712	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/7/2012	FS	X									
PZ-22	PZ-22_032212	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/22/2012	FS	X									
PZ-23	PZ-23_031912	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/19/2012	FS	X									
PZ-24	PZ-24_032212	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/22/2012	FS	X									
PZ-26	PZ-26_032012	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/20/2012	FS	X									
PZ-27	PZ-27_031912	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/19/2012	FS	X									
PZ-29	PZ-29_022912	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	2/29/2012	FS	X									
PZ-30	PZ-30_022812	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	2/28/2012	FS	X									
PZ-31	PZ-31_022812	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	2/28/2012	FS	X									
PZ-33	PZ-33_030812	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/8/2012	FS	X									
PZ-34	PZ-34_030912	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/9/2012	FS	X									
PZ-36	PZ-36_032012	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/20/2012	FS	X									
PZ-37	PZ-37_032212	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/22/2012	FS	X									
PZ-38	PZ-38_030512	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/5/2012	FS	X									
PZ-39	PZ-39_022912	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	2/29/2012	FS	X									
PZ-40	PZ-40_030112	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/1/2012	FS	X									
PZ-44	PZ-44_030512	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/5/2012	FS	X									
PZ-45	PZ-45_030212	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/2/2012	FS	X									
PZ-46	PZ-46_030112	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/1/2012	FS	X									
PZ-49	PZ-49_030912	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/9/2012	FS	X									
PZ-52	PZ-52_030112	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/1/2012	FS	X									

Table A.7.5.4-4
Analytical Parameters by Sample Location
Area B Groundwater
Fort Detrick, Maryland

Location ID	Sample Name	Sampling Area	Matrix	Date Collected	Sample Type	VOCs	SVOCs	Dioxins	Herbicides	Inorganics	Inorganics - Filtered	Miscellaneous	PCBs	Pesticides	Radiochemistry
PZ-54	PZ-54_032112	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/21/2012	FS	X									
PZ-55A	PZ-55A_032012	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/21/2012	FS	X									
PZ-55B	PZ-55B_032012	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/20/2012	FS	X									
PZ-56	PZ-56_032112	Direct Push Borings/Piezometers (Shallow Groundwater)	WG	3/21/2012	FS	X									
Surface Water															
SW-101	FTD72-SW-101(041912)	Surface Water Samples	WG	4/19/2012	FS	X	X			X	X		X	X	
SW-102	FTD72-SW-102(041912)	Surface Water Samples	WG	4/19/2012	FS	X	X			X	X		X	X	
SW-103	FTD72-SW-103(041912)	Surface Water Samples	WG	4/19/2012	FS	X	X			X	X		X	X	
SW-104	FTD72-SW-104(041912)	Surface Water Samples	WG	4/19/2012	FS	X	X			X	X		X	X	
SW-105	FTD72-SW-105(041912)	Surface Water Samples	WG	4/19/2012	FS	X	X			X	X		X	X	
SW-106	FTD72-SW-106(041812)	Surface Water Samples	WG	4/18/2012	FS	X	X			X	X		X	X	
SW-107	FTD72-SW-107(041812)	Surface Water Samples	WG	4/18/2012	FS	X	X			X	X		X	X	
SW-108	FTD72-SW-108(041712)	Surface Water Samples	WG	4/17/2012	FS	X	X			X	X		X	X	
SW-109	FTD72-SW-109(041612)	Surface Water Samples	WG	4/16/2012	FS	X	X			X	X		X	X	
SW-110	FTD72-SW-110(041612)	Surface Water Samples	WG	4/16/2012	FS	X	X			X	X		X	X	
SW-111	FTD72-SW-111(041612)	Surface Water Samples	WG	4/16/2012	FS	X	X			X	X		X	X	
SW-112	FTD72-SW-112(041812)	Surface Water Samples	WG	4/18/2012	FS	X	X			X	X		X	X	
SW-113	FTD72-SW-113(041712)	Surface Water Samples	WG	4/17/2012	FS	X	X			X	X		X	X	
SW-114	FTD72-SW-114(041712)	Surface Water Samples	WG	4/17/2012	FS	X	X			X	X		X	X	
SW-115	FTD72-SW-115(041712)	Surface Water Samples	WG	4/17/2012	FS	X	X			X	X		X	X	
SW-116	FTD72-SW-116(041712)	Surface Water Samples	WG	4/17/2012	FS	X	X			X	X		X	X	
SW-117	FTD72-SW-117(041712)	Surface Water Samples	WG	4/17/2012	FS	X	X			X	X		X	X	
SW-118	FTD72-SW-118(041712)	Surface Water Samples	WG	4/17/2012	FS	X	X			X	X		X	X	
SW-119	FTD72-SW-119(041712)	Surface Water Samples	WG	4/17/2012	FS	X	X			X	X		X	X	
SW-120	FTD72-SW-120(041612)	Surface Water Samples	WG	4/16/2012	FS	X	X			X	X		X	X	
SW-121	FTD72-SW-121(041712)	Surface Water Samples	WG	4/17/2012	FS	X	X			X	X		X	X	
SW-122	FTD72-SW-122(041712)	Surface Water Samples	WG	4/17/2012	FS	X	X			X	X		X	X	
SW-123	FTD72-SW-123(041612)	Surface Water Samples	WG	4/16/2012	FS	X	X			X	X		X	X	
SW-124	FTD72-SW-124(041612)	Surface Water Samples	WG	4/16/2012	FS	X	X			X	X		X	X	
SW-126	FTD72-SW-126(041612)	Surface Water Samples	WG	4/16/2012	FS	X	X			X	X		X	X	
SW-127	FTD72-SW-127(041612)	Surface Water Samples	WG	4/16/2012	FS	X	X			X	X		X	X	
SW-128	FTD72-SW-128(041912)	Surface Water Samples	WG	4/19/2012	FS	X									

Table A.7.5.4-4
Analytical Parameters by Sample Location
Area B Groundwater
Fort Detrick, Maryland

Location ID	Sample Name	Sampling Area	Matrix	Date Collected	Sample Type	VOCs	SVOCs	Dioxins	Herbicides	Inorganics	Inorganics - Filtered	Miscellaneous	PCBs	Pesticides	Radiochemistry
Sediment															
UnnamedBoils	FTD72-UNNAMEDBOILS(041712)	Sediment	SE	4/17/2012	FS	X	X	X	X	X		X	X	X	X
RISP-3	FTD72-RISP-3(042012)	Sediment	SE	4/20/2012	FS	X	X	X	X	X		X	X	X	X
STR5SD-30	FTD72-STR5SD-30(041612)	Sediment	SE	4/16/2012	FS	X	X	X	X	X		X	X	X	X
STR5SD-30	FTD72-STR5SD-30(041612) GRAB	Sediment	SE	4/16/2012	FS										X
STR5SD-31	FTD72-DUP-001(041612) GRAB SE	Sediment	SE	4/16/2012	FS										X
STR5SD-31	FTD72-DUP-001(041612)FD	Sediment	SE	4/16/2012	FD	X	X	X	X	X		X	X	X	X
STR5SD-31	FTD72-STR5SD-31(041612)	Sediment	SE	4/16/2012	FS	X	X	X	X	X		X	X	X	X
STR5SD-31	FTD72-STR5SD-31(041612) GRAB	Sediment	SE	4/16/2012	FS										X
STR5SD-53	FTD72-STR5SD-53(041612)	Sediment	SE	4/16/2012	FS	X	X	X	X	X		X	X	X	X
SD-101	FTD72-SD-101(041912)	Sediment	SE	4/19/2012	FS	X	X			X		X	X	X	
SD-102	FTD72-DUP-002(041912)FD	Sediment	SE	4/19/2012	FD	X	X			X		X	X	X	
SD-102	FTD72-SD-102(041912)	Sediment	SE	4/19/2012	FS	X	X			X		X	X	X	
SD-103	FTD72-SD-103(041912)	Sediment	SE	4/19/2012	FS	X	X			X		X	X	X	
SD-104	FTD72-SD-104(041912)	Sediment	SE	4/19/2012	FS	X	X			X		X	X	X	
SD-105	FTD72-SD-105(041912)	Sediment	SE	4/19/2012	FS	X	X			X		X	X	X	
SD-106	FTD72-SD-106(041812)	Sediment	SE	4/18/2012	FS	X	X			X		X	X	X	
SD-107	FTD72-SD-107(041812)	Sediment	SE	4/18/2012	FS	X	X			X		X	X	X	
SD-108	FTD72-SD-108(041712)	Sediment	SE	4/17/2012	FS	X	X			X		X	X	X	
SD-109	FTD72-SD-109(041612)	Sediment	SE	4/16/2012	FS	X	X			X		X	X	X	
SD-110	FTD72-SD-110(041612)	Sediment	SE	4/16/2012	FS	X	X			X		X	X	X	
SD-111	FTD72-SD-111(041612)	Sediment	SE	4/16/2012	FS	X	X			X		X	X	X	
SD-112	FTD72-SD-112(041812)	Sediment	SE	4/18/2012	FS	X	X			X		X	X	X	
SD-113	FTD72-SD-113(041712)	Sediment	SE	4/17/2012	FS	X	X			X		X	X	X	
SD-114	FTD72-SD-114(041712)	Sediment	SE	4/17/2012	FS	X	X			X		X	X	X	
SD-115	FTD72-SD-115(041712)	Sediment	SE	4/17/2012	FS	X	X			X		X	X	X	
SD-116	FTD72-SD-116(041712)	Sediment	SE	4/17/2012	FS	X	X			X		X	X	X	
SD-117	FTD72-SD-117(041712)	Sediment	SE	4/17/2012	FS	X	X			X		X	X	X	
SD-118	FTD72-SD-118(041712)	Sediment	SE	4/17/2012	FS	X	X			X		X	X	X	
SD-119	FTD72-SD-119(041712)	Sediment	SE	4/17/2012	FS	X	X			X		X	X	X	
SD-120	FTD72-SD-120(041612)	Sediment	SE	4/16/2012	FS	X	X			X		X	X	X	
SD-121	FTD72-SD-121(041712)	Sediment	SE	4/17/2012	FS	X	X			X		X	X	X	
SD-122	FTD72-SD-122(041712)	Sediment	SE	4/17/2012	FS	X	X			X		X	X	X	
SD-123	FTD72-SD-123(041612)	Sediment	SE	4/16/2012	FS	X	X			X		X	X	X	
SD-124	FTD72-SD-124(041612)	Sediment	SE	4/16/2012	FS	X	X			X		X	X	X	
SD-125	FTD72-SD-125(041612)	Sediment	SE	4/16/2012	FS	X	X			X		X	X	X	
SD-126	FTD72-SD-126(041612)	Sediment	SE	4/16/2012	FS	X	X			X		X	X	X	
SD-127	FTD72-SD-127(041612)	Sediment	SE	4/16/2012	FS	X	X			X		X	X	X	

Table A.7.5.4-5
Comprehensive Surface Water Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	Health - Fish Ingestion+Drinking Water	AWQC Human Health - Fish Ingestion Only		SW-101	SW-102	SW-103	SW-104	SW-105	SW-106	SW-107	SW-108
Date Collected:				04/19/12	04/19/12	04/19/12	04/19/12	04/19/12	04/18/12	04/18/12	04/17/12
Sampling Area:	(bold)	(shade)	Units	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples
PCBs											
Aroclor-1016	- -	- -	ug/L	0.1 U	0.098 U	0.096 U	0.1 U	0.11 U	0.1 U	0.1 U	0.097 U
Aroclor-1221	- -	- -	ug/L	0.1 U	0.098 U	0.096 U	0.1 U	0.11 U	0.1 U	0.1 U	0.097 U
Aroclor-1232	- -	- -	ug/L	0.1 U	0.098 U	0.096 U	0.1 U	0.11 U	0.1 U	0.1 U	0.097 U
Aroclor-1242	- -	- -	ug/L	0.1 U	0.098 U	0.096 U	0.1 U	0.11 U	0.1 U	0.1 U	0.097 U
Aroclor-1248	- -	- -	ug/L	0.1 U	0.098 U	0.096 U	0.1 U	0.11 U	0.1 U	0.1 U	0.097 U
Aroclor-1254	- -	- -	ug/L	0.1 U	0.098 U	0.096 U	0.1 U	0.11 U	0.1 U	0.1 U	0.097 U
Aroclor-1260	- -	- -	ug/L	0.1 U	0.098 U	0.096 U	0.1 U	0.11 U	0.1 U	0.1 U	0.097 U
Volatile Organics											
1,1,1-Trichloroethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.17	4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.59	16	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	330	7,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	35	70	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	420	1,300	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.38	37	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5	15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	320	960	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	63	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	2.2	51	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.55	17	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	4.3	140	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	47	1,500	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	0.23	1.6	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	130	1,600	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	5.7	470	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.2 J
Chloromethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.4	13	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	530	2,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylcyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	4.6	590	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.69	3.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	1,300	15,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	140	10,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	2.5	30	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.025	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-5
Comprehensive Surface Water Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Date Collected: / Sampling Area:	Health - Fish Ingestion+Drinking Water (bold)	AWQC Human Health - Fish Ingestion Only (shade)	Units	SW-101 04/19/12 Surface Water Samples	SW-102 04/19/12 Surface Water Samples	SW-103 04/19/12 Surface Water Samples	SW-104 04/19/12 Surface Water Samples	SW-105 04/19/12 Surface Water Samples	SW-106 04/18/12 Surface Water Samples	SW-107 04/18/12 Surface Water Samples	SW-108 04/17/12 Surface Water Samples
Semivolatile Organics											
1,1'-Biphenyl	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	35	70	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	420	1,300	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	320	960	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	63	190	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Naphthoquinone	- -	- -	ug/L	29 U	31 U	29 U	29 U	31 U	31 U	29 U	29 U
2,2'-Oxybis(1-Chloropropane)	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4,5-Trichlorophenol	1,800	3,600	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4,6-Trichlorophenol	1.4	2.4	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dichlorophenol	77	290	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dimethylphenol	380	850	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dinitrophenol	69	5,300	ug/L	29 U	31 U	29 U	29 U	31 U	31 U	29 U	29 U
2,4-Dinitrotoluene	0.11	3.4	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chloronaphthalene	1,000	1,600	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorophenol	81	150	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Methylnaphthalene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Methylphenol	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Nitroaniline	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Nitrophenol	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
3,3'-Dichlorobenzidine	0.021	0.028	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
3-Nitroaniline	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4,6-Dinitro-2-methylphenol	13	280	ug/L	15 U	16 U	15 U	15 U	16 U	15 U	15 U	14 U
4-Bromophenyl-phenylether	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Chloro-3-Methylphenol	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Chloroaniline	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Chlorophenyl-phenylether	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Methylphenol	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Nitroaniline	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Nitrophenol	- -	- -	ug/L	29 U	31 U	29 U	29 U	31 U	31 U	29 U	29 U
Acenaphthene	670	990	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acenaphthylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetophenone	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Anthracene	8,300	40,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Atrazine	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ
Benzaldehyde	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ
Benzo(a)anthracene	0.0038	0.018	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(a)pyrene	0.0038	0.018	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(b)fluoranthene	0.0038	0.018	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(g,h,i)perylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(k)fluoranthene	0.0038	0.018	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzoic Acid	- -	- -	ug/L	15 U	16 U	15 U	15 U	16 U	15 U	15 U	14 U
Benzyl Alcohol	- -	- -	ug/L	15 U	16 U	15 U	15 U	16 U	15 U	15 U	14 U
bis(2-Chloroethoxy)methane	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
bis(2-Chloroethyl)ether	0.03	0.53	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
bis(2-Ethylhexyl)phthalate	1.2	2.2	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Butylbenzylphthalate	1,500	1,900	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Caprolactam	- -	- -	ug/L	15 U	16 U	15 U	15 U	16 U	15 U	15 U	14 U
Carbazole	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chrysene	0.0038	0.018	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibenzo(a,h)anthracene	0.0038	0.018	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibenzofuran	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Diethylphthalate	17,000	44,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dimethylphthalate	270,000	1,100,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Di-n-Butylphthalate	2,000	4,500	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Di-n-Octylphthalate	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Fluoranthene	130	140	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Fluorene	1,100	5,300	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobenzene	0.00028	0.00029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene	0.44	18	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorocyclopentadiene	40	1,100	ug/L	15 U	16 U	15 U	15 U	16 U	15 U	15 U	14 U
Hexachloroethane	1.4	3.3	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Indeno(1,2,3-cd)pyrene	0.0038	0.018	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isophorone	35	960	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Naphthalene	- -	- -	ug/L	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Nitrobenzene	17	690	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
N-Nitroso-di-n-propylamine	0.005	0.51	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
N-Nitrosodiphenylamine	3.3	6	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Pentachlorophenol	0.27	3	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Phenanthrene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Phenol	10,000	860,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Pyrene	830	4,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-5
Comprehensive Surface Water Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Date Collected: / Sampling Area:	Health - Fish Ingestion+Drinking Water (bold)	AWQC Human Health - Fish Ingestion Only (shade)	Units	SW-101 04/19/12 Surface Water Samples	SW-102 04/19/12 Surface Water Samples	SW-103 04/19/12 Surface Water Samples	SW-104 04/19/12 Surface Water Samples	SW-105 04/19/12 Surface Water Samples	SW-106 04/18/12 Surface Water Samples	SW-107 04/18/12 Surface Water Samples	SW-108 04/17/12 Surface Water Samples
Inorganics											
Aluminum	- -	- -	ug/L	369	225	166 J	200 U	200 U	200 U	112 J	250
Antimony	5.6	640	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	0.018	0.14	ug/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Barium	1,000	- -	ug/L	36.3	25.7	38.2	20.5	19.8	103	27.3	74
Beryllium	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Boron	- -	- -	ug/L	6.5 J	3.6 J	15.4 J	7.3 J	8.5 J	10 J	11.5 B	8 B
Cadmium	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Calcium	- -	- -	ug/L	6,100	6,070	11,100	7,610	7,710	73,500	7,880	47,300
Chromium	- -	- -	ug/L	1.4 J	1.3 J	1.5 J	15 U	15 U	1.9 J	15 U	15 U
Cobalt	- -	- -	ug/L	5 U	5 U	5 U	0.85 J	0.73 J	5 U	5 U	5 U
Copper	1,300	- -	ug/L	10 U	1.3 J	10 U	10 U	1.3 J	10 U	1.9 B	10 U
Iron	- -	- -	ug/L	504	414	833	196 J	263	21.3 J	246	386
Lead	- -	- -	ug/L	4.9 J	7.4 J	7 J	2.4 J	15 U	4.7 J	5.1 J	5.3 J
Magnesium	- -	- -	ug/L	2,930	2,380	6,120	3,420	3,400	15,700	3,330	10,900
Manganese	50	100	ug/L	11.2	10.3	33.1	10.4	8.2	4.1 J	11.2	19.4
Mercury	- -	- -	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	610	4,600	ug/L	10 U	10 U	1.1 J	10 U	10 U	10 U	10 U	1.2 J
Potassium	- -	- -	ug/L	2,160	1,770	2,690	2,210	2,200	3,050	2,160	3,290
Selenium	170	4,200	ug/L	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Silver	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Sodium	- -	- -	ug/L	10,800	8,750	23,700	13,700	13,500	22,000	12,100	20,600
Thallium	0.24	0.47	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Zinc	7,400	26,000	ug/L	7.5 J	4.4 J	3.9 J	20 U	20 U	4.8 J	20 U	4.1 J
Inorganics-Filtered											
Aluminum	- -	- -	ug/L	200 U	200 U [200 U]	200 U	180 J	200 U	200 U	200 U	200 U
Antimony	5.6	640	ug/L	1 U	1 U [1 U]	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	0.018	0.14	ug/L	2 U	2 U [2 U]	2 U	2 U	2 U	2 U	2 U	2 U
Barium	1,000	- -	ug/L	31.7	22.1 [22.6]	34.4	22.5	19	99	27.1	67.4
Beryllium	- -	- -	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Boron	- -	- -	ug/L	7.7 J	4.6 J [4.4 J]	18 J	12.5 J	13.1 J	10.4 J	5.8 J	7.4 J
Cadmium	- -	- -	ug/L	5 U	5 U [5 U]	5 U	0.59 J	5 U	5 U	5 U	5 U
Calcium	- -	- -	ug/L	5,970	6,080 [6,110]	10,900	7,510	7,580	76,600	7,870	47,200
Chromium	- -	- -	ug/L	15 U	15 U [15 U]	15 U	15 U	15 U	1.4 J	15 U	15 U
Cobalt	- -	- -	ug/L	5 U	5 U [5 U]	5 U	5 U	5 U	5 U	5 U	5 U
Copper	1,300	- -	ug/L	1.8 J	10 U [10 U]	10 U	2.8 J	1.3 J	1 J	10 U	10 U
Iron	- -	- -	ug/L	40.9 J	29.9 J [36.8 J]	404	460	154 J	200 U	105 J	53.3 J
Lead	- -	- -	ug/L	2.4 B	15 U [15 U]	3.4 B	15 U	15 U	3 B	5.8 B	15 U
Magnesium	- -	- -	ug/L	2,870	2,360 [2,370]	6,030	3,370	3,340	15,700	3,310	10,700
Manganese	50	100	ug/L	2.9 J	1.7 J [1.9 J]	21.7	17.5	5.6	3.2 J	9.3	13
Mercury	- -	- -	ug/L	0.2 U	0.2 U [0.2 U]	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	610	4,600	ug/L	10 U	10 U [10 U]	0.99 J	10 U	10 U	10 U	10 U	10 U
Potassium	- -	- -	ug/L	2,060	1,740 [1,720]	2,660	2,130	2,030	3,050	2,150	3,150
Selenium	170	4,200	ug/L	20 U	20 U [20 U]	20 U	20 U	20 U	20 U	20 U	20 U
Silver	- -	- -	ug/L	5 U	5 U [5 U]	5 U	5 U	5 U	5 U	5 U	5 U
Sodium	- -	- -	ug/L	10,800	8,830 [8,940]	23,700	13,400	13,200	21,500	12,100	20,200
Thallium	0.24	0.47	ug/L	0.5 U	0.5 U [0.5 U]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	5 U	5 U [5 U]	5 U	5 U	5 U	5 U	5 U	5 U
Zinc	7,400	26,000	ug/L	20 U	20 U [20 U]	20 U	20 U	3.5 J	5.1 J	3.6 J	20 U

Table A.7.5.4-5
Comprehensive Surface Water Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Date Collected: / Sampling Area:	Health - Fish Ingestion+Drinking Water (bold)	AWQC Human Health - Fish Ingestion Only (shade)	Units	SW-101 04/19/12 Surface Water Samples	SW-102 04/19/12 Surface Water Samples	SW-103 04/19/12 Surface Water Samples	SW-104 04/19/12 Surface Water Samples	SW-105 04/19/12 Surface Water Samples	SW-106 04/18/12 Surface Water Samples	SW-107 04/18/12 Surface Water Samples	SW-108 04/17/12 Surface Water Samples
Pesticides											
4,4'-DDD	0.00031	0.00031	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.022 U	0.02 U	0.02 U	0.02 U
4,4'-DDE	0.00022	0.00022	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.022 U	0.02 U	0.02 U	0.02 U
4,4'-DDT	0.00022	0.00022	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.022 U	0.02 U	0.02 U	0.02 U
Aldrin	0.000049	0.00005	ug/L	0.01 U	0.01 U	0.0099 U	0.0098 U	0.011 U	0.01 U	0.0098 U	0.0099 U
Alpha-BHC	0.0026	0.0049	ug/L	0.01 U	0.01 U	0.0099 U	0.0098 U	0.011 U	0.01 U	0.0098 U	0.0099 U
Alpha-Chlordane	- -	- -	ug/L	0.01 U	0.01 U	0.0099 U	0.0098 U	0.011 U	0.01 U	0.0098 U	0.0099 U
Beta-BHC	0.0091	0.017	ug/L	0.01 U	0.01 U	0.0099 U	0.0038 J	0.011 U	0.01 U	0.0098 U	0.0099 U
Delta-BHC	- -	- -	ug/L	0.01 U	0.01 U	0.0099 U	0.0098 U	0.011 U	0.01 U	0.0098 U	0.0099 U
Dieldrin	0.000052	0.000054	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.022 U	0.02 U	0.02 U	0.02 U
Endosulfan I	- -	- -	ug/L	0.01 U	0.01 U	0.0099 U	0.0098 U	0.011 U	0.01 U	0.0098 U	0.0099 U
Endosulfan II	62	89	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.022 U	0.02 U	0.02 U	0.02 U
Endosulfan Sulfate	62	89	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.022 U	0.02 U	0.02 U	0.02 U
Endrin	0.059	0.06	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.022 U	0.02 U	0.02 U	0.02 U
Endrin Aldehyde	0.29	0.3	ug/L	0.1 U	0.1 U	0.099 U	0.098 U	0.11 U	0.1 U	0.098 U	0.099 U
Endrin Ketone	- -	- -	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.022 U	0.02 U	0.02 U	0.02 U
Gamma-BHC (Lindane)	0.98	1.8	ug/L	0.01 U	0.01 U	0.0099 U	0.0098 U	0.011 U	0.01 U	0.0098 U	0.0099 U
Gamma-Chlordane	- -	- -	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.022 U	0.02 U	0.02 U	0.02 U
Heptachlor	0.000079	0.000079	ug/L	0.01 U	0.01 U	0.0099 U	0.0098 U	0.011 U	0.01 U	0.0098 U	0.0099 U
Heptachlor Epoxide	0.000039	0.000039	ug/L	0.01 U	0.01 U	0.0099 U	0.0098 U	0.011 U	0.01 U	0.0098 U	0.0099 U
Methoxychlor	100	- -	ug/L	0.1 U	0.1 U	0.099 U	0.098 U	0.11 U	0.1 U	0.098 U	0.099 U
Toxaphene	0.00028	0.00028	ug/L	3 U	3 U	3 U	2.9 U	3.3 U	3 U	2.9 U	3 U
SVOCs TICs											
Diacetone Alcohol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	6 J
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	9 B	11 B
Total SVOC TICs	- -	- -	ug/L	0	0	14 J	10 J	5 J	0	50 BJ	24 BJ
Unknown alkane1	- -	- -	ug/L	NA	NA	NA	5 J	5 J	NA	4 J	4 J
Unknown1	- -	- -	ug/L	NA	NA	9 J	5 J	NA	NA	4 J	4 J
VOCs TICs											
Total VOC TICs	- -	- -	ug/L	0	0	0	0	0	0	0	0

Table A.7.5.4-5
Comprehensive Surface Water Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Date Collected: / Sampling Area:	Health - Fish Ingestion+Drinking Water (bold)	AWQC Human Health - Fish Ingestion Only (shade)	Units	SW-109 04/16/12 Surface Water Samples	SW-110 04/16/12 Surface Water Samples	SW-111 04/16/12 Surface Water Samples	SW-112 04/18/12 Surface Water Samples	SW-113 04/17/12 Surface Water Samples	SW-114 04/17/12 Surface Water Samples	SW-115 04/17/12 Surface Water Samples	SW-116 04/17/12 Surface Water Samples
PCBs											
Aroclor-1016	- -	- -	ug/L	0.097 U	0.099 U	0.097 U	0.1 U	0.098 U	0.1 U	0.1 U	0.1 U
Aroclor-1221	- -	- -	ug/L	0.097 U	0.099 U	0.097 U	0.1 U	0.098 U	0.1 U	0.1 U	0.1 U
Aroclor-1232	- -	- -	ug/L	0.097 U	0.099 U	0.097 U	0.1 U	0.098 U	0.1 U	0.1 U	0.1 U
Aroclor-1242	- -	- -	ug/L	0.097 U	0.099 U	0.097 U	0.1 U	0.098 U	0.1 U	0.1 U	0.1 U
Aroclor-1248	- -	- -	ug/L	0.097 U	0.099 U	0.097 U	0.1 U	0.098 U	0.1 U	0.1 U	0.1 U
Aroclor-1254	- -	- -	ug/L	0.097 U	0.099 U	0.097 U	0.1 U	0.098 U	0.1 U	0.1 U	0.1 U
Aroclor-1260	- -	- -	ug/L	0.097 U	0.099 U	0.097 U	0.1 U	0.098 U	0.1 U	0.1 U	0.1 U
Volatile Organics											
1,1,1-Trichloroethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.17	4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.59	16	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	330	7,100	ug/L	0.5 U	0.5 U	0.5 U	0.4 J	0.5 U	0.1 J	0.2 J	0.2 J
1,2,3-Trichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	35	70	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	420	1,300	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.38	37	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5	15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	320	960	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	63	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	- -	ug/L	5 U	5 U	5.2	5 U	5 U	5 U	5 U	5 U
Benzene	2.2	51	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.55	17	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	4.3	140	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	47	1,500	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	0.23	1.6	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	130	1,600	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	5.7	470	ug/L	0.2 J	0.2 J	0.5 U	1.1	0.2 J	0.4 J	0.6	0.6
Chloromethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.6	0.5 U	0.5 U	0.2 J	0.2 J
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.4	13	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	530	2,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylcyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	4.6	590	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.69	3.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 J	0.5 U	0.1 J	0.2 J	0.2 J
Toluene	1,300	15,000	ug/L	0.5 U	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	140	10,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	2.5	30	ug/L	0.5 U	0.3 J	0.5 U	**5.5**	0.5 J	1.2	2	2.2
Trichlorofluoromethane	- -	- -	ug/L	0.5 U	0.5 J	0.5 U	2.2	0.6	1	1.2	1.2
Vinyl Chloride	0.025	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-5
Comprehensive Surface Water Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	Health - Fish Ingestion+Drinking Water	AWQC Human Health - Fish Ingestion Only		SW-109	SW-110	SW-111	SW-112	SW-113	SW-114	SW-115	SW-116
Date Collected:				04/16/12	04/16/12	04/16/12	04/18/12	04/17/12	04/17/12	04/17/12	04/17/12
Sampling Area:	(bold)	(shade)	Units	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples
Semivolatile Organics											
1,1'-Biphenyl	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	35	70	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	420	1,300	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	320	960	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	63	190	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Naphthoquinone	- -	- -	ug/L	30 U	30 U	29 U	30 U	30 U	30 U	31 U	31 U
2,2'-Oxybis(1-Chloropropane)	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4,5-Trichlorophenol	1,800	3,600	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4,6-Trichlorophenol	1.4	2.4	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dichlorophenol	77	290	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dimethylphenol	380	850	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dinitrophenol	69	5,300	ug/L	30 U	30 U	29 U	30 U	30 U	30 U	31 U	31 U
2,4-Dinitrotoluene	0.11	3.4	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chloronaphthalene	1,000	1,600	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorophenol	81	150	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Methylnaphthalene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Methylphenol	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Nitroaniline	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Nitrophenol	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
3,3'-Dichlorobenzidine	0.021	0.028	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
3-Nitroaniline	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4,6-Dinitro-2-methylphenol	13	280	ug/L	15 U	15 U	15 U	15 U	15 U	15 U	16 U	16 U
4-Bromophenyl-phenylether	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Chloro-3-Methylphenol	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Chloroaniline	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Chlorophenyl-phenylether	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Methylphenol	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Nitroaniline	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Nitrophenol	- -	- -	ug/L	30 U	30 U	29 U	30 U	30 U	30 U	31 U	31 U
Acenaphthene	670	990	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acenaphthylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetophenone	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Anthracene	8,300	40,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Atrazine	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 UJ	5 UJ
Benzaldehyde	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 UJ	5 UJ
Benzo(a)anthracene	0.0038	0.018	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(a)pyrene	0.0038	0.018	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(b)fluoranthene	0.0038	0.018	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(g,h,i)perylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(k)fluoranthene	0.0038	0.018	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzoic Acid	- -	- -	ug/L	15 U	15 U	15 U	15 U	15 U	15 U	16 U	16 U
Benzyl Alcohol	- -	- -	ug/L	15 U	15 U	15 U	15 U	15 U	15 U	16 U	16 U
bis(2-Chloroethoxy)methane	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
bis(2-Chloroethyl)ether	0.03	0.53	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
bis(2-Ethylhexyl)phthalate	1.2	2.2	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Butylbenzylphthalate	1,500	1,900	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Caprolactam	- -	- -	ug/L	15 U	15 U	15 U	15 U	15 U	15 U	16 U	16 U
Carbazole	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chrysene	0.0038	0.018	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibenzo(a,h)anthracene	0.0038	0.018	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibenzofuran	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Diethylphthalate	17,000	44,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dimethylphthalate	270,000	1,100,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Di-n-Butylphthalate	2,000	4,500	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Di-n-Octylphthalate	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Fluoranthene	130	140	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Fluorene	1,100	5,300	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobenzene	0.00028	0.00029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene	0.44	18	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorocyclopentadiene	40	1,100	ug/L	15 U	15 U	15 U	15 U	15 U	15 U	16 U	16 U
Hexachloroethane	1.4	3.3	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Indeno(1,2,3-cd)pyrene	0.0038	0.018	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isophorone	35	960	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Naphthalene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Nitrobenzene	17	690	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
N-Nitroso-di-n-propylamine	0.005	0.51	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
N-Nitrosodiphenylamine	3.3	6	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Pentachlorophenol	0.27	3	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Phenanthrene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Phenol	10,000	860,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Pyrene	830	4,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-5
Comprehensive Surface Water Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Date Collected: / Sampling Area:	Health - Fish Ingestion+Drinking Water (bold)	AWQC Human Health - Fish Ingestion Only (shade)	Units	SW-109 04/16/12 Surface Water Samples	SW-110 04/16/12 Surface Water Samples	SW-111 04/16/12 Surface Water Samples	SW-112 04/18/12 Surface Water Samples	SW-113 04/17/12 Surface Water Samples	SW-114 04/17/12 Surface Water Samples	SW-115 04/17/12 Surface Water Samples	SW-116 04/17/12 Surface Water Samples
Inorganics											
Aluminum	- -	- -	ug/L	293	165 J	487	200 U	156 J	149 J	128 J	137 J
Antimony	5.6	640	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	0.018	0.14	ug/L	2 U	2 U	**1.7 B**	2 U	2 U	2 U	2 U	2 U
Barium	1,000	- -	ug/L	70.9	67.3	46.6	59	69.4	71.6	66.8	67.6
Beryllium	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Boron	- -	- -	ug/L	8.7 J	8.8 J	13.8 J	11 J	8.5 B	8.9 B	8.1 B	9.1 B
Cadmium	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Calcium	- -	- -	ug/L	50,300	49,600	34,700	58,600	49,900	53,600	54,600	54,500
Chromium	- -	- -	ug/L	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U
Cobalt	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	0.65 J	5 U
Copper	1,300	- -	ug/L	10 U	1.2 J	2.7 J	10 U	1 B	10 U	10 U	10 U
Iron	- -	- -	ug/L	473 J	266 J	1,360 J	37.1 J	268	205	191 J	191 J
Lead	- -	- -	ug/L	3.3 J	7.7 J	3.3 J	5.9 J	5.1 J	6.6 J	6.3 J	5.9 J
Magnesium	- -	- -	ug/L	10,200	11,400	13,100	16,300	11,900	12,900	13,000	12,800
Manganese	50	100	ug/L	20.6 J	13.2 J	**248 J**	2.1 J	14.6	11.7	10.8	10.7
Mercury	- -	- -	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	610	4,600	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Potassium	- -	- -	ug/L	3,130	2,940	8,660	1,700	2,780	2,510	2,440	2,370
Selenium	170	4,200	ug/L	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Silver	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Sodium	- -	- -	ug/L	20,000	19,400	7,010	10,500	18,800	17,200	16,500	16,000
Thallium	0.24	0.47	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	5 U	5 U	2.5 J	5 U	5 U	5 U	5 U	5 U
Zinc	7,400	26,000	ug/L	6.6 J	4.2 J	9.8 J	5.3 J	20 U	4.3 J	3.7 J	3.7 J
Inorganics-Filtered											
Aluminum	- -	- -	ug/L	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
Antimony	5.6	640	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	0.018	0.14	ug/L	2 U	2 U	**1.5 J**	2 U	2 U	2 U	2 U	2 U
Barium	1,000	- -	ug/L	66.3	62.5	40.7	58.7	65.7	67.5	65.1	66.4
Beryllium	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Boron	- -	- -	ug/L	8.9 J	8.3 J	14.3 J	12.2 J	8.3 J	8.1 J	7.8 J	7.8 J
Cadmium	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Calcium	- -	- -	ug/L	51,600	52,900	38,400	62,200	50,500	50,400	53,500	53,400
Chromium	- -	- -	ug/L	15 U	15 U	15 U	1.1 J	15 U	15 U	15 U	15 U
Cobalt	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Copper	1,300	- -	ug/L	10 U	10 U	2.2 B	10 U	10 U	10 U	10 U	10 U
Iron	- -	- -	ug/L	52.3 J	37.8 J	577 J	200 U	43.4 J	22.9 J	18.5 J	23.5 J
Lead	- -	- -	ug/L	15 U	15 U	15 U	5.7 B	6.7 B	4.2 B	4.1 B	5.8 B
Magnesium	- -	- -	ug/L	10,500	11,200	12,500	16,300	11,700	13,100	13,200	13,200
Manganese	50	100	ug/L	12.5 J	9.5 J	**186 J**	1.6 J	10.7	8.7	8.1	7.4
Mercury	- -	- -	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	610	4,600	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Potassium	- -	- -	ug/L	3,060	2,900	8,220	1,660	2,720	2,480	2,450	2,450
Selenium	170	4,200	ug/L	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Silver	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Sodium	- -	- -	ug/L	20,300	19,300	6,760	10,500	18,400	17,500	16,900	16,600
Thallium	0.24	0.47	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	5 U	5 U	1 J	5 U	5 U	5 U	5 U	5 U
Zinc	7,400	26,000	ug/L	4.1 J	3.6 J	3.5 J	4.7 J	20 U	4.7 J	4.4 J	4.5 J

Table A.7.5.4-5
Comprehensive Surface Water Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	Health - Fish Ingestion+Drinking Water	AWQC Human Health - Fish Ingestion Only		SW-109	SW-110	SW-111	SW-112	SW-113	SW-114	SW-115	SW-116
Date Collected:				04/16/12	04/16/12	04/16/12	04/18/12	04/17/12	04/17/12	04/17/12	04/17/12
Sampling Area:	(bold)	(shade)	Units	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples
Pesticides											
4,4'-DDD	0.00031	0.00031	ug/L	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U
4,4'-DDE	0.00022	0.00022	ug/L	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U
4,4'-DDT	0.00022	0.00022	ug/L	0.02 UJ	0.021 UJ	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U
Aldrin	0.000049	0.00005	ug/L	0.0099 U	0.01 U	0.01 U	0.011 U	0.0099 U	0.01 U	0.01 U	0.0099 U
Alpha-BHC	0.0026	0.0049	ug/L	0.0099 U	0.01 U	0.01 U	0.011 U	0.0099 U	0.01 U	0.01 U	0.0099 U
Alpha-Chlordane	- -	- -	ug/L	0.0099 U	0.01 U	0.01 U	0.011 U	0.0099 U	0.01 U	0.01 U	0.0099 U
Beta-BHC	0.0091	0.017	ug/L	0.0099 U	0.01 U	0.01 U	0.011 U	0.0099 U	0.01 U	0.01 U	0.0099 U
Delta-BHC	- -	- -	ug/L	0.0099 U	0.01 U	0.01 U	0.011 U	0.0099 U	0.01 U	0.01 U	0.0099 U
Dieldrin	0.000052	0.000054	ug/L	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U
Endosulfan I	- -	- -	ug/L	0.0099 U	0.01 U	0.01 U	0.011 U	0.0099 U	0.01 U	0.01 U	0.0099 U
Endosulfan II	62	89	ug/L	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U
Endosulfan Sulfate	62	89	ug/L	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U
Endrin	0.059	0.06	ug/L	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U
Endrin Aldehyde	0.29	0.3	ug/L	0.099 U	0.1 U	0.1 U	0.11 U	0.099 U	0.1 U	0.1 U	0.099 U
Endrin Ketone	- -	- -	ug/L	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U
Gamma-BHC (Lindane)	0.98	1.8	ug/L	0.0099 U	0.01 U	0.01 U	0.011 U	0.0099 U	0.01 U	0.01 U	0.0099 U
Gamma-Chlordane	- -	- -	ug/L	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U
Heptachlor	0.000079	0.000079	ug/L	0.0099 U	0.01 U	0.01 U	0.011 U	0.0099 U	0.01 U	0.01 U	0.0099 U
Heptachlor Epoxide	0.000039	0.000039	ug/L	0.0099 U	0.01 U	0.01 U	0.011 U	0.0099 U	0.01 U	0.01 U	0.0099 U
Methoxychlor	100	- -	ug/L	0.099 UJ	0.1 UJ	0.1 UJ	0.11 U	0.099 U	0.1 U	0.1 U	0.099 U
Toxaphene	0.00028	0.00028	ug/L	3 U	3.1 U	3 U	3.2 U	3 U	3 U	3 U	3 U
SVOCs TICs											
Diacetone Alcohol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA	NA	5 B	8 B	6 B	9 B
Total SVOC TICs	- -	- -	ug/L	27 JB	28 J	220 J	0	5 BJ	16 BJ	6 BJ	18 BJ
Unknown alkane1	- -	- -	ug/L	5 B	NA	5 J	NA	NA	5 J	NA	5 J
Unknown1	- -	- -	ug/L	11 J	5 J	14 J	NA	NA	4 J	NA	NA
VOCs TICs											
Total VOC TICs	- -	- -	ug/L	0	0	0	0	0	0	0	0

Table A.7.5.4-5
Comprehensive Surface Water Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Date Collected: / Sampling Area:	Health - Fish Ingestion+Drinking Water (bold)	AWQC Human Health - Fish Ingestion Only (shade)	Units	SW-117/Hospital 04/17/12 Named Springs	SW-118 04/17/12 Surface Water Samples	SW-119 04/17/12 Surface Water Samples	SW-120 04/16/12 Surface Water Samples	SW-121 04/17/12 Surface Water Samples	SW-122 04/17/12 Surface Water Samples	SW-123 04/16/12 Surface Water Samples	SW-124 04/16/12 Surface Water Samples
PCBs											
Aroclor-1016	- -	- -	ug/L	0.1 U	0.1 U	0.11 U	0.1 U	0.098 U	0.096 U	0.096 U	0.11 U
Aroclor-1221	- -	- -	ug/L	0.1 U	0.1 U	0.11 U	0.1 U	0.098 U	0.096 U	0.096 U	0.11 U
Aroclor-1232	- -	- -	ug/L	0.1 U	0.1 U	0.11 U	0.1 U	0.098 U	0.096 U	0.096 U	0.11 U
Aroclor-1242	- -	- -	ug/L	0.1 U	0.1 U	0.11 U	0.1 U	0.098 U	0.096 U	0.096 U	0.11 U
Aroclor-1248	- -	- -	ug/L	0.1 U	0.1 U	0.11 U	0.1 U	0.098 U	0.096 U	0.096 U	0.11 U
Aroclor-1254	- -	- -	ug/L	0.1 U	0.1 U	0.11 U	0.1 U	0.098 U	0.096 U	0.096 U	0.11 U
Aroclor-1260	- -	- -	ug/L	0.1 U	0.1 U	0.11 U	0.1 U	0.098 U	0.096 U	0.096 U	0.11 U
Volatile Organics											
1,1,1-Trichloroethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J
1,1,2,2-Tetrachloroethane	0.17	4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.59	16	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	330	7,100	ug/L	0.5 U	0.2 J	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5
1,2,3-Trichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	35	70	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	420	1,300	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.38	37	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5	15	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	320	960	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	63	190	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	2.2	51	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.55	17	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	4.3	140	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	47	1,500	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	0.23	1.6	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	130	1,600	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	5.7	470	ug/L	2.8	0.7	0.1 J	0.5 U	0.7	0.5	0.5 U	2.4
Chloromethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	- -	- -	ug/L	0.5 U	0.1 J	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 J
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.4	13	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	530	2,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylcyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	4.6	590	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.69	3.3	ug/L	0.5 U	0.1 J	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5
Toluene	1,300	15,000	ug/L	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	140	10,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	2.5	30	ug/L	0.3 J	1.6	0.3 J	0.5 U	1.5	0.9	0.5 U	**11**
Trichlorofluoromethane	- -	- -	ug/L	0.5 J	0.9	0.1 J	0.5 U	0.8	0.4 J	0.5 U	2.6
Vinyl Chloride	0.025	2.4	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-5
Comprehensive Surface Water Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	Health - Fish Ingestion+Drinking Water	AWQC Human Health - Fish Ingestion Only		SW-117/Hospital	SW-118	SW-119	SW-120	SW-121	SW-122	SW-123	SW-124
Date Collected:				04/17/12	04/17/12	04/17/12	04/16/12	04/17/12	04/17/12	04/16/12	04/16/12
Sampling Area:	(bold)	(shade)	Units	Named Springs	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples
Semivolatile Organics											
1,1'-Biphenyl	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	35	70	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	420	1,300	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	320	960	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	63	190	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Naphthoquinone	- -	- -	ug/L	30 U	29 U	30 U	32 U	29 U	30 U	29 U	31 U
2,2'-Oxybis(1-Chloropropane)	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4,5-Trichlorophenol	1,800	3,600	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4,6-Trichlorophenol	1.4	2.4	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dichlorophenol	77	290	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dimethylphenol	380	850	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dinitrophenol	69	5,300	ug/L	30 U	29 U	30 U	32 U	29 U	30 U	29 U	31 U
2,4-Dinitrotoluene	0.11	3.4	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chloronaphthalene	1,000	1,600	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorophenol	81	150	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Methylnaphthalene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Methylphenol	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Nitroaniline	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Nitrophenol	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
3,3'-Dichlorobenzidine	0.021	0.028	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
3-Nitroaniline	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4,6-Dinitro-2-methylphenol	13	280	ug/L	15 U	15 U	15 U	16 U	15 U	15 U	14 U	15 U
4-Bromophenyl-phenylether	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Chloro-3-Methylphenol	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Chloroaniline	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Chlorophenyl-phenylether	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Methylphenol	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Nitroaniline	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Nitrophenol	- -	- -	ug/L	30 U	29 U	30 U	32 U	29 U	30 U	29 U	31 U
Acenaphthene	670	990	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acenaphthylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetophenone	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Anthracene	8,300	40,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Atrazine	- -	- -	ug/L	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzaldehyde	- -	- -	ug/L	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(a)anthracene	0.0038	0.018	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(a)pyrene	0.0038	0.018	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(b)fluoranthene	0.0038	0.018	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(g,h,i)perylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzo(k)fluoranthene	0.0038	0.018	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzoic Acid	- -	- -	ug/L	15 U	15 U	15 U	16 U	15 U	15 U	14 U	15 U
Benzyl Alcohol	- -	- -	ug/L	15 U	15 U	15 U	16 U	15 U	15 U	14 U	15 U
bis(2-Chloroethoxy)methane	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
bis(2-Chloroethyl)ether	0.03	0.53	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
bis(2-Ethylhexyl)phthalate	1.2	2.2	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Butylbenzylphthalate	1,500	1,900	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Caprolactam	- -	- -	ug/L	15 U	15 U	15 U	16 U	15 U	15 U	14 U	15 U
Carbazole	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chrysene	0.0038	0.018	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibenzo(a,h)anthracene	0.0038	0.018	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibenzofuran	- -	- -	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Diethylphthalate	17,000	44,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dimethylphthalate	270,000	1,100,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Di-n-Butylphthalate	2,000	4,500	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Di-n-Octylphthalate	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Fluoranthene	130	140	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Fluorene	1,100	5,300	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobenzene	0.00028	0.00029	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene	0.44	18	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorocyclopentadiene	40	1,100	ug/L	15 U	15 U	15 U	16 U	15 U	15 U	14 U	15 U
Hexachloroethane	1.4	3.3	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Indeno(1,2,3-cd)pyrene	0.0038	0.018	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isophorone	35	960	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Naphthalene	- -	- -	ug/L	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.1 J
Nitrobenzene	17	690	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
N-Nitroso-di-n-propylamine	0.005	0.51	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
N-Nitrosodiphenylamine	3.3	6	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Pentachlorophenol	0.27	3	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Phenanthrene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Phenol	10,000	860,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Pyrene	830	4,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table A.7.5.4-5
Comprehensive Surface Water Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID:	Health - Fish Ingestion+Drinking Water	AWQC Human Health - Fish Ingestion Only		SW-117/Hospital	SW-118	SW-119	SW-120	SW-121	SW-122	SW-123	SW-124
Date Collected:				04/17/12	04/17/12	04/17/12	04/16/12	04/17/12	04/17/12	04/16/12	04/16/12
Sampling Area:	(bold)	(shade)	Units	Named Springs	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples	Surface Water Samples
Inorganics											
Aluminum	- -	- -	ug/L	200 U	82.7 J	249	89.7 J	103 J	220	108 J	200 U
Antimony	5.6	640	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	0.018	0.14	ug/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Barium	1,000	- -	ug/L	68.4	66.6	56.5	43	66.5	68.4	39	93
Beryllium	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Boron	- -	- -	ug/L	11.9 J	8.7 J	15.2 J	18.6 J	8.6 J	10.5 J	16.3 J	6.3 J
Cadmium	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Calcium	- -	- -	ug/L	89,300	60,800	51,200	19,800	56,500	61,400	16,000	55,500
Chromium	- -	- -	ug/L	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U
Cobalt	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Copper	1,300	- -	ug/L	10 U	0.94 J	2 J	1 J	10 U	0.95 J	1.7 J	0.96 J
Iron	- -	- -	ug/L	20 J	126 J	488 J	207 J	154 J	338 J	227 J	98.2 J
Lead	- -	- -	ug/L	7.8 J	7.8 J	6.7 J	5 J	7.1 J	8.6 J	5.4 J	9.5 J
Magnesium	- -	- -	ug/L	12,300	13,100	9,020	6,330	12,700	12,900	5,920	17,400
Manganese	50	100	ug/L	1.5 J	9.9 J	**55.9 J**	13.2 J	12.2 J	18.9 J	13.2 J	9.4 J
Mercury	- -	- -	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	610	4,600	ug/L	10 U	10 U	1.2 J	1.2 J	10 U	10 U	10 U	10 U
Potassium	- -	- -	ug/L	2,260	2,290	2,800	2,710	2,360	2,530	2,620	1,780
Selenium	170	4,200	ug/L	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Silver	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Sodium	- -	- -	ug/L	38,200	19,600	29,700	27,300	19,600	24,300	29,000	18,800
Thallium	0.24	0.47	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Zinc	7,400	26,000	ug/L	20 U	3.5 J	4.6 J	20 U	3.7 J	5.1 J	20 U	6.4 J
Inorganics-Filtered											
Aluminum	- -	- -	ug/L	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
Antimony	5.6	640	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	0.018	0.14	ug/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Barium	1,000	- -	ug/L	66.6	66	52.6	42.7	67.7	61.6	39.1	47.4
Beryllium	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Boron	- -	- -	ug/L	11.1 J	8.6 J	14.9 J	19.5 J	9.5 J	10.1 J	17.4 J	5.9 J
Cadmium	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Calcium	- -	- -	ug/L	93,000	65,700	50,000	19,800	63,100	66,100	16,400	56,000
Chromium	- -	- -	ug/L	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U
Cobalt	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Copper	1,300	- -	ug/L	10 U	10 U	10 U	2.2 B	10 U	10 U	1.1 B	10 U
Iron	- -	- -	ug/L	200 UJ	18.9 J	78 J	50.3 J	22.4 J	200 UJ	48.2 J	200 UJ
Lead	- -	- -	ug/L	3.2 B	2.9 B	15 U	15 U	15 U	4.7 B	3.6 B	2.5 B
Magnesium	- -	- -	ug/L	12,300	13,800	9,000	6,370	12,800	12,500	6,060	16,800
Manganese	50	100	ug/L	0.61 J	8.5 J	**54.4 J**	11.2 J	10.7 J	14.4 J	11.6 J	2.8 J
Mercury	- -	- -	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	610	4,600	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Potassium	- -	- -	ug/L	2,240	2,400	2,760	2,630	2,210	2,380	2,530	1,590
Selenium	170	4,200	ug/L	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Silver	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Sodium	- -	- -	ug/L	39,400	21,100	28,700	30,600	19,900	25,800	30,400	18,100
Thallium	0.24	0.47	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vanadium	- -	- -	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Zinc	7,400	26,000	ug/L	6.6 J	20 U	4.5 J	20 U	20 U	4.1 J	20 U	5.3 J

Table A.7.5.4-5
Comprehensive Surface Water Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Date Collected: / Sampling Area:	Health - Fish Ingestion+Drinking Water (bold)	AWQC Human Health - Fish Ingestion Only (shade)	Units	SW-117/Hospital 04/17/12 Named Springs	SW-118 04/17/12 Surface Water Samples	SW-119 04/17/12 Surface Water Samples	SW-120 04/16/12 Surface Water Samples	SW-121 04/17/12 Surface Water Samples	SW-122 04/17/12 Surface Water Samples	SW-123 04/16/12 Surface Water Samples	SW-124 04/16/12 Surface Water Samples
Pesticides											
4,4'-DDD	0.00031	0.00031	ug/L	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.019 U	0.021 U
4,4'-DDE	0.00022	0.00022	ug/L	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.019 U	0.021 U
4,4'-DDT	0.00022	0.00022	ug/L	0.02 UJ	0.02 UJ	0.021 UJ	0.02 U	0.02 UJ	0.02 UJ	0.019 U	0.021 U
Aldrin	0.000049	0.00005	ug/L	0.01 U	0.0099 U	0.01 U	0.01 U	0.0099 U	0.0098 U	0.0096 U	0.01 U
Alpha-BHC	0.0026	0.0049	ug/L	0.01 U	0.0099 U	0.01 U	0.01 U	0.0099 U	0.0098 U	0.0096 U	0.01 U
Alpha-Chlordane	- -	- -	ug/L	0.01 U	0.0099 U	0.01 U	0.01 U	0.0099 U	0.0098 U	0.0096 U	0.01 U
Beta-BHC	0.0091	0.017	ug/L	0.01 U	0.0099 U	0.01 U	0.01 U	0.0099 U	0.0098 U	0.0096 U	0.01 U
Delta-BHC	- -	- -	ug/L	0.01 U	0.0099 U	0.01 U	0.01 U	0.0099 U	0.0098 U	0.0096 U	0.01 U
Dieldrin	0.000052	0.000054	ug/L	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.019 U	0.021 U
Endosulfan I	- -	- -	ug/L	0.01 U	0.0099 U	0.01 U	0.01 U	0.0099 U	0.0098 U	0.0096 U	0.01 U
Endosulfan II	62	89	ug/L	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.019 U	0.021 U
Endosulfan Sulfate	62	89	ug/L	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.019 U	0.021 U
Endrin	0.059	0.06	ug/L	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.019 U	0.021 U
Endrin Aldehyde	0.29	0.3	ug/L	0.1 U	0.099 U	0.1 U	0.1 U	0.099 U	0.098 U	0.096 U	0.1 U
Endrin Ketone	- -	- -	ug/L	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.019 U	0.021 U
Gamma-BHC (Lindane)	0.98	1.8	ug/L	0.01 U	0.0099 U	0.01 U	0.01 U	0.0099 U	0.0098 U	0.0096 U	0.01 U
Gamma-Chlordane	- -	- -	ug/L	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.019 U	0.021 U
Heptachlor	0.000079	0.000079	ug/L	0.01 U	0.0099 U	0.01 U	0.01 U	0.0099 U	0.0098 U	0.0096 U	0.01 U
Heptachlor Epoxide	0.000039	0.000039	ug/L	0.01 U	0.0099 U	0.01 U	0.01 U	0.0099 U	0.0098 U	0.0096 U	0.01 U
Methoxychlor	100	- -	ug/L	0.1 UJ	0.099 UJ	0.1 UJ	0.1 UJ	0.099 UJ	0.098 UJ	0.096 UJ	0.1 UJ
Toxaphene	0.00028	0.00028	ug/L	3.1 U	3 U	3.1 U	3.1 U	3 U	2.9 U	2.9 U	3.1 U
SVOCs TICs											
Diacetone Alcohol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	7 B	NA	NA	NA	NA	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	14 JB	6,000 J	11 J	14 J	0	28 JB	29 J	22 J
Unknown alkane1	- -	- -	ug/L	7 J	510 J	NA	NA	NA	5 B	NA	5 J
Unknown1	- -	- -	ug/L	NA	290 J	5 J	6 J	NA	6 J	18 J	8 J
VOCs TICs											
Total VOC TICs	- -	- -	ug/L	0	0	0	0	0	0	0	0

Table A.7.5.4-5
Comprehensive Surface Water Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	Health - Fish Ingestion+Drinking Water (bold)	AWQC Human Health - Fish Ingestion Only (shade)	Units	SW-126 04/16/12 Surface Water Samples	SW-127 04/16/12 Surface Water Samples	SW-128 04/19/12 Surface Water Samples
PCBs						
Aroclor-1016	- -	- -	ug/L	0.11 U	0.099 U	NA
Aroclor-1221	- -	- -	ug/L	0.11 U	0.099 U	NA
Aroclor-1232	- -	- -	ug/L	0.11 U	0.099 U	NA
Aroclor-1242	- -	- -	ug/L	0.11 U	0.099 U	NA
Aroclor-1248	- -	- -	ug/L	0.11 U	0.099 U	NA
Aroclor-1254	- -	- -	ug/L	0.11 U	0.099 U	NA
Aroclor-1260	- -	- -	ug/L	0.11 U	0.099 U	NA
Volatile Organics						
1,1,1-Trichloroethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.17	4	ug/L	0.5 U	0.5 U	0.5 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.59	16	ug/L	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	330	7,100	ug/L	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	- -	- -	ug/L	1 U	1 U	1 U
1,2,4-Trichlorobenzene	35	70	ug/L	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	420	1,300	ug/L	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.38	37	ug/L	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5	15	ug/L	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	320	960	ug/L	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	63	190	ug/L	0.5 U	0.5 U	0.5 U
2-Butanone	- -	- -	ug/L	5 U	5 U	5 U
2-Hexanone	- -	- -	ug/L	5 U	5 U	5 U
4-Methyl-2-pentanone	- -	- -	ug/L	5 U	5 U	5 U
Acetone	- -	- -	ug/L	5 U	5 U	5 U
Benzene	2.2	51	ug/L	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.55	17	ug/L	0.5 U	0.5 U	0.5 U
Bromoform	4.3	140	ug/L	0.5 U	0.5 U	0.5 U
Bromomethane	47	1,500	ug/L	0.5 U	0.5 U	0.5 U
Carbon Disulfide	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	0.23	1.6	ug/L	0.5 U	0.5 U	0.5 U
Chlorobenzene	130	1,600	ug/L	0.5 U	0.5 U	0.5 U
Chloroethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
Chloroform	5.7	470	ug/L	0.5 U	0.5 U	0.6
Chloromethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	- -	- -	ug/L	0.5 U	0.5 U	0.1 J
cis-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
Cyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.4	13	ug/L	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
Ethylbenzene	530	2,100	ug/L	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
m&p-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
Methyl acetate	- -	- -	ug/L	1 U	1 U	1 U
Methyl tert-butyl ether	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
Methylcyclohexane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
Methylene Chloride	4.6	590	ug/L	0.5 U	0.5 U	0.5 U
o-Xylene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
Styrene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.69	3.3	ug/L	0.5 U	0.5 U	0.1 J
Toluene	1,300	15,000	ug/L	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	140	10,000	ug/L	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U
Trichloroethene	2.5	30	ug/L	0.5 U	0.5 U	1.2
Trichlorofluoromethane	- -	- -	ug/L	0.5 U	0.5 U	0.4 J
Vinyl Chloride	0.025	2.4	ug/L	0.5 U	0.5 U	0.5 U

Table A.7.5.4-5
Comprehensive Surface Water Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: / Date Collected: / Sampling Area:	Health - Fish Ingestion+Drinking Water (bold)	AWQC Human Health - Fish Ingestion Only (shade)	Units	SW-126 04/16/12 Surface Water Samples	SW-127 04/16/12 Surface Water Samples	SW-128 04/19/12 Surface Water Samples
Semivolatile Organics						
1,1'-Biphenyl	- -	- -	ug/L	1 U	1 U	NA
1,2,4-Trichlorobenzene	35	70	ug/L	1 U	1 U	NA
1,2-Dichlorobenzene	420	1,300	ug/L	1 U	1 U	NA
1,3-Dichlorobenzene	320	960	ug/L	1 U	1 U	NA
1,4-Dichlorobenzene	63	190	ug/L	1 U	1 U	NA
1,4-Dioxane	- -	- -	ug/L	5 U	5 U	NA
1,4-Naphthoquinone	- -	- -	ug/L	32 U	30 U	NA
2,2'-Oxybis(1-Chloropropane)	- -	- -	ug/L	1 U	1 U	NA
2,4,5-Trichlorophenol	1,800	3,600	ug/L	1 U	1 U	NA
2,4,6-Trichlorophenol	1.4	2.4	ug/L	1 U	1 U	NA
2,4-Dichlorophenol	77	290	ug/L	1 U	1 U	NA
2,4-Dimethylphenol	380	850	ug/L	1 U	1 U	NA
2,4-Dinitrophenol	69	5,300	ug/L	32 U	30 U	NA
2,4-Dinitrotoluene	0.11	3.4	ug/L	5 U	5 U	NA
2,6-Dinitrotoluene	- -	- -	ug/L	1 U	1 U	NA
2-Chloronaphthalene	1,000	1,600	ug/L	1 U	1 U	NA
2-Chlorophenol	81	150	ug/L	1 U	1 U	NA
2-Methylnaphthalene	- -	- -	ug/L	0.5 U	0.5 U	NA
2-Methylphenol	- -	- -	ug/L	1 U	1 U	NA
2-Nitroaniline	- -	- -	ug/L	1 U	1 U	NA
2-Nitrophenol	- -	- -	ug/L	1 U	1 U	NA
3,3'-Dichlorobenzidine	0.021	0.028	ug/L	5 U	5 U	NA
3-Nitroaniline	- -	- -	ug/L	1 U	1 U	NA
4,6-Dinitro-2-methylphenol	13	280	ug/L	16 U	15 U	NA
4-Bromophenyl-phenylether	- -	- -	ug/L	1 U	1 U	NA
4-Chloro-3-Methylphenol	- -	- -	ug/L	1 U	1 U	NA
4-Chloroaniline	- -	- -	ug/L	1 U	1 U	NA
4-Chlorophenyl-phenylether	- -	- -	ug/L	1 U	1 U	NA
4-Methylphenol	- -	- -	ug/L	1 U	1 U	NA
4-Nitroaniline	- -	- -	ug/L	1 U	1 U	NA
4-Nitrophenol	- -	- -	ug/L	32 U	30 U	NA
Acenaphthene	670	990	ug/L	0.5 U	0.5 U	NA
Acenaphthylene	- -	- -	ug/L	0.5 U	0.5 U	NA
Acetophenone	- -	- -	ug/L	1 U	1 U	NA
Anthracene	8,300	40,000	ug/L	0.5 U	0.5 U	NA
Atrazine	- -	- -	ug/L	5 U	5 U	NA
Benzaldehyde	- -	- -	ug/L	5 U	5 U	NA
Benzo(a)anthracene	0.0038	0.018	ug/L	0.5 U	0.5 U	NA
Benzo(a)pyrene	0.0038	0.018	ug/L	0.5 U	0.5 U	NA
Benzo(b)fluoranthene	0.0038	0.018	ug/L	0.5 U	0.5 U	NA
Benzo(g,h,i)perylene	- -	- -	ug/L	0.5 U	0.5 U	NA
Benzo(k)fluoranthene	0.0038	0.018	ug/L	0.5 U	0.5 U	NA
Benzoic Acid	- -	- -	ug/L	16 U	15 U	NA
Benzyl Alcohol	- -	- -	ug/L	16 U	15 U	NA
bis(2-Chloroethoxy)methane	- -	- -	ug/L	1 U	1 U	NA
bis(2-Chloroethyl)ether	0.03	0.53	ug/L	1 U	1 U	NA
bis(2-Ethylhexyl)phthalate	1.2	2.2	ug/L	5 U	5 U	NA
Butylbenzylphthalate	1,500	1,900	ug/L	5 U	5 U	NA
Caprolactam	- -	- -	ug/L	16 U	15 U	NA
Carbazole	- -	- -	ug/L	1 U	1 U	NA
Chrysene	0.0038	0.018	ug/L	0.5 U	0.5 U	NA
Dibenzo(a,h)anthracene	0.0038	0.018	ug/L	0.5 U	0.5 U	NA
Dibenzofuran	- -	- -	ug/L	1 U	1 U	NA
Diethylphthalate	17,000	44,000	ug/L	5 U	5 U	NA
Dimethylphthalate	270,000	1,100,000	ug/L	5 U	5 U	NA
Di-n-Butylphthalate	2,000	4,500	ug/L	5 U	5 U	NA
Di-n-Octylphthalate	- -	- -	ug/L	5 U	5 U	NA
Fluoranthene	130	140	ug/L	0.5 U	0.5 U	NA
Fluorene	1,100	5,300	ug/L	0.5 U	0.5 U	NA
Hexachlorobenzene	0.00028	0.00029	ug/L	0.5 U	0.5 U	NA
Hexachlorobutadiene	0.44	18	ug/L	1 U	1 U	NA
Hexachlorocyclopentadiene	40	1,100	ug/L	16 U	15 U	NA
Hexachloroethane	1.4	3.3	ug/L	5 U	5 U	NA
Indeno(1,2,3-cd)pyrene	0.0038	0.018	ug/L	0.5 U	0.5 U	NA
Isophorone	35	960	ug/L	1 U	1 U	NA
Naphthalene	- -	- -	ug/L	0.1 J	0.5 U	NA
Nitrobenzene	17	690	ug/L	1 U	1 U	NA
N-Nitroso-di-n-propylamine	0.005	0.51	ug/L	1 U	1 U	NA
N-Nitrosodiphenylamine	3.3	6	ug/L	1 U	1 U	NA
Pentachlorophenol	0.27	3	ug/L	5 U	5 U	NA
Phenanthrene	- -	- -	ug/L	0.5 U	0.5 U	NA
Phenol	10,000	860,000	ug/L	1 U	1 U	NA
Pyrene	830	4,000	ug/L	0.5 U	0.5 U	NA

Table A.7.5.4-5
Comprehensive Surface Water Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	Health - Fish Ingestion+Drinking Water (bold)	AWQC Human Health - Fish Ingestion Only (shade)	Units	SW-126 04/16/12 Surface Water Samples	SW-127 04/16/12 Surface Water Samples	SW-128 04/19/12 Surface Water Samples
Inorganics						
Aluminum	- -	- -	ug/L	200 U	91 J	NA
Antimony	5.6	640	ug/L	1 U	1 U	NA
Arsenic	0.018	0.14	ug/L	2 U	2 U	NA
Barium	1,000	- -	ug/L	40.4	38.4	NA
Beryllium	- -	- -	ug/L	0.5 U	0.5 U	NA
Boron	- -	- -	ug/L	16.5 J	16.3 J	NA
Cadmium	- -	- -	ug/L	5 U	5 U	NA
Calcium	- -	- -	ug/L	15,600	13,500	NA
Chromium	- -	- -	ug/L	15 U	15 U	NA
Cobalt	- -	- -	ug/L	5 U	5 U	NA
Copper	1,300	- -	ug/L	2.6 J	1.1 J	NA
Iron	- -	- -	ug/L	148 J	212 J	NA
Lead	- -	- -	ug/L	7.5 J	7.4 J	NA
Magnesium	- -	- -	ug/L	5,730	5,950	NA
Manganese	50	100	ug/L	5.4 J	10.3 J	NA
Mercury	- -	- -	ug/L	0.2 U	0.2 U	NA
Nickel	610	4,600	ug/L	10 U	10 U	NA
Potassium	- -	- -	ug/L	2,480	2,450	NA
Selenium	170	4,200	ug/L	20 U	20 U	NA
Silver	- -	- -	ug/L	0.98 J	5 U	NA
Sodium	- -	- -	ug/L	27,500	27,600	NA
Thallium	0.24	0.47	ug/L	0.5 U	0.5 U	NA
Vanadium	- -	- -	ug/L	5 U	5 U	NA
Zinc	7,400	26,000	ug/L	5.9 J	4.7 J	NA
Inorganics-Filtered						
Aluminum	- -	- -	ug/L	200 U	200 U	NA
Antimony	5.6	640	ug/L	1 U	1 U	NA
Arsenic	0.018	0.14	ug/L	2 U	2 U	NA
Barium	1,000	- -	ug/L	38.2	36.9	NA
Beryllium	- -	- -	ug/L	0.5 U	0.5 U	NA
Boron	- -	- -	ug/L	16.2 J	15.8 J	NA
Cadmium	- -	- -	ug/L	5 U	5 U	NA
Calcium	- -	- -	ug/L	15,300	14,000	NA
Chromium	- -	- -	ug/L	15 U	15 U	NA
Cobalt	- -	- -	ug/L	5 U	0.62 B	NA
Copper	1,300	- -	ug/L	1.9 B	10 U	NA
Iron	- -	- -	ug/L	19.7 J	200 UJ	NA
Lead	- -	- -	ug/L	3.9 B	2.5 B	NA
Magnesium	- -	- -	ug/L	5,620	6,180	NA
Manganese	50	100	ug/L	2.8 J	2.9 J	NA
Mercury	- -	- -	ug/L	0.2 U	0.2 U	NA
Nickel	610	4,600	ug/L	10 U	10 U	NA
Potassium	- -	- -	ug/L	2,440	2,490	NA
Selenium	170	4,200	ug/L	20 U	20 U	NA
Silver	- -	- -	ug/L	5 U	5 U	NA
Sodium	- -	- -	ug/L	29,100	28,800	NA
Thallium	0.24	0.47	ug/L	0.5 U	0.5 U	NA
Vanadium	- -	- -	ug/L	5 U	5 U	NA
Zinc	7,400	26,000	ug/L	3.3 J	7 J	NA

Table A.7.5.4-5
Comprehensive Surface Water Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	Health - Fish Ingestion+Drinking Water (bold)	AWQC Human Health - Fish Ingestion Only (shade)	Units	SW-126 04/16/12 Surface Water Samples	SW-127 04/16/12 Surface Water Samples	SW-128 04/19/12 Surface Water Samples
Pesticides						
4,4'-DDD	0.00031	0.00031	ug/L	0.02 U	0.021 U	NA
4,4'-DDE	0.00022	0.00022	ug/L	0.02 U	0.021 U	NA
4,4'-DDT	0.00022	0.00022	ug/L	0.02 U	0.021 U	NA
Aldrin	0.000049	0.00005	ug/L	0.01 U	0.01 U	NA
Alpha-BHC	0.0026	0.0049	ug/L	0.01 U	0.01 U	NA
Alpha-Chlordane	- -	- -	ug/L	0.01 U	0.01 U	NA
Beta-BHC	0.0091	0.017	ug/L	0.01 U	0.01 U	NA
Delta-BHC	- -	- -	ug/L	0.01 U	0.01 U	NA
Dieldrin	0.000052	0.000054	ug/L	0.02 U	0.021 U	NA
Endosulfan I	- -	- -	ug/L	0.01 U	0.01 U	NA
Endosulfan II	62	89	ug/L	0.02 U	0.021 U	NA
Endosulfan Sulfate	62	89	ug/L	0.02 U	0.021 U	NA
Endrin	0.059	0.06	ug/L	0.02 U	0.021 U	NA
Endrin Aldehyde	0.29	0.3	ug/L	0.1 U	0.1 U	NA
Endrin Ketone	- -	- -	ug/L	0.02 U	0.021 U	NA
Gamma-BHC (Lindane)	0.98	1.8	ug/L	0.01 U	0.01 U	NA
Gamma-Chlordane	- -	- -	ug/L	0.02 U	0.021 U	NA
Heptachlor	0.000079	0.000079	ug/L	0.01 U	0.01 U	NA
Heptachlor Epoxide	0.000039	0.000039	ug/L	0.01 U	0.01 U	NA
Methoxychlor	100	- -	ug/L	0.1 UJ	0.1 UJ	NA
Toxaphene	0.00028	0.00028	ug/L	3.1 U	3.1 U	NA
SVOCs TICs						
Diacetone Alcohol	- -	- -	ug/L	NA	NA	NA
Mesityl Oxide	- -	- -	ug/L	NA	NA	NA
Total SVOC TICs	- -	- -	ug/L	85 J	31 J	NA
Unknown alkane1	- -	- -	ug/L	5 J	5 J	NA
Unknown1	- -	- -	ug/L	NA	16 J	NA
VOCs TICs						
Total VOC TICs	- -	- -	ug/L	0	0	0

Table A.7.5.4-5
Comprehensive Surface Water Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Qualifier Type	Lab Qualifiers	Definition
Inorganic	B	Indicates an estimated value between the instrument detection limit and the Reporting Limit (RL).
Inorganic	J	Indicates an estimated value.
Inorganic	U	The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
Inorganic	UJ	The compound was analyzed for but not detected. The associated value is the compound quantitation limit. Indicates an estimated value.
Organic	B	Analyte was also detected in the associated method blank.
Organic	BJ	Analyte was also detected in the associated method blank. Indicates an estimated value.
Organic	J	Indicates an estimated value.
Organic	JB	
Organic	U	The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
Organic	UJ	The compound was analyzed for but not detected. The associated value is the compound quantitation limit. Indicates an estimated value.

Notes:
Exceedances of AWQC Human Health - Fish Ingestion+Drinking Water are in bold.
Exceedances of AWQC Human Health - Fish Ingestion Only are shaded.

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	FTD72-SD-104 04/19/12 Sediment	FTD72-SD-105 04/19/12 Sediment	RISP-3-SED 04/20/12 Sediment	SD-101 04/19/12 Sediment	SD-102 04/19/12 Sediment	SD-103 04/19/12 Sediment	SD-106 04/18/12 Sediment	SD-107 04/18/12 Sediment	SD-108 04/17/12 Sediment
PCBs												
Aroclor-1016	3,900	- -	ug/kg	25 U	23 U	26 U	22 U	22 U [21 U]	29 U	31 U	53 U	22 U
Aroclor-1221	140	- -	ug/kg	25 U	23 U	26 U	22 U	22 U [21 U]	29 U	31 U	53 U	22 U
Aroclor-1232	140	- -	ug/kg	25 U	23 U	26 U	22 U	22 U [21 U]	29 U	31 U	53 U	22 U
Aroclor-1242	220	- -	ug/kg	25 U	23 U	26 U	22 U	22 U [21 U]	29 U	31 U	53 U	22 U
Aroclor-1248	220	- -	ug/kg	25 U	23 U	26 U	22 U	22 U [21 U]	29 U	31 U	53 U	22 U
Aroclor-1254	220	- -	ug/kg	25 U	23 U	26 U	22 U	22 U [21 U]	29 U	31 U	53 U	22 U
Aroclor-1260	220	- -	ug/kg	25 U	23 U	26 U	22 U	22 U [21 U]	29 U	31 U	53 U	22 U
PCBs - TCLP												
Aroclor-1016	- -	- -	ug/L	NA	NA	0.097 U	NA	NA	NA	NA	NA	NA
Aroclor-1221	- -	- -	ug/L	NA	NA	0.097 U	NA	NA	NA	NA	NA	NA
Aroclor-1232	- -	- -	ug/L	NA	NA	0.097 U	NA	NA	NA	NA	NA	NA
Aroclor-1242	- -	- -	ug/L	NA	NA	0.097 U	NA	NA	NA	NA	NA	NA
Aroclor-1248	- -	- -	ug/L	NA	NA	0.097 U	NA	NA	NA	NA	NA	NA
Aroclor-1254	- -	- -	ug/L	NA	NA	0.097 U	NA	NA	NA	NA	NA	NA
Aroclor-1260	- -	- -	ug/L	NA	NA	0.097 U	NA	NA	NA	NA	NA	NA
Volatile Organics												
1,1,1-Trichloroethane	8,700,000	30.2	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
1,1,2,2-Tetrachloroethane	560	1,360	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
1,1,2-trichloro-1,2,2-trifluoroethane	43,000,000	- -	ug/kg	15 U	13 U	15 U	14 U	13 U [11 U]	16 U	17 U	49 U	12 U
1,1,2-Trichloroethane	1,100	1,240	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
1,1-Dichloroethane	3,300	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
1,1-Dichloroethene	240,000	31	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
1,2,3-Trichlorobenzene	49,000	858	ug/kg	NA	NA	7 U	NA	NA	NA	NA	NA	NA
1,2,3-Trichloropropane	5	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
1,2,4-Trichlorobenzene	22,000	2,100	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
1,2,4-Trimethylbenzene	62,000	- -	ug/kg	NA	NA	7 U	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	5.4	- -	ug/kg	NA	NA	7 U	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	34	- -	ug/kg	NA	NA	7 U	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	1,900,000	16.5	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
1,2-Dichloroethane	430	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
1,2-Dichloropropane	940	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
1,3-Dichlorobenzene	- -	4,430	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
1,4-Dichlorobenzene	2,400	599	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
2-Butanone	28,000,000	- -	ug/kg	15 U	13 U	15 U	14 U	13 U [11 U]	16 U	17 U	31 J	12 U
2-Hexanone	210,000	- -	ug/kg	15 U	13 U	15 U	14 U	13 U [11 U]	16 U	17 U	49 U	12 U
4-Methyl-2-pentanone	5,300,000	- -	ug/kg	15 U	13 U	15 U	14 U	13 U [11 U]	16 U	17 U	49 U	12 U
Acetone	61,000,000	- -	ug/kg	120 J	72 J	110	38	61 [70]	62	45	330	16 J
Benzene	1,100	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Bromodichloromethane	270	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Bromoform	62,000	654	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Bromomethane	7,300	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Carbon Disulfide	820,000	0.851	ug/kg	7 U	6 U	2 J	7 U	7 U [6 U]	8 U	8 U	24 U	1 J
Carbon Tetrachloride	610	64.2	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Chlorobenzene	290,000	8.42	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Chloroethane	15,000,000	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Chloroform	290	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Chloromethane	120,000	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
cis-1,2-Dichloroethene	160,000	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
cis-1,3-Dichloropropene	- -	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Cyclohexane	7,000,000	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Dibromochloromethane	680	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Dichlorodifluoromethane	94,000	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Ethylbenzene	5,400	1,100	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Isopropylbenzene	2,100,000	86	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
m&p-Xylene	- -	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Methyl acetate	78,000,000	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Methyl tert-butyl ether	43,000	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Methylcyclohexane	- -	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Methylene Chloride	56,000	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
o-Xylene	690,000	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Styrene	6,300,000	559	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Tetrachloroethene	22,000	468	ug/kg	7 U	6 U	2 J	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Toluene	5,000,000	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
trans-1,2-Dichloroethene	150,000	1,050	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
trans-1,3-Dichloropropene	- -	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Trichloroethene	910	96.9	ug/kg	7 U	6 U	14	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Trichlorofluoromethane	790,000	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U
Vinyl Chloride	60	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U	8 U	24 U	6 U

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	FTD72-SD-104 04/19/12 Sediment	FTD72-SD-105 04/19/12 Sediment	RISP-3-SED 04/20/12 Sediment	SD-101 04/19/12 Sediment	SD-102 04/19/12 Sediment	SD-103 04/19/12 Sediment	SD-106 04/18/12 Sediment	SD-107 04/18/12 Sediment	SD-108 04/17/12 Sediment
VOCs - TCLP												
1,1,1-Trichloroethane	- -	- -	ug/L	NA	NA	0.2 J	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
1,1,2-trichloro-1,2,2-trifluoroethane	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	- -	- -	ug/L	NA	NA	0.6	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
1,2,3-Trichloropropane	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
2-Butanone	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA
2-Hexanone	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA
Acetone	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA
Benzene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Bromodichloromethane	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Bromoform	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Bromomethane	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Carbon Disulfide	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Carbon Tetrachloride	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Chlorobenzene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Chloroethane	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Chloroform	- -	- -	ug/L	NA	NA	1.7	NA	NA	NA	NA	NA	NA
Chloromethane	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	- -	- -	ug/L	NA	NA	0.9	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Cyclohexane	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Dibromochloromethane	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Ethylbenzene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Isopropylbenzene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
m&p-Xylene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Methyl acetate	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Methylcyclohexane	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Methylene Chloride	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
o-Xylene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Styrene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Tetrachloroethene	- -	- -	ug/L	NA	NA	0.7	NA	NA	NA	NA	NA	NA
Toluene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Trichloroethene	- -	- -	ug/L	NA	NA	8.3	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	- -	- -	ug/L	NA	NA	3.3	NA	NA	NA	NA	NA	NA
Vinyl Chloride	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	FTD72-SD-104 04/19/12 Sediment	FTD72-SD-105 04/19/12 Sediment	RISP-3-SED 04/20/12 Sediment	SD-101 04/19/12 Sediment	SD-102 04/19/12 Sediment	SD-103 04/19/12 Sediment	SD-106 04/18/12 Sediment	SD-107 04/18/12 Sediment	SD-108 04/17/12 Sediment
Semivolatile Organics												
1,1'-Biphenyl	51,000	1,220	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
1,2,4-Trichlorobenzene	22,000	2,100	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
1,2-Dichlorobenzene	1,900,000	16.5	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
1,3-Dichlorobenzene	- -	4,430	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
1,4-Dichlorobenzene	2,400	599	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
1,4-Dioxane	4,900	- -	ug/kg	500 U	460 U	510 U	430 U	430 U [410 U]	560 U	600 U	1,000 U	420 U
1,4-Naphthoquinone	- -	- -	ug/kg	NA	NA	5,100 U	4,300 U	4,300 U [4,100 U]	5,600 U	6,000 U	10,000 U	4,200 U
2,2'-Oxybis(1-Chloropropane)	4,600	- -	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
2,4,5-Trichlorophenol	6,100,000	- -	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
2,4,6-Trichlorophenol	44,000	213	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
2,4-Dichlorophenol	180,000	117	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
2,4-Dimethylphenol	1,200,000	29	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
2,4-Dinitrophenol	120,000	- -	ug/kg	1,500 U	1,400 U	1,500 U	1,300 U	1,300 U [1,200 U]	1,700 U	1,800 U	3,100 U	1,300 U
2,4-Dinitrotoluene	1,600	41.6	ug/kg	250 U	230 U	260 U	220 U	210 U [200 U]	280 U	300 U	510 U	210 U
2,6-Dinitrotoluene	61,000	- -	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
2-Chloronaphthalene	6,300,000	- -	ug/kg	49 U	46 U	51 U	43 U	42 U [40 U]	56 U	60 U	100 U	42 U
2-Chlorophenol	390,000	31.2	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
2-Methylnaphthalene	230,000	20.2	ug/kg	25 U	24 U	9 J	22 U	22 U [4 J]	29 U	31 U	52 U	21 U
2-Methylphenol	3,100,000	- -	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
2-Nitroaniline	610,000	- -	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
2-Nitrophenol	- -	- -	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
3,3'-Dichlorobenzidine	1,100	127	ug/kg	500 U	460 U	510 U	430 U	430 U [410 U]	560 U	600 U	1,000 U	420 U
3-Nitroaniline	- -	- -	ug/kg	250 U	230 U	260 U	220 U	210 U [200 U]	280 U	300 U	510 U	210 U
4,6-Dinitro-2-methylphenol	4,900	- -	ug/kg	740 U	690 U	770 U	650 U	640 U [610 U]	840 U	900 U	1,500 U	630 U
4-Bromophenyl-phenylether	- -	1,230	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
4-Chloro-3-Methylphenol	6,100,000	- -	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
4-Chloroaniline	2,400	- -	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
4-Chlorophenyl-phenylether	- -	- -	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
4-Methylphenol	6,100,000	670	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	450	42 U
4-Nitroaniline	24,000	- -	ug/kg	250 U	230 U	260 U	220 U	210 U [200 U]	280 U	300 U	510 U	210 U
4-Nitrophenol	- -	- -	ug/kg	740 U	690 U	770 U	650 U	640 U [610 U]	840 U	900 U	1,500 U	630 U
Acenaphthene	3,400,000	6.7	ug/kg	25 U	24 U	8 J	22 U	22 U [21 U]	29 U	31 U	52 U	21 U
Acenaphthylene	- -	5.9	ug/kg	25 U	24 U	13 J	22 U	22 U [21 U]	29 U	31 U	52 U	21 U
Acetophenone	7,800,000	- -	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
Anthracene	17,000,000	57.2	ug/kg	25 U	24 U	25 J	22 U	22 U [21 U]	29 U	31 U	52 U	21 U
Atrazine	2,100	6.62	ug/kg	250 U	230 U	260 U	220 U	210 U [200 U]	280 U	300 U	510 U	210 U
Benzaldehyde	7,800,000	- -	ug/kg	250 U	230 U	260 U	220 U	210 U [200 U]	280 U	300 U	510 U	210 U
Benzo(a)anthracene	150	108	ug/kg	18 J	5 J	76	6 J	10 J [4 J]	8 J	7 J	16 J	19 J
Benzo(a)pyrene	15	150	ug/kg	**19 J**	24 U	**84**	6 J	8 J [5 J]	7 J	31 U	**16 J**	**24**
Benzo(b)fluoranthene	150	- -	ug/kg	28	7 J	120	7 J	11 J [6 J]	14 J	10 J	24 J	32
Benzo(g,h,i)perylene	- -	170	ug/kg	15 J	5 J	55	5 J	7 J [5 J]	12 J	10 J	22 J	24
Benzo(k)fluoranthene	1,500	240	ug/kg	13 J	24 U	57	6 J	8 J [6 J]	10 J	8 J	18 J	19 J
Benzoic Acid	240,000,000	650	ug/kg	250 J	250 J	770 U	650 U	640 U [610 U]	390 J	900 U	1,500 U	630 U
Benzyl Alcohol	6,100,000	- -	ug/kg	740 U	690 U	770 U	650 U	640 U [610 U]	840 U	900 U	1,500 U	630 U
bis(2-Chloroethoxy)methane	180,000	- -	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
bis(2-Chloroethyl)ether	210	- -	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
bis(2-Ethylhexyl)phthalate	35,000	180	ug/kg	250 U	240 U	260 U	220 U	220 U [210 U]	290 U	310 U	520 U	210 U
Butylbenzylphthalate	260,000	10,900	ug/kg	250 U	230 U	260 U	220 U	210 U [200 U]	280 U	300 U	510 U	210 U
Caprolactam	31,000,000	- -	ug/kg	250 U	230 U	260 U	220 U	210 U [200 U]	280 U	300 U	510 U	210 U
Carbazole	- -	- -	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
Chrysene	15,000	166	ug/kg	24 J	6 J	98	8 J	8 J [5 J]	10 J	10 J	21 J	26
Dibenzo(a,h)anthracene	15	33	ug/kg	5 J	24 U	12 J	22 U	4 J [4 J]	8 J	31 U	52 U	21 U
Dibenzofuran	78,000	415	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
Diethylphthalate	49,000,000	603	ug/kg	250 U	230 U	260 U	220 U	210 U [200 U]	280 U	300 U	510 U	210 U
Dimethylphthalate	- -	- -	ug/kg	250 U	230 U	260 U	220 U	210 U [200 U]	280 U	300 U	510 U	210 U
Di-n-Butylphthalate	6,100,000	6,470	ug/kg	250 U	230 U	260 U	220 U	210 U [200 U]	280 U	300 U	510 U	210 U
Di-n-Octylphthalate	- -	- -	ug/kg	250 U	230 U	260 U	220 U	210 U [200 U]	280 U	300 U	510 U	210 U
Fluoranthene	2,300,000	423	ug/kg	46	7 J	170	7 J	13 J [21 U]	10 J	8 J	21 J	31
Fluorene	2,300,000	77.4	ug/kg	25 U	24 U	10 J	22 U	22 U [21 U]	29 U	31 U	52 U	21 U
Hexachlorobenzene	300	20	ug/kg	25 U	24 U	26 U	22 U	22 U [21 U]	29 U	31 U	52 U	21 U
Hexachlorobutadiene	6,200	- -	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	FTD72-SD-104 04/19/12 Sediment	FTD72-SD-105 04/19/12 Sediment	RISP-3-SED 04/20/12 Sediment	SD-101 04/19/12 Sediment	SD-102 04/19/12 Sediment	SD-103 04/19/12 Sediment	SD-106 04/18/12 Sediment	SD-107 04/18/12 Sediment	SD-108 04/17/12 Sediment
Hexachlorocyclopentadiene	370,000	- -	ug/kg	740 U	690 U	770 U	650 U	640 U [610 U]	840 U	900 U	1,500 U	630 U
Hexachloroethane	12,000	1,027	ug/kg	250 U	230 U	260 U	220 U	210 U [200 U]	280 U	300 U	510 U	210 U
Indeno(1,2,3-cd)pyrene	150	17	ug/kg	12 J	6 J	47	5 J	7 J [4 J]	12 J	10 J	21 J	20 J
Isophorone	510,000	- -	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
Naphthalene	3,600	176	ug/kg	25 U	24 U	18 J	5 J	22 U [21 U]	29 U	31 U	52 U	21 U
Nitrobenzene	4,800	- -	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
N-Nitroso-di-n-propylamine	69	- -	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
N-Nitrosodiphenylamine	99,000	2,680	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
Pentachlorophenol	890	504	ug/kg	250 U	240 U	260 U	220 U	220 U [210 U]	290 U	310 U	520 U	210 U
Phenanthrene	- -	204	ug/kg	24 J	24 U	110	22 U	5 J [21 U]	29 U	7 J	52 U	13 J
Phenol	18,000,000	420	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U	60 U	100 U	42 U
Pyrene	1,700,000	195	ug/kg	40	9 J	160	22 U	12 J [6 J]	10 J	9 J	24 J	29

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Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	FTD72-SD-104 04/19/12 Sediment	FTD72-SD-105 04/19/12 Sediment	RISP-3-SED 04/20/12 Sediment	SD-101 04/19/12 Sediment	SD-102 04/19/12 Sediment	SD-103 04/19/12 Sediment	SD-106 04/18/12 Sediment	SD-107 04/18/12 Sediment	SD-108 04/17/12 Sediment
SVOCs - TCLP												
1,1'-Biphenyl	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
1,4-Dioxane	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA
1,4-Naphthoquinone	- -	- -	ug/L	NA	NA	29 U	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-Chloropropane)	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	- -	- -	ug/L	NA	NA	29 U	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
2-Chlorophenol	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
2-Methylphenol	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
2-Nitroaniline	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
2-Nitrophenol	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA
3-Nitroaniline	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	- -	- -	ug/L	NA	NA	15 U	NA	NA	NA	NA	NA	NA
4-Bromophenyl-phenylether	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
4-Chloroaniline	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
4-Methylphenol	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
4-Nitroaniline	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
4-Nitrophenol	- -	- -	ug/L	NA	NA	29 U	NA	NA	NA	NA	NA	NA
Acenaphthene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Acenaphthylene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Acetophenone	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
Anthracene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Atrazine	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA
Benzaldehyde	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Benzoic Acid	- -	- -	ug/L	NA	NA	15 U	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	- -	- -	ug/L	NA	NA	15 U	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA
Butylbenzylphthalate	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA
Caprolactam	- -	- -	ug/L	NA	NA	15 U	NA	NA	NA	NA	NA	NA
Carbazole	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
Chrysene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Dibenzofuran	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
Diethylphthalate	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA
Dimethylphthalate	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA
Di-n-Butylphthalate	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA
Di-n-Octylphthalate	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA
Fluoranthene	- -	- -	ug/L	NA	NA	0.1 J	NA	NA	NA	NA	NA	NA
Fluorene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	- -	- -	ug/L	NA	NA	15 U	NA	NA	NA	NA	NA	NA
Hexachloroethane	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Isophorone	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
Naphthalene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Nitrobenzene	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
Pentachlorophenol	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA
Phenanthrene	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Phenol	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
Pyrene	- -	- -	ug/L	NA	NA	0.1 J	NA	NA	NA	NA	NA	NA

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	FTD72-SD-104 04/19/12 Sediment	FTD72-SD-105 04/19/12 Sediment	RISP-3-SED 04/20/12 Sediment	SD-101 04/19/12 Sediment	SD-102 04/19/12 Sediment	SD-103 04/19/12 Sediment	SD-106 04/18/12 Sediment	SD-107 04/18/12 Sediment	SD-108 04/17/12 Sediment
Inorganics												
Aluminum	77,000	- -	mg/kg	8,020	6,730	20,700	6,480	3,770 [4,110]	8,820	10,800	11,000	2,230
Antimony	31	2	mg/kg	2.86 U	2.75 U	1.71 J	2.61 U	2.53 U [2.43 U]	3.36 U	3.63 U	6.03 U	2.49 U
Arsenic	0.39	9.8	mg/kg	**1.13 J**	**1.15 J**	**6.36**	**4.55**	**3.76 [6.61]**	**5.21**	**6.12**	**7.43**	**2.35 J**
Barium	15,000	- -	mg/kg	65.4	53.4	145	74.4	34.1 [30.5]	71	89.3	119	31
Beryllium	160	- -	mg/kg	0.389 J	0.322 J	1.3	0.456 J	0.3 J [0.345 J]	0.461 J	0.91	0.693 J	0.248 J
Boron	16,000	- -	mg/kg	4.05 J	3.25 J	11.1	3.41 J	1.7 J [1.95 J]	2.89 J	4.95 J	4.2 J	1.67 J
Cadmium	70	0.99	mg/kg	0.714 U	0.688 U	0.0639 J	0.155 J	0.0911 J [0.124 J]	0.106 J	0.162 J	0.172 J	0.086 J
Calcium	- -	- -	mg/kg	615	606	15,200	519	293 [285]	1,070	3,560	1,360	1,860
Chromium	- -	43.4	mg/kg	9.13	10.9	27.2	11.3	7.55 [11.9]	8.41	18.7	15.3	6.7
Cobalt	23	50	mg/kg	6.54	5.39	19.7	7.43	4.88 [5.88]	8.96	7.96	8.64	2.32
Copper	3,100	31.6	mg/kg	6.41	6.98	19	9.87	6.03 [7.19]	7.27	10.3	10.5	3.05
Iron	55,000	20,000	mg/kg	15,200	11,900	35,300	18,600	13,500 [24,300]	18,600	15,900	20,900	6,250
Lead	400	35.8	mg/kg	13	10.4	60.3	13.8	9 [7.28]	11.4	16.5	22.7	6.1
Magnesium	- -	- -	mg/kg	1,550	1,330	2,570	1,550	1,220 [954]	1,830	2,480	1,780	544
Manganese	1,800	460	mg/kg	191	147	**2,030**	237	152 [148]	265	198	225	61.1
Mercury	10	0.18	mg/kg	0.143 U	0.138 U	0.0923 J	0.129 U	0.122 U [0.119 U]	0.165 U	0.175 U	0.294 U	0.123 U
Nickel	1,500	22.7	mg/kg	7.57	6.92	17.7	9.48	5.75 [8.06]	12.1	11.4	11.2	2.88
Potassium	- -	- -	mg/kg	1,230	1,040	2,530	1,370	639 [589]	1,020	1,260	1,940	445
Selenium	390	2	mg/kg	2.86 U	2.75 U	2.97 U	3.57	2.24 J [3.64]	2.68 J	3.63 U	3.39 J	0.931 J
Silver	390	1	mg/kg	0.714 U	0.688 U	0.372 J	0.651 U	0.633 U [0.607 U]	0.841 U	0.908 U	1.51 U	0.623 U
Sodium	- -	- -	mg/kg	40.2 J	35.5 J	53.5 J	39.5 J	20.1 J [17.5 J]	70.5 J	66.4 J	97.4 J	25.8 J
Thallium	0.78	- -	mg/kg	**1.63 J**	**0.858 J**	**5.09**	3.91 U	3.8 U [3.64 U]	5.04 U	5.45 U	9.05 U	3.74 U
Vanadium	- -	- -	mg/kg	10.5	9.69	42.9	10.6	5.94 [8.2]	9.11	22.5	17.8	5.7
Zinc	23,000	121	mg/kg	43.3	36.6	66.1	56.1	38.2 [44.1]	100	53.5	62.7	25.1
Inorganics-Filtered												
Aluminum	- -	- -	ug/L	NA	NA	1,380	NA	NA	NA	NA	NA	NA
Antimony	- -	- -	ug/L	NA	NA	1 U	NA	NA	NA	NA	NA	NA
Arsenic	- -	- -	ug/L	NA	NA	2 U	NA	NA	NA	NA	NA	NA
Barium	- -	- -	ug/L	NA	NA	69.7	NA	NA	NA	NA	NA	NA
Beryllium	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Boron	- -	- -	ug/L	NA	NA	12 J	NA	NA	NA	NA	NA	NA
Cadmium	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	65,000	NA	NA	NA	NA	NA	NA
Chromium	- -	- -	ug/L	NA	NA	1.9 J	NA	NA	NA	NA	NA	NA
Cobalt	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA
Copper	- -	- -	ug/L	NA	NA	2.5 J	NA	NA	NA	NA	NA	NA
Iron	- -	- -	ug/L	NA	NA	1,890	NA	NA	NA	NA	NA	NA
Lead	- -	- -	ug/L	NA	NA	15 U	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	16,300	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	73.4	NA	NA	NA	NA	NA	NA
Mercury	- -	- -	ug/L	NA	NA	0.2 U	NA	NA	NA	NA	NA	NA
Nickel	- -	- -	ug/L	NA	NA	0.95 J	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	1,900	NA	NA	NA	NA	NA	NA
Selenium	- -	- -	ug/L	NA	NA	20 U	NA	NA	NA	NA	NA	NA
Silver	- -	- -	ug/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	10,600	NA	NA	NA	NA	NA	NA
Thallium	- -	- -	ug/L	NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	2 J	NA	NA	NA	NA	NA	NA
Zinc	- -	- -	ug/L	NA	NA	7.8 J	NA	NA	NA	NA	NA	NA

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	FTD72-SD-104 04/19/12 Sediment	FTD72-SD-105 04/19/12 Sediment	RISP-3-SED 04/20/12 Sediment	SD-101 04/19/12 Sediment	SD-102 04/19/12 Sediment	SD-103 04/19/12 Sediment	SD-106 04/18/12 Sediment	SD-107 04/18/12 Sediment	SD-108 04/17/12 Sediment
Miscellaneous												
Bromide	- -	- -	mg/kg	NA	NA	7.6 U	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	mg/kg	NA	NA	27.5	NA	NA	NA	NA	NA	NA
Nitrate-N	130,000	- -	mg/kg	NA	NA	4.9	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	32.7	28	34.7	24	23.3 [19.2]	41.7	45.5	67.8	22.1
Sulfate	- -	- -	mg/kg	NA	NA	17.2 J	NA	NA	NA	NA	NA	NA
Herbicides												
2,2-Dichloropropionic Acid	1,800,000	- -	ug/kg	NA	NA	140 U	NA	NA	NA	NA	NA	NA
2,4,5-T	610,000	12,300	ug/kg	NA	NA	2.6 U	NA	NA	NA	NA	NA	NA
2,4,5-TP	490,000	675	ug/kg	NA	NA	2.6 U	NA	NA	NA	NA	NA	NA
2,4-D	690,000	- -	ug/kg	NA	NA	55 U	NA	NA	NA	NA	NA	NA
2,4-DB	490,000	- -	ug/kg	NA	NA	26 U	NA	NA	NA	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	31,000	- -	ug/kg	NA	NA	3,800 U	NA	NA	NA	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	4,300,000	- -	ug/kg	NA	NA	77 U	NA	NA	NA	NA	NA	NA
Dicamba	1,800,000	- -	ug/kg	NA	NA	18 U	NA	NA	NA	NA	NA	NA
Dichlorprop	- -	- -	ug/kg	NA	NA	26 U	NA	NA	NA	NA	NA	NA
Dinoseb	61,000	0.611	ug/kg	NA	NA	37 U	NA	NA	NA	NA	NA	NA
Diuron	120,000	- -	ug/kg	NA	NA	0.46 U	NA	NA	NA	NA	NA	NA
Endothall	1,200,000	- -	ug/kg	NA	NA	77 U	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/kg	NA	NA	0.31 U	NA	NA	NA	NA	NA	NA
MCPP	61,000	- -	ug/kg	NA	NA	3,800 U	NA	NA	NA	NA	NA	NA
Monuron	- -	- -	ug/kg	NA	NA	0.31 U	NA	NA	NA	NA	NA	NA
Pesticides												
4,4'-DDD	2,000	4.88	ug/kg	2.5 U	2.4 U	2.6 U	2.2 U	2.2 U [2.1 U]	2.9 U	3.1 U	5.3 U	0.73 J
4,4'-DDE	1,400	3.16	ug/kg	2.5 U	2.4 U	2.6 U	2.2 U	2.2 U [2.1 U]	2.9 U	1.1 J	5.3 U	2.2 U
4,4'-DDT	1,700	- -	ug/kg	2.5 U	2.4 U	2.6 U	2.2 U	2.2 U [2.1 U]	2.9 U	3.1 U	5.3 U	2.2 U
Aldrin	29	2	ug/kg	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U [1 U]	1.4 U	1.5 U	2.6 U	8.6
Alpha-BHC	77	6	ug/kg	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U [1 U]	0.44 J	0.4 J	2.6 U	15 U
Alpha-Chlordane	- -	- -	ug/kg	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U [1 U]	0.45 J	0.77 J	2.6 U	1.1 U
Beta-BHC	270	5	ug/kg	2.8 U	2.6 U	2.9 U	2.5 U	2.5 U [2.4 U]	3.3 U	3.5 U	5.9 U	13 U
Delta-BHC	- -	6,400	ug/kg	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U [1 U]	1.4 U	1.5 U	2.6 U	5.3 U
Dieldrin	30	1.9	ug/kg	2.5 U	2.4 U	2.6 U	2.2 U	2.2 U [2.1 U]	2.9 U	3.1 U	5.3 U	4.2
Endosulfan I	- -	2.9	ug/kg	1.2 U	1.2 U	1.3 U	0.82 J	1.1 U [1 U]	1.4 U	1.5 U	2.6 U	2.4
Endosulfan II	- -	14	ug/kg	2.5 U	2.4 U	2.6 U	2.2 U	2.2 U [2.1 U]	2.9 U	3.1 U	5.3 U	2.2 U
Endosulfan Sulfate	- -	5.4	ug/kg	2.5 U	2.4 U	2.6 U	2.2 U	2.2 U [2.1 U]	2.9 U	3.1 U	5.3 U	2.2 U
Endrin	18,000	2.22	ug/kg	2.5 U	2.4 U	2.6 U	2.2 U	2.2 U [2.1 U]	2.9 U	3.1 U	5.3 U	0.49 J
Endrin Aldehyde	- -	- -	ug/kg	2.5 U	2.4 U	2.6 U	2.2 U	2.2 U [2.1 U]	2.9 U	3.1 U	5.3 U	1.1 J
Endrin Ketone	- -	- -	ug/kg	2.7 U	2.5 UJ	2.8 U	2.4 U	2.3 U [2.2 U]	3.1 U	3.3 U	5.6 U	2.3 U
Gamma-BHC (Lindane)	520	2.37	ug/kg	1.2 U	1.2 U	1.3 U	0.72 J	1.1 U [1 U]	0.41 J	2.5	0.57 J	1.8
Gamma-Chlordane	- -	- -	ug/kg	1.2 U	1.2 U	0.42 J	1.1 U	1.1 U [0.25 J]	1.4 U	1.5 U	2.6 U	0.25 J
Heptachlor	110	68	ug/kg	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U [1 U]	1.4 U	2.5	2.6 U	8.7
Heptachlor Epoxide	53	2.47	ug/kg	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U [1 U]	1.4 U	1.5 U	2.6 U	7.7
Methoxychlor	310,000	18.7	ug/kg	12 U	12 U	13 U	11 U	11 U [10 U]	14 U	15 U	26 U	11 U
Simazine	4,100	- -	ug/kg	NA	NA	100 U	NA	NA	NA	NA	NA	NA
Toxaphene	440	0.1	ug/kg	49 U	46 U	51 U	43 U	43 U [41 U]	57 U	61 U	100 U	42 U

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	FTD72-SD-104 04/19/12 Sediment	FTD72-SD-105 04/19/12 Sediment	RISP-3-SED 04/20/12 Sediment	SD-101 04/19/12 Sediment	SD-102 04/19/12 Sediment	SD-103 04/19/12 Sediment	SD-106 04/18/12 Sediment	SD-107 04/18/12 Sediment	SD-108 04/17/12 Sediment
Pesticides - TCLP												
4,4'-DDD	- -	- -	ug/L	NA	NA	0.02 U	NA	NA	NA	NA	NA	NA
4,4'-DDE	- -	- -	ug/L	NA	NA	0.02 U	NA	NA	NA	NA	NA	NA
4,4'-DDT	- -	- -	ug/L	NA	NA	0.02 U	NA	NA	NA	NA	NA	NA
Aldrin	- -	- -	ug/L	NA	NA	0.0098 U	NA	NA	NA	NA	NA	NA
Alpha-BHC	- -	- -	ug/L	NA	NA	0.0098 U	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	- -	- -	ug/L	NA	NA	0.0098 U	NA	NA	NA	NA	NA	NA
Beta-BHC	- -	- -	ug/L	NA	NA	0.0098 U	NA	NA	NA	NA	NA	NA
Delta-BHC	- -	- -	ug/L	NA	NA	0.0098 U	NA	NA	NA	NA	NA	NA
Dieldrin	- -	- -	ug/L	NA	NA	0.02 U	NA	NA	NA	NA	NA	NA
Endosulfan I	- -	- -	ug/L	NA	NA	0.0098 U	NA	NA	NA	NA	NA	NA
Endosulfan II	- -	- -	ug/L	NA	NA	0.02 U	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	- -	- -	ug/L	NA	NA	0.02 U	NA	NA	NA	NA	NA	NA
Endrin	- -	- -	ug/L	NA	NA	0.02 U	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	- -	- -	ug/L	NA	NA	0.098 U	NA	NA	NA	NA	NA	NA
Endrin Ketone	- -	- -	ug/L	NA	NA	0.02 U	NA	NA	NA	NA	NA	NA
Gamma-BHC (Lindane)	- -	- -	ug/L	NA	NA	0.0098 U	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	- -	- -	ug/L	NA	NA	0.02 U	NA	NA	NA	NA	NA	NA
Heptachlor	- -	- -	ug/L	NA	NA	0.0098 U	NA	NA	NA	NA	NA	NA
Heptachlor Epoxide	- -	- -	ug/L	NA	NA	0.0098 U	NA	NA	NA	NA	NA	NA
Methoxychlor	- -	- -	ug/L	NA	NA	0.098 U	NA	NA	NA	NA	NA	NA
Toxaphene	- -	- -	ug/L	NA	NA	2.9 U	NA	NA	NA	NA	NA	NA
Dioxins												
1,2,3,4,6,7,8-HpCDD	- -	- -	ng/kg	NA	NA	88.8 B	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	ng/kg	NA	NA	1.7 BJ	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	ng/kg	NA	NA	0.176 BJ	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	ng/kg	NA	NA	0.751 BJ	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	ng/kg	NA	NA	0.463 BJ	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	ng/kg	NA	NA	1.42 BJ	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	ng/kg	NA	NA	0.471 BJ	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	ng/kg	NA	NA	1.76 BJ	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	ng/kg	NA	NA	0.401 J	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	ng/kg	NA	NA	0.308 BJ	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	ng/kg	NA	NA	0.373 BJ	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	ng/kg	NA	NA	0.43 BJ	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	ng/kg	NA	NA	0.501 BJ	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	- -	- -	ng/kg	NA	NA	0.111 JQ	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	ng/kg	NA	NA	0.402 J	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	ng/kg	NA	NA	2.46 BJ	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	ng/kg	NA	NA	8,850 EB	NA	NA	NA	NA	NA	NA
Radiochemistry												
Gross Alpha	- -	- -	pci/g	NA	NA	13.7	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/g	NA	NA	24.9	NA	NA	NA	NA	NA	NA

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-109 04/16/12 Sediment	SD-110 04/16/12 Sediment	SD-111 04/16/12 Sediment	SD-112 04/18/12 Sediment	SD-113 04/17/12 Sediment	SD-114 04/17/12 Sediment	SD-115 04/17/12 Sediment	SD-116 04/17/12 Sediment	SD-117 04/17/12 Sediment
PCBs												
Aroclor-1016	3,900	- -	ug/kg	11 U	13 U	5.2 U	28 U	25 U	25 U	23 U	27 U	10 U
Aroclor-1221	140	- -	ug/kg	11 U	13 U	5.2 U	28 U	25 U	25 U	23 U	27 U	10 U
Aroclor-1232	140	- -	ug/kg	11 U	13 U	5.2 U	28 U	25 U	25 U	23 U	27 U	10 U
Aroclor-1242	220	- -	ug/kg	11 U	13 U	5.2 U	28 U	25 U	25 U	23 U	27 U	10 U
Aroclor-1248	220	- -	ug/kg	11 U	13 U	5.2 U	28 U	25 U	25 U	23 U	27 U	10 U
Aroclor-1254	220	- -	ug/kg	11 U	13 U	5.2 U	28 U	25 U	25 U	23 U	27 U	10 U
Aroclor-1260	220	- -	ug/kg	11 U	13 U	5.2 U	28 U	25 U	25 U	23 U	27 U	10 U
PCBs - TCLP												
Aroclor-1016	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Organics												
1,1,1-Trichloroethane	8,700,000	30.2	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
1,1,2,2-Tetrachloroethane	560	1,360	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
1,1,2-trichloro-1,2,2-trifluoroethane	43,000,000	- -	ug/kg	16 U	19 U	13 U	24 U	14 U	15 U	14 U	16 U	15 U
1,1,2-Trichloroethane	1,100	1,240	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
1,1-Dichloroethane	3,300	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
1,1-Dichloroethene	240,000	31	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
1,2,3-Trichlorobenzene	49,000	858	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichloropropane	5	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
1,2,4-Trichlorobenzene	22,000	2,100	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
1,2,4-Trimethylbenzene	62,000	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	5.4	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	34	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	1,900,000	16.5	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
1,2-Dichloroethane	430	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
1,2-Dichloropropane	940	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
1,3-Dichlorobenzene	- -	4,430	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
1,4-Dichlorobenzene	2,400	599	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
2-Butanone	28,000,000	- -	ug/kg	16 U	19 U	13 U	20 J	14 U	15 U	14 U	16 U	15 U
2-Hexanone	210,000	- -	ug/kg	16 U	19 U	13 U	24 U	14 U	15 U	14 U	16 U	15 U
4-Methyl-2-pentanone	5,300,000	- -	ug/kg	16 U	19 U	13 U	24 U	14 U	15 U	14 U	16 U	15 U
Acetone	61,000,000	- -	ug/kg	33	47	22 J	46 J	27 J	26 J	17 J	48	16 J
Benzene	1,100	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Bromodichloromethane	270	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Bromoform	62,000	654	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Bromomethane	7,300	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Carbon Disulfide	820,000	0.851	ug/kg	8 U	4 J	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Carbon Tetrachloride	610	64.2	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Chlorobenzene	290,000	8.42	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Chloroethane	15,000,000	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Chloroform	290	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	3 J
Chloromethane	120,000	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
cis-1,2-Dichloroethene	160,000	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
cis-1,3-Dichloropropene	- -	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Cyclohexane	7,000,000	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Dibromochloromethane	680	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Dichlorodifluoromethane	94,000	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Ethylbenzene	5,400	1,100	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Isopropylbenzene	2,100,000	86	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
m&p-Xylene	- -	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Methyl acetate	78,000,000	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Methyl tert-butyl ether	43,000	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Methylcyclohexane	- -	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Methylene Chloride	56,000	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
o-Xylene	690,000	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Styrene	6,300,000	559	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Tetrachloroethene	22,000	468	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Toluene	5,000,000	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
trans-1,2-Dichloroethene	150,000	1,050	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
trans-1,3-Dichloropropene	- -	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Trichloroethene	910	96.9	ug/kg	8 U	5 J	6 U	12 U	7 U	2 J	7 U	3 J	7 U
Trichlorofluoromethane	790,000	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U
Vinyl Chloride	60	- -	ug/kg	8 U	9 U	6 U	12 U	7 U	7 U	7 U	8 U	7 U

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-109 04/16/12 Sediment	SD-110 04/16/12 Sediment	SD-111 04/16/12 Sediment	SD-112 04/18/12 Sediment	SD-113 04/17/12 Sediment	SD-114 04/17/12 Sediment	SD-115 04/17/12 Sediment	SD-116 04/17/12 Sediment	SD-117 04/17/12 Sediment
VOCs - TCLP												
1,1,1-Trichloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-trichloro-1,2,2-trifluoroethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichloropropane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromomethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Disulfide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Tetrachloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
m&p-Xylene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-109 04/16/12 Sediment	SD-110 04/16/12 Sediment	SD-111 04/16/12 Sediment	SD-112 04/18/12 Sediment	SD-113 04/17/12 Sediment	SD-114 04/17/12 Sediment	SD-115 04/17/12 Sediment	SD-116 04/17/12 Sediment	SD-117 04/17/12 Sediment
Semivolatile Organics												
1,1'-Biphenyl	51,000	1,220	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
1,2,4-Trichlorobenzene	22,000	2,100	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
1,2-Dichlorobenzene	1,900,000	16.5	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
1,3-Dichlorobenzene	- -	4,430	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
1,4-Dichlorobenzene	2,400	599	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
1,4-Dioxane	4,900	- -	ug/kg	530 U	610 U	510 U	550 U	490 U	490 U	450 U	530 U	490 U
1,4-Naphthoquinone	- -	- -	ug/kg	5,300 U	6,100 U	5,100 U	5,500 U	4,900 U	4,900 U	4,500 U	5,300 U	4,900 U
2,2'-Oxybis(1-Chloropropane)	4,600	- -	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
2,4,5-Trichlorophenol	6,100,000	- -	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
2,4,6-Trichlorophenol	44,000	213	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
2,4-Dichlorophenol	180,000	117	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
2,4-Dimethylphenol	1,200,000	29	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
2,4-Dinitrophenol	120,000	- -	ug/kg	1,600 U	1,800 U	1,500 U	1,700 U	1,500 U	1,500 U	1,400 U	1,600 U	1,500 U
2,4-Dinitrotoluene	1,600	41.6	ug/kg	270 U	300 U	260 U	280 U	240 U	250 U	230 U	270 U	250 U
2,6-Dinitrotoluene	61,000	- -	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
2-Chloronaphthalene	6,300,000	- -	ug/kg	53 U	60 U	51 U	55 U	48 U	49 U	45 U	53 U	49 U
2-Chlorophenol	390,000	31.2	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
2-Methylnaphthalene	230,000	20.2	ug/kg	27 U	31 U	26 U	28 U	25 U	25 U	23 U	27 U	19 J
2-Methylphenol	3,100,000	- -	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
2-Nitroaniline	610,000	- -	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
2-Nitrophenol	- -	- -	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
3,3'-Dichlorobenzidine	1,100	127	ug/kg	530 U	610 U	510 U	550 U	490 U	490 U	450 U	530 U	490 U
3-Nitroaniline	- -	- -	ug/kg	270 U	300 U	260 U	280 U	240 U	250 U	230 U	270 U	250 U
4,6-Dinitro-2-methylphenol	4,900	- -	ug/kg	800 U	910 U	770 U	830 U	730 U	740 U	680 U	800 U	740 U
4-Bromophenyl-phenylether	- -	1,230	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
4-Chloro-3-Methylphenol	6,100,000	- -	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
4-Chloroaniline	2,400	- -	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
4-Chlorophenyl-phenylether	- -	- -	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
4-Methylphenol	6,100,000	670	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	27 J
4-Nitroaniline	24,000	- -	ug/kg	270 U	300 U	260 U	280 U	240 U	250 U	230 U	270 U	250 U
4-Nitrophenol	- -	- -	ug/kg	800 U	910 U	770 U	830 U	730 U	740 U	680 U	800 U	740 U
Acenaphthene	3,400,000	6.7	ug/kg	27 U	31 U	26 U	28 U	25 U	25 U	11 J	8 J	25 U
Acenaphthylene	- -	5.9	ug/kg	27 U	31 U	26 U	28 U	25 U	25 U	23 U	6 J	22 J
Acetophenone	7,800,000	- -	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
Anthracene	17,000,000	57.2	ug/kg	27 U	6 J	26 U	32	7 J	7 J	19 J	16 J	26
Atrazine	2,100	6.62	ug/kg	270 U	300 U	260 U	280 U	240 U	250 U	230 U	270 U	250 U
Benzaldehyde	7,800,000	- -	ug/kg	270 U	300 U	260 U	280 U	240 U	250 U	230 U	270 U	250 U
Benzo(a)anthracene	150	108	ug/kg	27 U	28 J	26 U	110	28	38	70	48	150
Benzo(a)pyrene	15	150	ug/kg	6 J	**39**	5 J	**65**	**23 J**	**45**	**61**	**48**	**150**
Benzo(b)fluoranthene	150	- -	ug/kg	9 J	68	9 J	100	26	53	87	60	**180**
Benzo(g,h,i)perylene	- -	170	ug/kg	7 J	41	9 J	41	21 J	44	45	41	84
Benzo(k)fluoranthene	1,500	240	ug/kg	6 J	21 J	6 J	49	16 J	37	33	38	73
Benzoic Acid	240,000,000	650	ug/kg	800 U	910 U	770 U	830 U	730 U	740 U	680 U	800 U	740 U
Benzyl Alcohol	6,100,000	- -	ug/kg	800 U	910 U	770 U	830 U	730 U	740 U	680 U	800 U	740 U
bis(2-Chloroethoxy)methane	180,000	- -	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
bis(2-Chloroethyl)ether	210	- -	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
bis(2-Ethylhexyl)phthalate	35,000	180	ug/kg	270 U	310 U	260 U	280 U	250 U	250 U	230 U	270 U	250 U
Butylbenzylphthalate	260,000	10,900	ug/kg	270 U	300 U	260 U	280 U	240 U	250 U	230 U	270 U	250 U
Caprolactam	31,000,000	- -	ug/kg	270 U	300 U	260 U	280 U	240 U	250 U	230 U	270 U	250 U
Carbazole	- -	- -	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
Chrysene	15,000	166	ug/kg	6 J	49	10 J	180	24 J	42	74	55	130
Dibenzo(a,h)anthracene	15	33	ug/kg	27 U	8 J	26 U	**19 J**	25 U	**28**	11 J	27 U	**31**
Dibenzofuran	78,000	415	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
Diethylphthalate	49,000,000	603	ug/kg	270 U	300 U	260 U	280 U	240 U	250 U	230 U	270 U	250 U
Dimethylphthalate	- -	- -	ug/kg	270 U	300 U	260 U	280 U	240 U	250 U	230 U	270 U	250 U
Di-n-Butylphthalate	6,100,000	6,470	ug/kg	270 U	300 U	260 U	280 U	240 U	250 U	230 U	270 U	250 U
Di-n-Octylphthalate	- -	- -	ug/kg	270 U	300 U	260 U	280 U	240 U	250 U	230 U	270 U	250 U
Fluoranthene	2,300,000	423	ug/kg	6 J	72	7 J	90	34	74	150	95	170
Fluorene	2,300,000	77.4	ug/kg	27 U	31 U	26 U	14 J	25 U	25 U	12 J	10 J	8 J
Hexachlorobenzene	300	20	ug/kg	27 U	31 U	26 U	28 U	25 U	25 U	23 U	27 U	25 U
Hexachlorobutadiene	6,200	- -	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-109 04/16/12 Sediment	SD-110 04/16/12 Sediment	SD-111 04/16/12 Sediment	SD-112 04/18/12 Sediment	SD-113 04/17/12 Sediment	SD-114 04/17/12 Sediment	SD-115 04/17/12 Sediment	SD-116 04/17/12 Sediment	SD-117 04/17/12 Sediment
Hexachlorocyclopentadiene	370,000	- -	ug/kg	800 U	910 U	770 U	830 U	730 U	740 U	680 U	800 U	740 U
Hexachloroethane	12,000	1,027	ug/kg	270 U	300 U	260 U	280 U	240 U	250 U	230 U	270 U	250 U
Indeno(1,2,3-cd)pyrene	150	17	ug/kg	7 J	34	5 J	37	19 J	38	42	38	83
Isophorone	510,000	- -	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
Naphthalene	3,600	176	ug/kg	27 U	31 U	26 U	28 U	25 U	25 U	5 J	27 U	29
Nitrobenzene	4,800	- -	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
N-Nitroso-di-n-propylamine	69	- -	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
N-Nitrosodiphenylamine	99,000	2,680	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
Pentachlorophenol	890	504	ug/kg	270 U	310 U	260 U	280 U	250 U	250 U	230 U	270 U	250 U
Phenanthrene	- -	204	ug/kg	27 U	24 J	6 J	79	15 J	34	90	56	77
Phenol	18,000,000	420	ug/kg	53 U	61 U	51 U	55 U	49 U	49 U	45 U	53 U	49 U
Pyrene	1,700,000	195	ug/kg	8 J	69	8 J	75	31	64	120	80	160

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-109 04/16/12 Sediment	SD-110 04/16/12 Sediment	SD-111 04/16/12 Sediment	SD-112 04/18/12 Sediment	SD-113 04/17/12 Sediment	SD-114 04/17/12 Sediment	SD-115 04/17/12 Sediment	SD-116 04/17/12 Sediment	SD-117 04/17/12 Sediment
SVOCs - TCLP												
1,1'-Biphenyl	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dioxane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Naphthoquinone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-Chloropropane)	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl-phenylether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic Acid	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butylbenzylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-Butylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-Octylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-109 04/16/12 Sediment	SD-110 04/16/12 Sediment	SD-111 04/16/12 Sediment	SD-112 04/18/12 Sediment	SD-113 04/17/12 Sediment	SD-114 04/17/12 Sediment	SD-115 04/17/12 Sediment	SD-116 04/17/12 Sediment	SD-117 04/17/12 Sediment
Inorganics												
Aluminum	77,000	- -	mg/kg	2,870	8,800	13,000	4,590	1,980	4,040	5,620	4,230	3,130
Antimony	31	2	mg/kg	3.11 U	3.68 U	2.99 U	3.3 U	2.93 U	2.95 U	2.7 U	3.19 U	2.93 U
Arsenic	0.39	9.8	mg/kg	**2.41 J**	**4**	**5.89**	**2.66 J**	**2.25 J**	**1.08 J**	**2.88**	**2.66 J**	**3.33**
Barium	15,000	- -	mg/kg	25	75.8	107	46	25.9	52	61.7	36.3	22.2
Beryllium	160	- -	mg/kg	0.294 J	0.567 J	0.919	0.343 J	0.25 J	0.265 J	0.408 J	0.241 J	0.34 J
Boron	16,000	- -	mg/kg	1.09 J	2.71 J	4.24 J	2.98 J	2.05 J	2.25 J	2.87 J	2.26 J	2.13 J
Cadmium	70	0.99	mg/kg	0.777 U	0.0589 J	0.748 U	0.122 J	0.0658 J	0.407 J	0.137 J	0.083 J	0.0807 J
Calcium	- -	- -	mg/kg	1,470	1,750	1,210	35,900	1,290	2,410	2,710	5,790	14,600
Chromium	- -	43.4	mg/kg	7.02	11.5	48.5	14.4	5.66	6.54	8.73	5.42	7.92
Cobalt	23	50	mg/kg	2.11	8.2	10.4	2.22	2.98	3.98	4.33	2.5	2.2
Copper	3,100	31.6	mg/kg	3.68	8.35	6.38	4.59	2.58	4.8	8.24	4.04	4
Iron	55,000	20,000	mg/kg	5,710	12,500	19,200	7,620	7,830	7,830	8,510	5,720	6,870
Lead	400	35.8	mg/kg	9.68	15.2	20.3	43.4	4.83	8.1	9.95	7.06	29.8
Magnesium	- -	- -	mg/kg	684	1,870	2,410	1,800	622	1,200	1,960	1,610	2,680
Manganese	1,800	460	mg/kg	65.8	201	205	46	61.2	152	67	90.7	41.5
Mercury	10	0.18	mg/kg	0.157 U	0.171 U	0.0178 J	0.165 U	0.147 U	0.145 U	0.133 U	0.155 U	0.0398 J
Nickel	1,500	22.7	mg/kg	2.51	8.09	10.8	4.2	3.61	4.34	6.15	3.41	3.43
Potassium	- -	- -	mg/kg	520	1,540	1,880	615	469	761	926	557	529
Selenium	390	2	mg/kg	3.11 U	3.68 U	2.99 U	3.3 U	2.93 U	2.95 U	1.51 J	3.19 U	2.93 U
Silver	390	1	mg/kg	0.777 U	0.921 U	0.748 U	0.824 U	0.732 U	0.737 U	0.676 U	0.798 U	0.733 U
Sodium	- -	- -	mg/kg	22.5 J	44.1 J	41.7 J	44.7 J	21.9 J	49.1 J	40.4 J	35.9 J	66.8 J
Thallium	0.78	- -	mg/kg	4.66 U	5.52 U	4.49 U	4.94 U	0.707 J	4.42 U	**0.928 J**	4.79 U	4.4 U
Vanadium	- -	- -	mg/kg	5.08	12.6	27.6	8.7	6.24	7.36	9.45	5.44	6.78
Zinc	23,000	121	mg/kg	17.7	48.5	62.8	29.3	19.7	35.3	41	25.8	35.5
Inorganics-Filtered												
Aluminum	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-109 04/16/12 Sediment	SD-110 04/16/12 Sediment	SD-111 04/16/12 Sediment	SD-112 04/18/12 Sediment	SD-113 04/17/12 Sediment	SD-114 04/17/12 Sediment	SD-115 04/17/12 Sediment	SD-116 04/17/12 Sediment	SD-117 04/17/12 Sediment
Miscellaneous												
Bromide	- -	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	130,000	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	37.5	45.7	35.1	40.5	33	33.5	27.5	38.6	32.5
Sulfate	- -	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Herbicides												
2,2-Dichloropropionic Acid	1,800,000	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-T	610,000	12,300	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TP	490,000	675	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	690,000	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DB	490,000	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	31,000	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	4,300,000	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dicamba	1,800,000	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorprop	- -	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dinoseb	61,000	0.611	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	120,000	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endothall	1,200,000	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	61,000	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monuron	- -	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides												
4,4'-DDD	2,000	4.88	ug/kg	0.53 J	0.76 J	2.6 U	2.9 U	2.5 U	2.6 U	2.3 U	2.8 U	2.5 U
4,4'-DDE	1,400	3.16	ug/kg	0.54 J	3.1 U	0.76 J	0.72 J	2.5 U	2.6 U	2.3 U	2.8 U	2 J
4,4'-DDT	1,700	- -	ug/kg	2.7 U	3.1 U	2.6 U	0.69 J	2.5 U	2.6 U	2.3 U	2.8 U	0.69 J
Aldrin	29	2	ug/kg	2.3	1.5 U	1.3 U	**37**	1.2 U	1.2 U	0.95 J	1.1 J	1.2 U
Alpha-BHC	77	6	ug/kg	2.3	0.89 J	1.3 U	74 U	1.2 U	1.2 U	1.1 U	1.4 U	3.6
Alpha-Chlordane	- -	- -	ug/kg	1.3 U	1.5 U	1.3 U	1.4 U	1.2 U	1.2 U	1.1 U	1.4 U	1.1 J
Beta-BHC	270	5	ug/kg	2.2 J	3.5 U	2.9 U	30	8.2 U	2.9 U	2.7	3.6	2.8 U
Delta-BHC	- -	6,400	ug/kg	1.3 U	1.5 U	1.3 U	1.4 U	1.2 U	1.2 U	1.1 U	1.4 U	4 U
Dieldrin	30	1.9	ug/kg	2.7 U	3.1 U	2.6 U	3.6	2.5 U	2.6 U	0.62 J	2.2 J	2.5 U
Endosulfan I	- -	2.9	ug/kg	0.76 J	1.5 U	1.3 U	1.4 U	1.2 U	1.2 U	0.82 J	1.1 J	0.84 J
Endosulfan II	- -	14	ug/kg	2.7 U	3.1 U	2.6 U	2.9 U	2.5 U	2.6 U	2.3 U	2.8 U	2.5 U
Endosulfan Sulfate	- -	5.4	ug/kg	2.7 U	3.1 U	2.6 U	2.9 U	2.5 U	2.6 U	2.3 U	2.8 U	2.5 U
Endrin	18,000	2.22	ug/kg	2.7 U	3.1 U	2.6 U	5	2.5 U	2.6 U	2.3 U	0.6 J	2.5 U
Endrin Aldehyde	- -	- -	ug/kg	2.7 U	3.1 U	2.6 U	2.9 U	2.5 U	2.6 U	2.3 U	2.8 U	2.5 U
Endrin Ketone	- -	- -	ug/kg	2.9 U	3.3 U	2.8 U	3 U	2.7 U	2.7 U	2.5 U	2.9 U	2.7 U
Gamma-BHC (Lindane)	520	2.37	ug/kg	0.78 J	1.5 U	1.3 U	8.5	0.48 J	0.26 J	0.97 J	1.5	0.55 J
Gamma-Chlordane	- -	- -	ug/kg	1.3 U	1.4 J	1.3 U	1.4 U	1.2 U	1.2 U	1.1 U	1.4 U	1.4 U
Heptachlor	110	68	ug/kg	4.7	0.81 J	1.3 U	1.4 U	1.2 U	1.2 U	1.1 U	1.4 U	2.5
Heptachlor Epoxide	53	2.47	ug/kg	1.3 U	1.5 U	1.3 U	**59**	0.88 J	0.32 J	3	3.6	1.2 U
Methoxychlor	310,000	18.7	ug/kg	13 U	15 U	13 U	6 J	12 U	12 U	11 U	14 U	12 U
Simazine	4,100	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	440	0.1	ug/kg	52 U	61 U	51 U	55 U	49 U	50 U	46 U	54 U	49 U

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-109 04/16/12 Sediment	SD-110 04/16/12 Sediment	SD-111 04/16/12 Sediment	SD-112 04/18/12 Sediment	SD-113 04/17/12 Sediment	SD-114 04/17/12 Sediment	SD-115 04/17/12 Sediment	SD-116 04/17/12 Sediment	SD-117 04/17/12 Sediment
Pesticides - TCLP												
4,4'-DDD	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-BHC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beta-BHC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta-BHC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Ketone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-BHC (Lindane)	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor Epoxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dioxins												
1,2,3,4,6,7,8-HpCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Radiochemistry												
Gross Alpha	- -	- -	pci/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/g	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-118 04/17/12 Sediment	SD-119 04/17/12 Sediment	SD-120 04/16/12 Sediment	SD-121 04/17/12 Sediment	SD-122 04/17/12 Sediment	SD-123 04/16/12 Sediment	SD-124 04/16/12 Sediment	SD-125 04/16/12 Sediment	SD-126 04/16/12 Sediment
PCBs												
Aroclor-1016	3,900	- -	ug/kg	14 U	17 U	5.7 U	5.9 U	11 U	13 U	6.1 U	3.9 U	11 U
Aroclor-1221	140	- -	ug/kg	14 U	17 U	5.7 U	5.9 U	11 U	13 U	6.1 U	3.9 U	11 U
Aroclor-1232	140	- -	ug/kg	14 U	17 U	5.7 U	5.9 U	11 U	13 U	6.1 U	3.9 U	11 U
Aroclor-1242	220	- -	ug/kg	14 U	17 U	5.7 U	5.9 U	11 U	13 U	6.1 U	3.9 U	11 U
Aroclor-1248	220	- -	ug/kg	14 U	17 U	5.7 U	5.9 U	11 U	13 U	6.1 U	3.9 U	11 U
Aroclor-1254	220	- -	ug/kg	14 U	17 U	5.7 U	5.9 U	11 U	13 U	6.1 U	3.9 U	11 U
Aroclor-1260	220	- -	ug/kg	14 U	17 U	5.7 U	5.9 U	11 U	13 U	6.1 U	1.1 J	11 U
PCBs - TCLP												
Aroclor-1016	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Organics												
1,1,1-Trichloroethane	8,700,000	30.2	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
1,1,2,2-Tetrachloroethane	560	1,360	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
1,1,2-trichloro-1,2,2-trifluoroethane	43,000,000	- -	ug/kg	21 U	28 U	17 U	16 U	19 U	29 U	23 U	15 U	16 U
1,1,2-Trichloroethane	1,100	1,240	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
1,1-Dichloroethane	3,300	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
1,1-Dichloroethene	240,000	31	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
1,2,3-Trichlorobenzene	49,000	858	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichloropropane	5	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
1,2,4-Trichlorobenzene	22,000	2,100	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
1,2,4-Trimethylbenzene	62,000	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	5.4	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	34	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	1,900,000	16.5	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
1,2-Dichloroethane	430	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
1,2-Dichloropropane	940	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
1,3-Dichlorobenzene	- -	4,430	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
1,4-Dichlorobenzene	2,400	599	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
2-Butanone	28,000,000	- -	ug/kg	21 U	28 U	17 U	16 U	19 U	29 U	23 U	15 U	16 U
2-Hexanone	210,000	- -	ug/kg	21 U	28 U	17 U	16 U	19 U	29 U	23 U	15 U	16 U
4-Methyl-2-pentanone	5,300,000	- -	ug/kg	21 U	28 U	17 U	16 U	19 U	29 U	23 U	15 U	16 U
Acetone	61,000,000	- -	ug/kg	77	52 J	42	35	40	77	65	110	48
Benzene	1,100	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
Bromodichloromethane	270	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
Bromoform	62,000	654	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
Bromomethane	7,300	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
Carbon Disulfide	820,000	0.851	ug/kg	11 U	4 J	8 U	8 U	3 J	15 U	12 U	7 U	8 U
Carbon Tetrachloride	610	64.2	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
Chlorobenzene	290,000	8.42	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
Chloroethane	15,000,000	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
Chloroform	290	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
Chloromethane	120,000	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
cis-1,2-Dichloroethene	160,000	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	3 J	7 U	8 U
cis-1,3-Dichloropropene	- -	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
Cyclohexane	7,000,000	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
Dibromochloromethane	680	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
Dichlorodifluoromethane	94,000	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
Ethylbenzene	5,400	1,100	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
Isopropylbenzene	2,100,000	86	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
m&p-Xylene	- -	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
Methyl acetate	78,000,000	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
Methyl tert-butyl ether	43,000	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
Methylcyclohexane	- -	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
Methylene Chloride	56,000	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
o-Xylene	690,000	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
Styrene	6,300,000	559	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
Tetrachloroethene	22,000	468	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	6 J	7 U	8 U
Toluene	5,000,000	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
trans-1,2-Dichloroethene	150,000	1,050	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
trans-1,3-Dichloropropene	- -	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
Trichloroethene	910	96.9	ug/kg	2 J	14 U	8 U	8 U	10 U	15 U	54	7 U	8 U
Trichlorofluoromethane	790,000	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U
Vinyl Chloride	60	- -	ug/kg	11 U	14 U	8 U	8 U	10 U	15 U	12 U	7 U	8 U

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-118 04/17/12 Sediment	SD-119 04/17/12 Sediment	SD-120 04/16/12 Sediment	SD-121 04/17/12 Sediment	SD-122 04/17/12 Sediment	SD-123 04/16/12 Sediment	SD-124 04/16/12 Sediment	SD-125 04/16/12 Sediment	SD-126 04/16/12 Sediment
VOCs - TCLP												
1,1,1-Trichloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-trichloro-1,2,2-trifluoroethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichloropropane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromomethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Disulfide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Tetrachloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
m&p-Xylene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-118 04/17/12 Sediment	SD-119 04/17/12 Sediment	SD-120 04/16/12 Sediment	SD-121 04/17/12 Sediment	SD-122 04/17/12 Sediment	SD-123 04/16/12 Sediment	SD-124 04/16/12 Sediment	SD-125 04/16/12 Sediment	SD-126 04/16/12 Sediment
Semivolatile Organics												
1,1'-Biphenyl	51,000	1,220	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
1,2,4-Trichlorobenzene	22,000	2,100	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
1,2-Dichlorobenzene	1,900,000	16.5	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
1,3-Dichlorobenzene	- -	4,430	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
1,4-Dichlorobenzene	2,400	599	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
1,4-Dioxane	4,900	- -	ug/kg	690 U	830 U	560 U	580 U	560 U	630 U	590 U	370 U	540 U
1,4-Naphthoquinone	- -	- -	ug/kg	6,900 U	8,300 U	5,600 U	5,800 U	5,600 U	6,300 U	5,900 U	3,700 U	5,400 U
2,2'-Oxybis(1-Chloropropane)	4,600	- -	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
2,4,5-Trichlorophenol	6,100,000	- -	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
2,4,6-Trichlorophenol	44,000	213	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
2,4-Dichlorophenol	180,000	117	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
2,4-Dimethylphenol	1,200,000	29	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
2,4-Dinitrophenol	120,000	- -	ug/kg	2,100 U	2,500 U	1,700 U	1,700 U	1,700 U	1,900 U	1,800 U	1,100 U	1,600 U
2,4-Dinitrotoluene	1,600	41.6	ug/kg	350 U	420 U	280 U	290 U	280 U	320 U	300 U	190 U	270 U
2,6-Dinitrotoluene	61,000	- -	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
2-Chloronaphthalene	6,300,000	- -	ug/kg	68 U	83 U	55 U	58 U	56 U	62 U	58 U	37 U	53 U
2-Chlorophenol	390,000	31.2	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
2-Methylnaphthalene	230,000	20.2	ug/kg	35 U	43 U	23 J	30 U	6 J	32 U	30 U	19 U	27 U
2-Methylphenol	3,100,000	- -	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
2-Nitroaniline	610,000	- -	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
2-Nitrophenol	- -	- -	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
3,3'-Dichlorobenzidine	1,100	127	ug/kg	690 U	830 U	560 U	580 U	560 U	630 U	590 U	370 U	540 U
3-Nitroaniline	- -	- -	ug/kg	350 U	420 U	280 U	290 U	280 U	320 U	300 U	190 U	270 U
4,6-Dinitro-2-methylphenol	4,900	- -	ug/kg	1,000 U	1,300 U	840 U	870 U	840 U	950 U	890 U	560 U	810 U
4-Bromophenyl-phenylether	- -	1,230	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
4-Chloro-3-Methylphenol	6,100,000	- -	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
4-Chloroaniline	2,400	- -	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
4-Chlorophenyl-phenylether	- -	- -	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
4-Methylphenol	6,100,000	670	ug/kg	69 U	72 J	56 U	47 J	56 U	73	59 U	37 U	54 U
4-Nitroaniline	24,000	- -	ug/kg	350 U	420 U	280 U	290 U	280 U	320 U	300 U	190 U	270 U
4-Nitrophenol	- -	- -	ug/kg	1,000 U	1,300 U	840 U	870 U	840 U	950 U	890 U	560 U	810 U
Acenaphthene	3,400,000	6.7	ug/kg	35 U	43 U	29 U	30 U	15 J	32 U	30 U	19 U	27 U
Acenaphthylene	- -	5.9	ug/kg	35 U	43 U	29 U	30 U	29 U	32 U	30 U	19 U	27 U
Acetophenone	7,800,000	- -	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
Anthracene	17,000,000	57.2	ug/kg	10 J	43 U	29 U	12 J	35	7 J	30 U	19 U	27 U
Atrazine	2,100	6.62	ug/kg	350 U	420 U	280 U	290 U	280 U	320 U	300 U	190 U	270 U
Benzaldehyde	7,800,000	- -	ug/kg	350 U	420 U	280 U	290 U	280 U	320 U	300 U	190 U	270 U
Benzo(a)anthracene	150	108	ug/kg	62	9 J	29 U	42	120	25 J	30 U	19 U	19 J
Benzo(a)pyrene	15	150	ug/kg	**73**	15 J	7 J	**48**	**150**	**25 J**	7 J	5 J	**21 J**
Benzo(b)fluoranthene	150	- -	ug/kg	110	25 J	7 J	72	**250**	43	6 J	8 J	31
Benzo(g,h,i)perylene	- -	170	ug/kg	59	17 J	29 U	40	120	20 J	6 J	6 J	17 J
Benzo(k)fluoranthene	1,500	240	ug/kg	40	43 U	6 J	25 J	81	23 J	7 J	5 J	17 J
Benzoic Acid	240,000,000	650	ug/kg	1,000 U	1,300 U	840 U	870 U	840 U	950 U	890 U	560 U	810 U
Benzyl Alcohol	6,100,000	- -	ug/kg	1,000 U	1,300 U	840 U	870 U	840 U	950 U	890 U	560 U	810 U
bis(2-Chloroethoxy)methane	180,000	- -	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
bis(2-Chloroethyl)ether	210	- -	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
bis(2-Ethylhexyl)phthalate	35,000	180	ug/kg	350 U	430 U	290 U	300 U	290 U	320 U	300 U	190 U	270 U
Butylbenzylphthalate	260,000	10,900	ug/kg	350 U	420 U	280 U	290 U	280 U	320 U	300 U	190 U	270 U
Caprolactam	31,000,000	- -	ug/kg	350 U	420 U	280 U	290 U	280 U	320 U	300 U	190 U	270 U
Carbazole	- -	- -	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
Chrysene	15,000	166	ug/kg	71	17 J	7 J	44	160	38	30 U	5 J	27
Dibenzo(a,h)anthracene	15	33	ug/kg	**16 J**	43 U	29 U	30 U	**20 J**	11 J	30 U	19 U	27 U
Dibenzofuran	78,000	415	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
Diethylphthalate	49,000,000	603	ug/kg	350 U	420 U	280 U	290 U	280 U	320 U	300 U	190 U	270 U
Dimethylphthalate	- -	- -	ug/kg	350 U	420 U	280 U	290 U	280 U	320 U	300 U	190 U	270 U
Di-n-Butylphthalate	6,100,000	6,470	ug/kg	350 U	420 U	280 U	290 U	280 U	320 U	300 U	190 U	270 U
Di-n-Octylphthalate	- -	- -	ug/kg	350 U	420 U	280 U	290 U	280 U	320 U	300 U	190 U	270 U
Fluoranthene	2,300,000	423	ug/kg	130	21 J	6 J	87	270	100	30 U	4 J	47
Fluorene	2,300,000	77.4	ug/kg	35 U	43 U	29 U	30 U	22 J	6 J	30 U	19 U	27 U
Hexachlorobenzene	300	20	ug/kg	35 U	43 U	29 U	30 U	29 U	32 U	30 U	19 U	27 U
Hexachlorobutadiene	6,200	- -	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-118 04/17/12 Sediment	SD-119 04/17/12 Sediment	SD-120 04/16/12 Sediment	SD-121 04/17/12 Sediment	SD-122 04/17/12 Sediment	SD-123 04/16/12 Sediment	SD-124 04/16/12 Sediment	SD-125 04/16/12 Sediment	SD-126 04/16/12 Sediment
Hexachlorocyclopentadiene	370,000	- -	ug/kg	1,000 U	1,300 U	840 U	870 U	840 U	950 U	890 U	560 U	810 U
Hexachloroethane	12,000	1,027	ug/kg	350 U	420 U	280 U	290 U	280 U	320 U	300 U	190 U	270 U
Indeno(1,2,3-cd)pyrene	150	17	ug/kg	55	15 J	29 U	28 J	120	19 J	30 U	5 J	18 J
Isophorone	510,000	- -	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
Naphthalene	3,600	176	ug/kg	8 J	43 U	37	14 J	14 J	32 U	30 U	19 U	27 U
Nitrobenzene	4,800	- -	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
N-Nitroso-di-n-propylamine	69	- -	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
N-Nitrosodiphenylamine	99,000	2,680	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
Pentachlorophenol	890	504	ug/kg	350 U	430 U	290 U	300 U	290 U	320 U	300 U	190 U	270 U
Phenanthrene	- -	204	ug/kg	43	43 U	10 J	53	140	76	30 U	19 U	18 J
Phenol	18,000,000	420	ug/kg	69 U	83 U	56 U	58 U	56 U	63 U	59 U	37 U	54 U
Pyrene	1,700,000	195	ug/kg	110	22 J	8 J	98	240	78	30 U	5 J	35

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-118 04/17/12 Sediment	SD-119 04/17/12 Sediment	SD-120 04/16/12 Sediment	SD-121 04/17/12 Sediment	SD-122 04/17/12 Sediment	SD-123 04/16/12 Sediment	SD-124 04/16/12 Sediment	SD-125 04/16/12 Sediment	SD-126 04/16/12 Sediment
SVOCs - TCLP												
1,1'-Biphenyl	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dioxane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Naphthoquinone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-Chloropropane)	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl-phenylether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic Acid	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butylbenzylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-Butylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-Octylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-118 04/17/12 Sediment	SD-119 04/17/12 Sediment	SD-120 04/16/12 Sediment	SD-121 04/17/12 Sediment	SD-122 04/17/12 Sediment	SD-123 04/16/12 Sediment	SD-124 04/16/12 Sediment	SD-125 04/16/12 Sediment	SD-126 04/16/12 Sediment
Inorganics												
Aluminum	77,000	- -	mg/kg	7,630	14,100	6,970	8,530	5,710	10,400	27,900	20,500	5,870
Antimony	31	2	mg/kg	4.03 U	5.04 U	3.28 U	3.46 U	3.38 U	3.73 U	3.57 U	2.26 U	3.17 U
Arsenic	0.39	9.8	mg/kg	**4.21**	**6.08**	**5.68**	**4.52**	**3.62**	**5**	**9.12**	**4.75**	**4.98**
Barium	15,000	- -	mg/kg	66.2	104	33.5	68.4	50.6	68	356	130	52.4
Beryllium	160	- -	mg/kg	0.493 J	0.809 J	0.543 J	0.555 J	0.412 J	0.542 J	1.74	0.866	0.576 J
Boron	16,000	- -	mg/kg	2.61 J	3.74 J	2.17 J	2.79 J	2.46 J	2.56 J	8.29 J	4.34 J	3.27 J
Cadmium	70	0.99	mg/kg	0.0665 J	1.26 U	0.82 U	0.102 J	0.103 J	0.056 J	0.207 J	0.566 U	0.117 J
Calcium	- -	- -	mg/kg	3,320	2,350	842	6,390	6,760	1,130	2,480	2,950	1,510
Chromium	- -	43.4	mg/kg	9.45	14.8	12	11.6	9.13	11.5	29.4	23	13.2
Cobalt	23	50	mg/kg	4.58	8.19	10.9	4.99	3.76	6.07	14.4	6.14	8.66
Copper	3,100	31.6	mg/kg	7.17	11.5	7.94	9.09	8.04	10.9	20.1	6.94	17.6
Iron	55,000	20,000	mg/kg	10,200	18,400	24,300	11,200	8,230	16,800	33,200	16,500	33,100
Lead	400	35.8	mg/kg	11.9	17.4	10.4	13.3	12.4	17.7	18.5	17.9	42.8
Magnesium	- -	- -	mg/kg	1,620	2,320	1,850	1,870	1,560	1,300	2,690	2,200	1,130
Manganese	1,800	460	mg/kg	164	187	192	77.2	88.7	66.3	**3,130**	448	307
Mercury	10	0.18	mg/kg	0.198 U	0.238 U	0.159 U	0.0127 J	0.0257 J	0.0196 J	0.0339 J	0.0165 J	0.153 U
Nickel	1,500	22.7	mg/kg	6.52	11.8	10.6	7.34	5.7	9.65	23.1	10.6	13.5
Potassium	- -	- -	mg/kg	1,290	1,970	923	1,430	903	1,300	3,640	2,350	1,180
Selenium	390	2	mg/kg	4.03 U	5.04 U	2.14 J	3.46 U	3.38 U	3.73 U	3.01 J	2.26 U	3.91
Silver	390	1	mg/kg	1.01 U	1.26 U	0.82 U	0.864 U	0.845 U	0.934 U	0.892 U	0.566 U	0.793 U
Sodium	- -	- -	mg/kg	66.4 J	108 J	34.7 J	78.2 J	71 J	98.3 J	84.6 J	76.3 J	59.8 J
Thallium	0.78	- -	mg/kg	6.04 U	7.56 U	4.92 U	5.18 U	5.07 U	5.6 U	5.35 U	3.39 U	4.76 U
Vanadium	- -	- -	mg/kg	10.4	18.4	12.7	11.8	9.34	14.5	46.3	32.8	15.2
Zinc	23,000	121	mg/kg	45.4	63.3	54.8	48.7	73.1	65.5	54	60.8	151
Inorganics-Filtered												
Aluminum	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-118 04/17/12 Sediment	SD-119 04/17/12 Sediment	SD-120 04/16/12 Sediment	SD-121 04/17/12 Sediment	SD-122 04/17/12 Sediment	SD-123 04/16/12 Sediment	SD-124 04/16/12 Sediment	SD-125 04/16/12 Sediment	SD-126 04/16/12 Sediment
Miscellaneous												
Bromide	- -	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	130,000	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	51.8	60.7	40.8	42.7	40.8	47.5	44.5	12.5	38.8
Sulfate	- -	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Herbicides												
2,2-Dichloropropionic Acid	1,800,000	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-T	610,000	12,300	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TP	490,000	675	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	690,000	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DB	490,000	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4-Chlorophenoxyacetic Acid	31,000	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Amino-3,5,6-Trichloropicolinic Acid	4,300,000	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dicamba	1,800,000	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorprop	- -	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dinoseb	61,000	0.611	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diuron	120,000	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endothall	1,200,000	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenuron	- -	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	61,000	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monuron	- -	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides												
4,4'-DDD	2,000	4.88	ug/kg	3.5 U	2.1 J	2.8 U	2.9 U	2.8 U	3.2 U	0.88 J	1.9 U	2.7 U
4,4'-DDE	1,400	3.16	ug/kg	2.8 J	2.7 J	2.8 U	1.9 J	3	3.2 U	1.5 J	1.9 U	2.7 U
4,4'-DDT	1,700	- -	ug/kg	3.5 U	4.3 U	2.8 U	2.9 U	2.8 U	3.2 U	1.7 J	1.9 U	2.7 U
Aldrin	29	2	ug/kg	1.2 J	2.1 U	1.4 U	1.4 U	1.4 U	1.6 U	1.5 U	0.94 U	1.3 U
Alpha-BHC	77	6	ug/kg	1.7 U	2.2	1.4 U	2	2.2	1.6 U	0.37 J	0.94 U	1.3 U
Alpha-Chlordane	- -	- -	ug/kg	0.77 J	0.47 J	1.4 U	0.3 J	1.4	1.6 U	1.5 U	0.94 U	1.3 U
Beta-BHC	270	5	ug/kg	8.2	9.7	3.2 U	3.3 U	2.6 J	3.6 U	3.4 U	2.1 U	3.1 U
Delta-BHC	- -	6,400	ug/kg	3.4 U	1.5 J	1.4 U	1.4 U	2.8 U	3.2 U	3 U	0.95 U	2.7 U
Dieldrin	30	1.9	ug/kg	3.5 U	4.3 U	2.8 U	2.9 U	2.8 U	3.2 U	3.1 U	1.9 U	1.2 J
Endosulfan I	- -	2.9	ug/kg	1.7 U	2.7	1.4 U	1.4 U	1.2 J	1.6 U	1.5 U	0.94 U	1.3 U
Endosulfan II	- -	14	ug/kg	3.5 U	3.4 J	2.8 U	2.9 U	2.8 U	3.2 U	3.1 U	1.9 U	2.7 U
Endosulfan Sulfate	- -	5.4	ug/kg	3.5 U	4.3 U	2.8 U	2.9 U	2.8 U	3.2 U	3.1 U	1.9 U	2.7 U
Endrin	18,000	2.22	ug/kg	3.5 U	4.3 U	2.8 U	2.9 U	2.8 U	3.2 U	3.1 U	1.9 U	2.7 U
Endrin Aldehyde	- -	- -	ug/kg	3.5 U	4.3 U	2.8 U	2.9 U	1.4 J	3.2 U	3.1 U	1.9 U	2.7 U
Endrin Ketone	- -	- -	ug/kg	3.7 U	4.6 U	3 U	3.1 U	3 U	3.4 U	3.2 U	2 U	2.9 U
Gamma-BHC (Lindane)	520	2.37	ug/kg	1.1 J	2.1 U	1.4 U	1.4 U	4.1	1.6 U	1.5 U	0.94 U	1.3 U
Gamma-Chlordane	- -	- -	ug/kg	3.4	2.1 U	1.4 U	1.4 J	3.2 U	1.6 U	9.7	0.94 U	1.3 U
Heptachlor	110	68	ug/kg	13	46	1.4 U	0.79 J	24	0.33 J	1.5 U	0.94 U	1.3 U
Heptachlor Epoxide	53	2.47	ug/kg	1.7 U	2.1 U	1.4 U	0.31 J	1.4 U	1.6 U	1.5 U	0.94 U	1.3 U
Methoxychlor	310,000	18.7	ug/kg	17 U	21 U	14 U	14 U	14 U	16 U	15 U	9.4 U	13 U
Simazine	4,100	- -	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	440	0.1	ug/kg	68 U	84 U	55 U	57 U	55 U	62 U	59 U	37 U	53 U

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-118 04/17/12 Sediment	SD-119 04/17/12 Sediment	SD-120 04/16/12 Sediment	SD-121 04/17/12 Sediment	SD-122 04/17/12 Sediment	SD-123 04/16/12 Sediment	SD-124 04/16/12 Sediment	SD-125 04/16/12 Sediment	SD-126 04/16/12 Sediment
Pesticides - TCLP												
4,4'-DDD	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-BHC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beta-BHC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta-BHC	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Ketone	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-BHC (Lindane)	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor Epoxide	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dioxins												
1,2,3,4,6,7,8-HpCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Radiochemistry												
Gross Alpha	- -	- -	pci/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/g	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-127 04/16/12 Sediment	STR5SD-30 04/16/12 Sediment	STR5SD-31 04/16/12 Sediment	STR5SD-53 04/16/12 Sediment	UnnamedBoils-SED 04/17/12 Sediment
PCBs								
Aroclor-1016	3,900	- -	ug/kg	4.6 U	5.1 U	5 U [4.7 U]	5 U	34 U
Aroclor-1221	140	- -	ug/kg	4.6 U	5.1 U	5 U [4.7 U]	5 U	34 U
Aroclor-1232	140	- -	ug/kg	4.6 U	5.1 U	5 U [4.7 U]	5 U	34 U
Aroclor-1242	220	- -	ug/kg	4.6 U	5.1 U	5 U [4.7 U]	5 U	34 U
Aroclor-1248	220	- -	ug/kg	4.6 U	5.1 U	5 U [4.7 U]	5 U	34 U
Aroclor-1254	220	- -	ug/kg	4.6 U	5.1 U	5 U [4.7 U]	5 U	34 U
Aroclor-1260	220	- -	ug/kg	4.6 U	8.1	5 U [4.4 J]	5 U	34 U
PCBs - TCLP								
Aroclor-1016	- -	- -	ug/L	NA	NA	NA	NA	NA
Aroclor-1221	- -	- -	ug/L	NA	NA	NA	NA	NA
Aroclor-1232	- -	- -	ug/L	NA	NA	NA	NA	NA
Aroclor-1242	- -	- -	ug/L	NA	NA	NA	NA	NA
Aroclor-1248	- -	- -	ug/L	NA	NA	NA	NA	NA
Aroclor-1254	- -	- -	ug/L	NA	NA	NA	NA	NA
Aroclor-1260	- -	- -	ug/L	NA	NA	NA	NA	NA
Volatile Organics								
1,1,1-Trichloroethane	8,700,000	30.2	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
1,1,2,2-Tetrachloroethane	560	1,360	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
1,1,2-trichloro-1,2,2-trifluoroethane	43,000,000	- -	ug/kg	17 U	14 U	15 U [14 U]	15 U	22 U
1,1,2-Trichloroethane	1,100	1,240	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
1,1-Dichloroethane	3,300	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
1,1-Dichloroethene	240,000	31	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
1,2,3-Trichlorobenzene	49,000	858	ug/kg	NA	7 U	8 U [7 U]	8 U	11 U
1,2,3-Trichloropropane	5	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
1,2,4-Trichlorobenzene	22,000	2,100	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
1,2,4-Trimethylbenzene	62,000	- -	ug/kg	NA	7 U	8 U [7 U]	8 U	11 U
1,2-Dibromo-3-chloropropane	5.4	- -	ug/kg	NA	7 U	8 U [7 U]	8 U	11 U
1,2-Dibromoethane	34	- -	ug/kg	NA	7 U	8 U [7 U]	8 U	11 U
1,2-Dichlorobenzene	1,900,000	16.5	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
1,2-Dichloroethane	430	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
1,2-Dichloropropane	940	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
1,3-Dichlorobenzene	- -	4,430	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
1,4-Dichlorobenzene	2,400	599	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
2-Butanone	28,000,000	- -	ug/kg	17 U	14 U	15 U [14 U]	15 U	22 U
2-Hexanone	210,000	- -	ug/kg	17 U	14 U	15 U [14 U]	15 U	22 U
4-Methyl-2-pentanone	5,300,000	- -	ug/kg	17 U	14 U	15 U [14 U]	15 U	22 U
Acetone	61,000,000	- -	ug/kg	64	45	22 J [16 J]	17 J	44 J
Benzene	1,100	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Bromodichloromethane	270	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Bromoform	62,000	654	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Bromomethane	7,300	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Carbon Disulfide	820,000	0.851	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Carbon Tetrachloride	610	64.2	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Chlorobenzene	290,000	8.42	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Chloroethane	15,000,000	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Chloroform	290	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Chloromethane	120,000	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
cis-1,2-Dichloroethene	160,000	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
cis-1,3-Dichloropropene	- -	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Cyclohexane	7,000,000	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Dibromochloromethane	680	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Dichlorodifluoromethane	94,000	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Ethylbenzene	5,400	1,100	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Isopropylbenzene	2,100,000	86	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
m&p-Xylene	- -	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Methyl acetate	78,000,000	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Methyl tert-butyl ether	43,000	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Methylcyclohexane	- -	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Methylene Chloride	56,000	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
o-Xylene	690,000	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Styrene	6,300,000	559	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Tetrachloroethene	22,000	468	ug/kg	9 U	7 U	8 U [7 U]	8 U	3 J
Toluene	5,000,000	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
trans-1,2-Dichloroethene	150,000	1,050	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
trans-1,3-Dichloropropene	- -	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Trichloroethene	910	96.9	ug/kg	9 U	2 J	4 J [3 J]	8 U	16
Trichlorofluoromethane	790,000	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Vinyl Chloride	60	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-127 04/16/12 Sediment	STR5SD-30 04/16/12 Sediment	STR5SD-31 04/16/12 Sediment	STR5SD-53 04/16/12 Sediment	UnnamedBoils-SED 04/17/12 Sediment
VOCs - TCLP								
1,1,1-Trichloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA
1,1,2-trichloro-1,2,2-trifluoroethane	- -	- -	ug/L	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA
1,1-Dichloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA
1,1-Dichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA
1,2,3-Trichloropropane	- -	- -	ug/L	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	- -	- -	ug/L	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	- -	- -	ug/L	NA	NA	NA	NA	NA
1,2-Dibromoethane	- -	- -	ug/L	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA
1,2-Dichloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA
1,2-Dichloropropane	- -	- -	ug/L	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA
2-Butanone	- -	- -	ug/L	NA	NA	NA	NA	NA
2-Hexanone	- -	- -	ug/L	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	- -	- -	ug/L	NA	NA	NA	NA	NA
Acetone	- -	- -	ug/L	NA	NA	NA	NA	NA
Benzene	- -	- -	ug/L	NA	NA	NA	NA	NA
Bromodichloromethane	- -	- -	ug/L	NA	NA	NA	NA	NA
Bromoform	- -	- -	ug/L	NA	NA	NA	NA	NA
Bromomethane	- -	- -	ug/L	NA	NA	NA	NA	NA
Carbon Disulfide	- -	- -	ug/L	NA	NA	NA	NA	NA
Carbon Tetrachloride	- -	- -	ug/L	NA	NA	NA	NA	NA
Chlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA
Chloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA
Chloroform	- -	- -	ug/L	NA	NA	NA	NA	NA
Chloromethane	- -	- -	ug/L	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	- -	- -	ug/L	NA	NA	NA	NA	NA
Cyclohexane	- -	- -	ug/L	NA	NA	NA	NA	NA
Dibromochloromethane	- -	- -	ug/L	NA	NA	NA	NA	NA
Dichlorodifluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA
Ethylbenzene	- -	- -	ug/L	NA	NA	NA	NA	NA
Isopropylbenzene	- -	- -	ug/L	NA	NA	NA	NA	NA
m&p-Xylene	- -	- -	ug/L	NA	NA	NA	NA	NA
Methyl acetate	- -	- -	ug/L	NA	NA	NA	NA	NA
Methyl tert-butyl ether	- -	- -	ug/L	NA	NA	NA	NA	NA
Methylcyclohexane	- -	- -	ug/L	NA	NA	NA	NA	NA
Methylene Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA
o-Xylene	- -	- -	ug/L	NA	NA	NA	NA	NA
Styrene	- -	- -	ug/L	NA	NA	NA	NA	NA
Tetrachloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA
Toluene	- -	- -	ug/L	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	- -	- -	ug/L	NA	NA	NA	NA	NA
Trichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA
Trichlorofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA
Vinyl Chloride	- -	- -	ug/L	NA	NA	NA	NA	NA

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-127 04/16/12 Sediment	STR5SD-30 04/16/12 Sediment	STR5SD-31 04/16/12 Sediment	STR5SD-53 04/16/12 Sediment	UnnamedBoils-SED 04/17/12 Sediment
Semivolatile Organics								
1,1'-Biphenyl	51,000	1,220	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
1,2,4-Trichlorobenzene	22,000	2,100	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
1,2-Dichlorobenzene	1,900,000	16.5	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
1,3-Dichlorobenzene	- -	4,430	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
1,4-Dichlorobenzene	2,400	599	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
1,4-Dioxane	4,900	- -	ug/kg	440 U	500 U	480 U [460 U]	490 U	680 U
1,4-Naphthoquinone	- -	- -	ug/kg	4,400 U	5,000 U	4,800 U [4,600 U]	4,900 U	6,800 U
2,2'-Oxybis(1-Chloropropane)	4,600	- -	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
2,4,5-Trichlorophenol	6,100,000	- -	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
2,4,6-Trichlorophenol	44,000	213	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
2,4-Dichlorophenol	180,000	117	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
2,4-Dimethylphenol	1,200,000	29	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
2,4-Dinitrophenol	120,000	- -	ug/kg	1,300 U	1,500 U	1,400 U [1,400 U]	1,500 U	2,100 U
2,4-Dinitrotoluene	1,600	41.6	ug/kg	220 U	250 U	240 U [230 U]	250 U	340 U
2,6-Dinitrotoluene	61,000	- -	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
2-Chloronaphthalene	6,300,000	- -	ug/kg	44 U	49 U	48 U [45 U]	49 U	68 U
2-Chlorophenol	390,000	31.2	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
2-Methylnaphthalene	230,000	20.2	ug/kg	23 U	25 U	24 U [23 U]	5 J	35 U
2-Methylphenol	3,100,000	- -	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
2-Nitroaniline	610,000	- -	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
2-Nitrophenol	- -	- -	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
3,3'-Dichlorobenzidine	1,100	127	ug/kg	440 U	500 U	480 U [460 U]	490 U	680 U
3-Nitroaniline	- -	- -	ug/kg	220 U	250 U	240 U [230 U]	250 U	340 U
4,6-Dinitro-2-methylphenol	4,900	- -	ug/kg	670 U	740 U	720 U [690 U]	740 U	1,000 U
4-Bromophenyl-phenylether	- -	1,230	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
4-Chloro-3-Methylphenol	6,100,000	- -	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
4-Chloroaniline	2,400	- -	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
4-Chlorophenyl-phenylether	- -	- -	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
4-Methylphenol	6,100,000	670	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
4-Nitroaniline	24,000	- -	ug/kg	220 U	250 U	240 U [230 U]	250 U	340 U
4-Nitrophenol	- -	- -	ug/kg	670 U	740 U	720 U [690 U]	740 U	1,000 U
Acenaphthene	3,400,000	6.7	ug/kg	23 U	25 U	5 J [11 J]	20 J	35 U
Acenaphthylene	- -	5.9	ug/kg	23 U	25 U	24 U [6 J]	25 U	35 U
Acetophenone	7,800,000	- -	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
Anthracene	17,000,000	57.2	ug/kg	23 U	25 U	15 J [32]	81	35 U
Atrazine	2,100	6.62	ug/kg	220 U	250 U	240 U [230 U]	250 U	340 U
Benzaldehyde	7,800,000	- -	ug/kg	220 U	250 U	240 U [230 U]	250 U	340 U
Benzo(a)anthracene	150	108	ug/kg	23 U	9 J	29 [57]	120	36
Benzo(a)pyrene	15	150	ug/kg	5 J	11 J	**30 [51]**	**95**	**47**
Benzo(b)fluoranthene	150	- -	ug/kg	5 J	11 J	32 [66]	120	60
Benzo(g,h,i)perylene	- -	170	ug/kg	8 J	12 J	19 J [39]	48	38
Benzo(k)fluoranthene	1,500	240	ug/kg	5 J	9 J	16 J [24]	64	35
Benzoic Acid	240,000,000	650	ug/kg	670 U	740 U	720 U [690 U]	740 U	1,000 U
Benzyl Alcohol	6,100,000	- -	ug/kg	670 U	740 U	720 U [690 U]	740 U	1,000 U
bis(2-Chloroethoxy)methane	180,000	- -	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
bis(2-Chloroethyl)ether	210	- -	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
bis(2-Ethylhexyl)phthalate	35,000	180	ug/kg	230 U	250 U	240 U [230 U]	250 U	350 U
Butylbenzylphthalate	260,000	10,900	ug/kg	220 U	250 U	240 U [230 U]	250 U	340 U
Caprolactam	31,000,000	- -	ug/kg	220 U	250 U	240 U [230 U]	250 U	340 U
Carbazole	- -	- -	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
Chrysene	15,000	166	ug/kg	5 J	11 J	35 [53]	110	47
Dibenzo(a,h)anthracene	15	33	ug/kg	23 U	5 J	5 J [11 J]	**16 J**	14 J
Dibenzofuran	78,000	415	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
Diethylphthalate	49,000,000	603	ug/kg	220 U	250 U	240 U [230 U]	250 U	340 U
Dimethylphthalate	- -	- -	ug/kg	220 U	250 U	240 U [230 U]	250 U	340 U
Di-n-Butylphthalate	6,100,000	6,470	ug/kg	220 U	250 U	240 U [230 U]	250 U	340 U
Di-n-Octylphthalate	- -	- -	ug/kg	220 U	250 U	240 U [230 U]	250 U	340 U
Fluoranthene	2,300,000	423	ug/kg	23 U	15 J	77 [110]	280	83
Fluorene	2,300,000	77.4	ug/kg	23 U	25 U	9 J [18 J]	29	35 U
Hexachlorobenzene	300	20	ug/kg	23 U	25 U	24 U [23 U]	25 U	35 U
Hexachlorobutadiene	6,200	- -	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-127 04/16/12 Sediment	STR5SD-30 04/16/12 Sediment	STR5SD-31 04/16/12 Sediment	STR5SD-53 04/16/12 Sediment	UnnamedBoils-SED 04/17/12 Sediment
Hexachlorocyclopentadiene	370,000	- -	ug/kg	670 U	740 U	720 U [690 U]	740 U	1,000 U
Hexachloroethane	12,000	1,027	ug/kg	220 U	250 U	240 U [230 U]	250 U	340 U
Indeno(1,2,3-cd)pyrene	150	17	ug/kg	6 J	9 J	17 J [33]	52	35
Isophorone	510,000	- -	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
Naphthalene	3,600	176	ug/kg	6 J	25 U	24 U [23 U]	25 U	35 U
Nitrobenzene	4,800	- -	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
N-Nitroso-di-n-propylamine	69	- -	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
N-Nitrosodiphenylamine	99,000	2,680	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
Pentachlorophenol	890	504	ug/kg	230 U	250 U	240 U [230 U]	250 U	350 U
Phenanthrene	- -	204	ug/kg	23 U	7 J	67 [110]	270	28 J
Phenol	18,000,000	420	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
Pyrene	1,700,000	195	ug/kg	23 U	17 J	70 [110]	210	76

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-127 04/16/12 Sediment	STR5SD-30 04/16/12 Sediment	STR5SD-31 04/16/12 Sediment	STR5SD-53 04/16/12 Sediment	UnnamedBoils-SED 04/17/12 Sediment
SVOCs - TCLP								
1,1'-Biphenyl	- -	- -	ug/L	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA
1,4-Dioxane	- -	- -	ug/L	NA	NA	NA	NA	NA
1,4-Naphthoquinone	- -	- -	ug/L	NA	NA	NA	NA	NA
2,2'-Oxybis(1-Chloropropane)	- -	- -	ug/L	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	- -	- -	ug/L	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	- -	- -	ug/L	NA	NA	NA	NA	NA
2,4-Dichlorophenol	- -	- -	ug/L	NA	NA	NA	NA	NA
2,4-Dimethylphenol	- -	- -	ug/L	NA	NA	NA	NA	NA
2,4-Dinitrophenol	- -	- -	ug/L	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	- -	- -	ug/L	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	- -	- -	ug/L	NA	NA	NA	NA	NA
2-Chloronaphthalene	- -	- -	ug/L	NA	NA	NA	NA	NA
2-Chlorophenol	- -	- -	ug/L	NA	NA	NA	NA	NA
2-Methylnaphthalene	- -	- -	ug/L	NA	NA	NA	NA	NA
2-Methylphenol	- -	- -	ug/L	NA	NA	NA	NA	NA
2-Nitroaniline	- -	- -	ug/L	NA	NA	NA	NA	NA
2-Nitrophenol	- -	- -	ug/L	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	- -	- -	ug/L	NA	NA	NA	NA	NA
3-Nitroaniline	- -	- -	ug/L	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	- -	- -	ug/L	NA	NA	NA	NA	NA
4-Bromophenyl-phenylether	- -	- -	ug/L	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	- -	- -	ug/L	NA	NA	NA	NA	NA
4-Chloroaniline	- -	- -	ug/L	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	- -	- -	ug/L	NA	NA	NA	NA	NA
4-Methylphenol	- -	- -	ug/L	NA	NA	NA	NA	NA
4-Nitroaniline	- -	- -	ug/L	NA	NA	NA	NA	NA
4-Nitrophenol	- -	- -	ug/L	NA	NA	NA	NA	NA
Acenaphthene	- -	- -	ug/L	NA	NA	NA	NA	NA
Acenaphthylene	- -	- -	ug/L	NA	NA	NA	NA	NA
Acetophenone	- -	- -	ug/L	NA	NA	NA	NA	NA
Anthracene	- -	- -	ug/L	NA	NA	NA	NA	NA
Atrazine	- -	- -	ug/L	NA	NA	NA	NA	NA
Benzaldehyde	- -	- -	ug/L	NA	NA	NA	NA	NA
Benzo(a)anthracene	- -	- -	ug/L	NA	NA	NA	NA	NA
Benzo(a)pyrene	- -	- -	ug/L	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	- -	- -	ug/L	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	- -	- -	ug/L	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	- -	- -	ug/L	NA	NA	NA	NA	NA
Benzoic Acid	- -	- -	ug/L	NA	NA	NA	NA	NA
Benzyl Alcohol	- -	- -	ug/L	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	- -	- -	ug/L	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	- -	- -	ug/L	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	- -	- -	ug/L	NA	NA	NA	NA	NA
Butylbenzylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA
Caprolactam	- -	- -	ug/L	NA	NA	NA	NA	NA
Carbazole	- -	- -	ug/L	NA	NA	NA	NA	NA
Chrysene	- -	- -	ug/L	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	- -	- -	ug/L	NA	NA	NA	NA	NA
Dibenzofuran	- -	- -	ug/L	NA	NA	NA	NA	NA
Diethylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA
Dimethylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA
Di-n-Butylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA
Di-n-Octylphthalate	- -	- -	ug/L	NA	NA	NA	NA	NA
Fluoranthene	- -	- -	ug/L	NA	NA	NA	NA	NA
Fluorene	- -	- -	ug/L	NA	NA	NA	NA	NA
Hexachlorobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA
Hexachlorobutadiene	- -	- -	ug/L	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	- -	- -	ug/L	NA	NA	NA	NA	NA
Hexachloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	- -	- -	ug/L	NA	NA	NA	NA	NA
Isophorone	- -	- -	ug/L	NA	NA	NA	NA	NA
Naphthalene	- -	- -	ug/L	NA	NA	NA	NA	NA
Nitrobenzene	- -	- -	ug/L	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	- -	- -	ug/L	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	- -	- -	ug/L	NA	NA	NA	NA	NA
Pentachlorophenol	- -	- -	ug/L	NA	NA	NA	NA	NA
Phenanthrene	- -	- -	ug/L	NA	NA	NA	NA	NA
Phenol	- -	- -	ug/L	NA	NA	NA	NA	NA
Pyrene	- -	- -	ug/L	NA	NA	NA	NA	NA

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-127 04/16/12 Sediment	STR5SD-30 04/16/12 Sediment	STR5SD-31 04/16/12 Sediment	STR5SD-53 04/16/12 Sediment	UnnamedBoils-SED 04/17/12 Sediment
Inorganics								
Aluminum	77,000	- -	mg/kg	10,500	5,820	3,990 [5,040]	5,190	9,870
Antimony	31	2	mg/kg	2.58 U	2.89 U	2.86 U [2.72 U]	2.88 U	4.12 U
Arsenic	0.39	9.8	mg/kg	**4.34**	**3.41**	**1.77 J [3.23]**	**2.96**	**4.87**
Barium	15,000	- -	mg/kg	49.6	44.4	33 [39.5]	46.3	88
Beryllium	160	- -	mg/kg	0.607 J	0.428 J	0.293 J [0.369 J]	0.362 J	0.537 J
Boron	16,000	- -	mg/kg	4.83 J	2.08 J	1.75 J [2.21 J]	2.04 J	4.63 J
Cadmium	70	0.99	mg/kg	0.0387 J	0.0317 J	0.716 U [0.679 U]	0.0504 J	0.165 J
Calcium	- -	- -	mg/kg	59,900	1,990	4,000 [6,500]	1,220	4,710
Chromium	- -	43.4	mg/kg	12.6	10.1	4.91 [7.45]	7.87	12.2
Cobalt	23	50	mg/kg	9.89	4.29	2.73 [3.73]	3.24	5.79
Copper	3,100	31.6	mg/kg	12.9	4.65	3.24 [4.01]	4.75	10.2
Iron	55,000	20,000	mg/kg	30,100	10,900	6,090 [8,480]	8,140	12,800
Lead	400	35.8	mg/kg	10.4	12.5	6.72 [8.68]	10.6	16.2
Magnesium	- -	- -	mg/kg	4,690	1,660	1,020 [2,060]	1,160	2,030
Manganese	1,800	460	mg/kg	459	166	59.9 [147]	142	82.8
Mercury	10	0.18	mg/kg	0.128 U	0.139 U	0.139 U [0.129 U]	0.0927 J	0.196 U
Nickel	1,500	22.7	mg/kg	15.2	5.58	3.65 [5.2]	4.54	8.51
Potassium	- -	- -	mg/kg	1,880	896	646 [773]	916	1,340
Selenium	390	2	mg/kg	2.58 U	2.89 U	2.86 U [2.72 U]	2.88 U	4.12 U
Silver	390	1	mg/kg	0.645 U	0.721 U	0.716 U [0.679 U]	0.72 U	1.03 U
Sodium	- -	- -	mg/kg	49.3 J	26.7 J	29.5 J [22.4 J]	25.1 J	68.7 J
Thallium	0.78	- -	mg/kg	3.87 U	4.33 U	4.29 U [4.07 U]	4.32 U	**0.924 J**
Vanadium	- -	- -	mg/kg	12.3	11	6.11 [9.31]	8.03	12.5
Zinc	23,000	121	mg/kg	88.6	28.7	17.6 [23.9]	27	60.7
Inorganics-Filtered								
Aluminum	- -	- -	ug/L	NA	NA	NA	NA	NA
Antimony	- -	- -	ug/L	NA	NA	NA	NA	NA
Arsenic	- -	- -	ug/L	NA	NA	NA	NA	NA
Barium	- -	- -	ug/L	NA	NA	NA	NA	NA
Beryllium	- -	- -	ug/L	NA	NA	NA	NA	NA
Boron	- -	- -	ug/L	NA	NA	NA	NA	NA
Cadmium	- -	- -	ug/L	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA
Chromium	- -	- -	ug/L	NA	NA	NA	NA	NA
Cobalt	- -	- -	ug/L	NA	NA	NA	NA	NA
Copper	- -	- -	ug/L	NA	NA	NA	NA	NA
Iron	- -	- -	ug/L	NA	NA	NA	NA	NA
Lead	- -	- -	ug/L	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA
Mercury	- -	- -	ug/L	NA	NA	NA	NA	NA
Nickel	- -	- -	ug/L	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA
Selenium	- -	- -	ug/L	NA	NA	NA	NA	NA
Silver	- -	- -	ug/L	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA
Thallium	- -	- -	ug/L	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA
Zinc	- -	- -	ug/L	NA	NA	NA	NA	NA

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-127 04/16/12 Sediment	STR5SD-30 04/16/12 Sediment	STR5SD-31 04/16/12 Sediment	STR5SD-53 04/16/12 Sediment	UnnamedBoils-SED 04/17/12 Sediment
Miscellaneous								
Bromide	- -	- -	mg/kg	NA	7.4 U	7.2 U [6.9 U]	7.3 U	10.2 U
Chloride	- -	- -	mg/kg	NA	20.3	21.3 [23.7]	21.6	47.7
Nitrate-N	130,000	- -	mg/kg	NA	3.7	1.2 J [2.7]	3.1	3.1 U
Percent Moisture	- -	- -	%	25.5	32.7	31.5 [27.8]	32.6	NA
Sulfate	- -	- -	mg/kg	NA	14.4 J	54.3 [27.8]	15.4 J	48.6
Herbicides								
2,2-Dichloropropionic Acid	1,800,000	- -	ug/kg	NA	130 U	130 U [120 U]	130 U	190 U
2,4,5-T	610,000	12,300	ug/kg	NA	2.5 U	2.5 U [2.3 U]	2.5 U	3.5 U
2,4,5-TP	490,000	675	ug/kg	NA	2.5 U	2.5 U [2.3 U]	2.5 U	3.5 U
2,4-D	690,000	- -	ug/kg	NA	53 U	52 U [50 U]	53 U	74 U
2,4-DB	490,000	- -	ug/kg	NA	25 U	25 U [23 U]	25 U	35 U
2-Methyl-4-Chlorophenoxyacetic Acid	31,000	- -	ug/kg	NA	3,700 U	3,600 U [3,400 U]	3,700 U	5,100 U
4-Amino-3,5,6-Trichloropicolinic Acid	4,300,000	- -	ug/kg	NA	15 U	14 U [14 U]	15 U	100 U
Dicamba	1,800,000	- -	ug/kg	NA	18 U	17 U [17 U]	18 U	25 U
Dichlorprop	- -	- -	ug/kg	NA	25 U	25 U [23 U]	25 U	35 U
Dinoseb	61,000	0.611	ug/kg	NA	35 U	35 U [33 U]	35 U	49 U
Diuron	120,000	- -	ug/kg	NA	0.45 U	0.44 U [0.42 U]	0.45 U	0.62 U
Endothall	1,200,000	- -	ug/kg	NA	74 U	73 U [69 U]	74 U	100 U
Fenuron	- -	- -	ug/kg	NA	0.3 U	0.29 U [0.28 U]	0.3 U	0.41 U
MCPP	61,000	- -	ug/kg	NA	3,700 U	3,600 U [3,400 U]	3,700 U	5,100 U
Monuron	- -	- -	ug/kg	NA	0.3 U	0.29 U [0.28 U]	0.3 U	0.41 U
Pesticides								
4,4'-DDD	2,000	4.88	ug/kg	2.3 U	2.7	2.5 U [0.52 J]	2.5 U	3.5 U
4,4'-DDE	1,400	3.16	ug/kg	2.3 U	7.4	2.5 U [2.7]	2.5 U	3.5 U
4,4'-DDT	1,700	- -	ug/kg	2.3 U	2.4 J	2.5 U [2.3 J]	2.5 U	3.5 U
Aldrin	29	2	ug/kg	1.1 U	1.2 U	0.33 J [0.28 J]	1.2 U	0.63 J
Alpha-BHC	77	6	ug/kg	1.1 U	1.2 U	0.59 J [1.7]	1.2 U	1.7 U
Alpha-Chlordane	- -	- -	ug/kg	1.1 U	1.3	1.2 U [0.89 J]	1.2 U	1.7 U
Beta-BHC	270	5	ug/kg	2.5 U	2.8 U	2.8 U [2.6 U]	2.8 U	8.6 U
Delta-BHC	- -	6,400	ug/kg	1.1 U	1.2 U	2.4 U [2.3 U]	1.2 U	1.7 U
Dieldrin	30	1.9	ug/kg	2.3 U	2.5 U	2.5 U [2.3 U]	2.5 U	3.5 U
Endosulfan I	- -	2.9	ug/kg	1.1 U	1.2 U	1.2 U [1.1 U]	1.2 U	0.68 J
Endosulfan II	- -	14	ug/kg	2.3 U	2.5 U	2.5 U [2.3 U]	2.5 U	3.5 U
Endosulfan Sulfate	- -	5.4	ug/kg	2.3 U	2.5 U	2.5 U [2.3 U]	2.5 U	3.5 U
Endrin	18,000	2.22	ug/kg	2.3 U	2.5 U	2.5 U [2.3 U]	2.5 U	3.5 U
Endrin Aldehyde	- -	- -	ug/kg	2.3 U	2.5 U	2.5 U [2.3 U]	2.5 U	3.5 U
Endrin Ketone	- -	- -	ug/kg	2.4 U	2.7 U	2.6 U [2.5 U]	2.7 U	3.7 U
Gamma-BHC (Lindane)	520	2.37	ug/kg	1.1 U	1.2 U	1.2 U [1.1 U]	1.2 U	1.7 U
Gamma-Chlordane	- -	- -	ug/kg	1.1 U	1.2 U	1.2 U [1.1 U]	1.2 U	1.7 U
Heptachlor	110	68	ug/kg	1.1 U	1.2 U	1.2 U [1.1 U]	1.2 U	1.7 U
Heptachlor Epoxide	53	2.47	ug/kg	1.1 U	1.2 U	1.2 U [1.1 U]	1.2 U	1.7 U
Methoxychlor	310,000	18.7	ug/kg	11 U	12 U	12 U [11 U]	12 U	17 U
Simazine	4,100	- -	ug/kg	NA	98 U	96 U [91 U]	98 U	140 U
Toxaphene	440	0.1	ug/kg	44 U	49 U	48 U [45 U]	49 U	68 U

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-127 04/16/12 Sediment	STR5SD-30 04/16/12 Sediment	STR5SD-31 04/16/12 Sediment	STR5SD-53 04/16/12 Sediment	UnnamedBoils-SED 04/17/12 Sediment
Pesticides - TCLP								
4,4'-DDD	- -	- -	ug/L	NA	NA	NA	NA	NA
4,4'-DDE	- -	- -	ug/L	NA	NA	NA	NA	NA
4,4'-DDT	- -	- -	ug/L	NA	NA	NA	NA	NA
Aldrin	- -	- -	ug/L	NA	NA	NA	NA	NA
Alpha-BHC	- -	- -	ug/L	NA	NA	NA	NA	NA
Alpha-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA
Beta-BHC	- -	- -	ug/L	NA	NA	NA	NA	NA
Delta-BHC	- -	- -	ug/L	NA	NA	NA	NA	NA
Dieldrin	- -	- -	ug/L	NA	NA	NA	NA	NA
Endosulfan I	- -	- -	ug/L	NA	NA	NA	NA	NA
Endosulfan II	- -	- -	ug/L	NA	NA	NA	NA	NA
Endosulfan Sulfate	- -	- -	ug/L	NA	NA	NA	NA	NA
Endrin	- -	- -	ug/L	NA	NA	NA	NA	NA
Endrin Aldehyde	- -	- -	ug/L	NA	NA	NA	NA	NA
Endrin Ketone	- -	- -	ug/L	NA	NA	NA	NA	NA
Gamma-BHC (Lindane)	- -	- -	ug/L	NA	NA	NA	NA	NA
Gamma-Chlordane	- -	- -	ug/L	NA	NA	NA	NA	NA
Heptachlor	- -	- -	ug/L	NA	NA	NA	NA	NA
Heptachlor Epoxide	- -	- -	ug/L	NA	NA	NA	NA	NA
Methoxychlor	- -	- -	ug/L	NA	NA	NA	NA	NA
Toxaphene	- -	- -	ug/L	NA	NA	NA	NA	NA
Dioxins								
1,2,3,4,6,7,8-HpCDD	- -	- -	ng/kg	NA	393 B	48.7 B [23.7 B]	47.9 B	104 B
1,2,3,4,6,7,8-HpCDF	- -	- -	ng/kg	NA	65.4 B	3.77 BJ [1.9 BJ]	8.04 B	18.3 B
1,2,3,4,7,8,9-HpCDF	- -	- -	ng/kg	NA	4.72 BJ	0.285 BJ [0.165 BJ]	0.576 BJ	1.15 BJ
1,2,3,4,7,8-HxCDD	- -	- -	ng/kg	NA	3.3 BJ	0.604 BJ [0.404 BJ]	0.302 BJQ	1.44 BJ
1,2,3,4,7,8-HxCDF	- -	- -	ng/kg	NA	3.46 BJ	0.654 BJ [0.436 BJ]	0.321 BJ	1.19 BJ
1,2,3,6,7,8-HxCDD	- -	- -	ng/kg	NA	9.86 B	1.09 BJ [0.605 BJ]	0.988 BJ	3.07 BJ
1,2,3,6,7,8-HxCDF	- -	- -	ng/kg	NA	2.11 BJ	0.397 BJ [0.357 BJ]	0.254 BJQ	1.19 BJ
1,2,3,7,8,9-HxCDD	- -	- -	ng/kg	NA	6.85 BJ	1.13 BJ [1 BJ]	0.659 BJ	2.92 BJ
1,2,3,7,8,9-HxCDF	- -	- -	ng/kg	NA	0.65 BJ	0.0678 BJQ [6.89 U]	0.133 BJQ	0.307 BJ
1,2,3,7,8-PeCDD	- -	- -	ng/kg	NA	1.02 J	0.21 J [0.168 JQ]	0.11 JQ	0.654 J
1,2,3,7,8-PeCDF	- -	- -	ng/kg	NA	2.11 BJ	0.377 BJQ [0.261 BJ]	0.134 BJQ	0.519 BJ
2,3,4,6,7,8-HxCDF	- -	- -	ng/kg	NA	3.36 BJ	0.528 BJ [0.506 BJ]	0.303 BJ	1.39 BJ
2,3,4,7,8-PeCDF	- -	- -	ng/kg	NA	7.39 U	0.538 JQ [0.502 JQ]	0.0989 JQ	0.854 J
2,3,7,8-TCDD	- -	- -	ng/kg	NA	1 J	0.116 J [0.0672 JQ]	0.119 JQ	0.341 J
2,3,7,8-TCDF	- -	- -	ng/kg	NA	1.12 J	0.13 J [0.0465 JQ]	1.46 U	0.277 J
Octachlorodibenzofuran	- -	- -	ng/kg	NA	334 B	10.3 BJ [4.4 BJ]	35.9 B	58.4 B
Octachlorodibenzo-p-Dioxin	- -	- -	ng/kg	NA	9,040 EB	2,840 B [1,330 B]	1,710 B	3,750 B
Radiochemistry								
Gross Alpha	- -	- -	pci/g	NA	17.1	8.27 [8.92]	11.8	11.9
Gross Beta	- -	- -	pci/g	NA	16.6	17 [27.5]	6.73	26.5

Table A.7.5.4-6
Comprehensive Sediment Analytical Results
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Qualifier Type	Lab Qualifiers	Definition
Inorganic	J	Indicates an estimated value.
Inorganic	U	The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
Organic	B	Analyte was also detected in the associated method blank.
Organic	BJ	Analyte was also detected in the associated method blank. Indicates an estimated value.
Organic	BJQ	Analyte was also detected in the associated method blank. Indicates an estimated value.
Organic	EB	
Organic	J	Indicates an estimated value.
Organic	JQ	Indicates an estimated value.
Organic	U	The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
Organic	UJ	The compound was analyzed for but not detected. The associated value is the compound quantitation limit. Indicates an estimated value.

Table A.7.5.4-7
Surface Water Analytical Results (Detect-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	AWQC Human Health - Fish Ingestion + Drinking Water (bold)	AWQC Human Health - Fish Ingestion Only (shade)	Units	SW-103 04/19/12 Surface Water Samples	SW-104 04/19/12 Surface Water Samples	SW-105 04/19/12 Surface Water Samples	SW-101 04/19/12 Surface Water Samples
Detected PCBs							
None Detected	- -	- -	- -	NA	- -	- -	- -
Detected Volatile Organics							
1,1,1-Trichloroethane	- -	- -	ug/L	NA	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	330	7,100	ug/L	NA	0.5 U	0.5 U	0.5 U
Acetone	- -	- -	ug/L	NA	5 U	5 U	5 U
Chloroform	5.7	470	ug/L	NA	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	- -	- -	ug/L	NA	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.69	3.3	ug/L	NA	0.5 U	0.5 U	0.5 U
Toluene	1,300	15,000	ug/L	NA	0.5 U	0.5 U	0.5 U
Trichloroethene	2.5	30	ug/L	NA	0.5 U	NA	0.5 U
Trichlorofluoromethane	- -	- -	ug/L	NA	0.5 U	NA	0.5 U
Detected Semivolatile Organics							
Naphthalene	- -	- -	ug/L	0.5 U	0.5 U	NA	0.1 J
Detected Inorganics							
Aluminum	- -	- -	ug/L	166 J	200 U	NA	369
Arsenic	0.018	0.14	ug/L	2 U	2 U	NA	2 U
Barium	1,000	- -	ug/L	38.2	20.5	NA	36.3
Boron	- -	- -	ug/L	15.4 J	7.3 J	NA	6.5 J
Calcium	- -	- -	ug/L	11,100	7,610	NA	6,100
Chromium	- -	- -	ug/L	1.5 J	15 U	NA	1.4 J
Cobalt	- -	- -	ug/L	5 U	0.85 J	NA	5 U
Copper	1,300	- -	ug/L	10 U	10 U	NA	10 U
Iron	- -	- -	ug/L	833	196 J	NA	504
Lead	- -	- -	ug/L	7 J	2.4 J	NA	4.9 J
Magnesium	- -	- -	ug/L	6,120	3,420	NA	2,930
Manganese	50	100	ug/L	33.1	10.4	NA	11.2
Nickel	610	4,600	ug/L	1.1 J	10 U	NA	10 U
Potassium	- -	- -	ug/L	2,690	2,210	NA	2,160
Silver	- -	- -	ug/L	5 U	5 U	NA	5 U
Sodium	- -	- -	ug/L	23,700	13,700	NA	10,800
Vanadium	- -	- -	ug/L	5 U	5 U	NA	5 U
Zinc	7,400	26,000	ug/L	3.9 J	20 U	NA	7.5 J
Detected Inorganics-Filtered							
Aluminum	- -	- -	ug/L	200 U	180 J	NA	200 U
Arsenic	0.018	0.14	ug/L	2 U	2 U	NA	2 U
Barium	1,000	- -	ug/L	34.4	22.5	NA	31.7
Boron	- -	- -	ug/L	18 J	12.5 J	NA	7.7 J
Cadmium	- -	- -	ug/L	5 U	0.59 J	NA	5 U
Calcium	- -	- -	ug/L	10,900	7,510	NA	5,970
Chromium	- -	- -	ug/L	15 U	15 U	NA	15 U
Cobalt	- -	- -	ug/L	5 U	5 U	NA	5 U
Copper	1,300	- -	ug/L	10 U	2.8 J	NA	1.8 J
Iron	- -	- -	ug/L	404	460	NA	40.9 J
Lead	- -	- -	ug/L	3.4 B	15 U	NA	2.4 B
Magnesium	- -	- -	ug/L	6,030	3,370	NA	2,870
Manganese	50	100	ug/L	21.7	17.5	NA	2.9 J
Nickel	610	4,600	ug/L	0.99 J	10 U	NA	10 U
Potassium	- -	- -	ug/L	2,660	2,130	NA	2,060
Sodium	- -	- -	ug/L	23,700	13,400	NA	10,800
Vanadium	- -	- -	ug/L	5 U	5 U	NA	5 U
Zinc	7,400	26,000	ug/L	20 U	20 U	NA	20 U
Detected Pesticides							
Beta-BHC	0.0091	0.017	ug/L	0.0099 U	0.0038 J	NA	0.01 U

Table A.7.5.4-7
Surface Water Analytical Results (Detect-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	AWQC Human Health - Fish Ingestion + Drinking Water (bold)	AWQC Human Health - Fish Ingestion Only (shade)	Units	SW-102 04/19/12 Surface Water Samples	SW-103 04/19/12 Surface Water Samples	SW-105 04/19/12 Surface Water Samples	SW-106 04/18/12 Surface Water Samples
Detected PCBs							
None Detected	- -	- -	- -	- -	- -	NA	- -
Detected Volatile Organics							
1,1,1-Trichloroethane	- -	- -	ug/L	0.5 U	0.5 U	NA	0.5 U
1,1-Dichloroethene	330	7,100	ug/L	0.5 U	0.5 U	NA	0.5 U
Acetone	- -	- -	ug/L	5 U	5 U	NA	5 U
Chloroform	5.7	470	ug/L	0.5 U	0.5 U	NA	0.2 J
cis-1,2-Dichloroethene	- -	- -	ug/L	0.5 U	0.5 U	NA	0.5 U
Tetrachloroethene	0.69	3.3	ug/L	0.5 U	0.5 U	NA	0.5 U
Toluene	1,300	15,000	ug/L	0.5 U	0.5 U	NA	0.5 U
Trichloroethene	2.5	30	ug/L	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U
Detected Semivolatile Organics							
Naphthalene	- -	- -	ug/L	0.5 U	NA	0.5 U	0.5 U
Detected Inorganics							
Aluminum	- -	- -	ug/L	225	NA	200 U	200 U
Arsenic	0.018	0.14	ug/L	2 U	NA	2 U	2 U
Barium	1,000	- -	ug/L	25.7	NA	19.8	103
Boron	- -	- -	ug/L	3.6 J	NA	8.5 J	10 J
Calcium	- -	- -	ug/L	6,070	NA	7,710	73,500
Chromium	- -	- -	ug/L	1.3 J	NA	15 U	1.9 J
Cobalt	- -	- -	ug/L	5 U	NA	0.73 J	5 U
Copper	1,300	- -	ug/L	1.3 J	NA	1.3 J	10 U
Iron	- -	- -	ug/L	414	NA	263	21.3 J
Lead	- -	- -	ug/L	7.4 J	NA	15 U	4.7 J
Magnesium	- -	- -	ug/L	2,380	NA	3,400	15,700
Manganese	50	100	ug/L	10.3	NA	8.2	4.1 J
Nickel	610	4,600	ug/L	10 U	NA	10 U	10 U
Potassium	- -	- -	ug/L	1,770	NA	2,200	3,050
Silver	- -	- -	ug/L	5 U	NA	5 U	5 U
Sodium	- -	- -	ug/L	8,750	NA	13,500	22,000
Vanadium	- -	- -	ug/L	5 U	NA	5 U	5 U
Zinc	7,400	26,000	ug/L	4.4 J	NA	20 U	4.8 J
Detected Inorganics-Filtered							
Aluminum	- -	- -	ug/L	200 U [200 U]	NA	200 U	200 U
Arsenic	0.018	0.14	ug/L	2 U [2 U]	NA	2 U	2 U
Barium	1,000	- -	ug/L	22.1 [22.6]	NA	19	99
Boron	- -	- -	ug/L	4.6 J [4.4 J]	NA	13.1 J	10.4 J
Cadmium	- -	- -	ug/L	5 U [5 U]	NA	5 U	5 U
Calcium	- -	- -	ug/L	6,080 [6,110]	NA	7,580	76,600
Chromium	- -	- -	ug/L	15 U [15 U]	NA	15 U	1.4 J
Cobalt	- -	- -	ug/L	5 U [5 U]	NA	5 U	5 U
Copper	1,300	- -	ug/L	10 U [10 U]	NA	1.3 J	1 J
Iron	- -	- -	ug/L	29.9 J [36.8 J]	NA	154 J	200 U
Lead	- -	- -	ug/L	15 U [15 U]	NA	15 U	3 B
Magnesium	- -	- -	ug/L	2,360 [2,370]	NA	3,340	15,700
Manganese	50	100	ug/L	1.7 J [1.9 J]	NA	5.6	3.2 J
Nickel	610	4,600	ug/L	10 U [10 U]	NA	10 U	10 U
Potassium	- -	- -	ug/L	1,740 [1,720]	NA	2,030	3,050
Sodium	- -	- -	ug/L	8,830 [8,940]	NA	13,200	21,500
Vanadium	- -	- -	ug/L	5 U [5 U]	NA	5 U	5 U
Zinc	7,400	26,000	ug/L	20 U [20 U]	NA	3.5 J	5.1 J
Detected Pesticides							
Beta-BHC	0.0091	0.017	ug/L	0.01 U	NA	0.011 U	0.01 U

Table A.7.5.4-7
Surface Water Analytical Results (Detect-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	AWQC Human Health - Fish Ingestion + Drinking Water (bold)	AWQC Human Health - Fish Ingestion Only (shade)	Units	SW-107 04/18/12 Surface Water Samples	SW-108 04/17/12 Surface Water Samples	SW-109 04/16/12 Surface Water Samples	SW-110 04/16/12 Surface Water Samples
Detected PCBs							
None Detected	- -	- -	- -	- -	- -	- -	- -
Detected Volatile Organics							
1,1,1-Trichloroethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	330	7,100	ug/L	0.5 U	0.5 U	0.5 U	0.5 U
Acetone	- -	- -	ug/L	5 U	5 U	5 U	5 U
Chloroform	5.7	470	ug/L	0.5 U	0.2 J	0.2 J	0.2 J
cis-1,2-Dichloroethene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.69	3.3	ug/L	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	1,300	15,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	2.5	30	ug/L	0.5 U	0.5 U	0.5 U	0.3 J
Trichlorofluoromethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 J
Detected Semivolatile Organics							
Naphthalene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U
Detected Inorganics							
Aluminum	- -	- -	ug/L	112 J	250	293	165 J
Arsenic	0.018	0.14	ug/L	2 U	2 U	2 U	2 U
Barium	1,000	- -	ug/L	27.3	74	70.9	67.3
Boron	- -	- -	ug/L	11.5 B	8 B	8.7 J	8.8 J
Calcium	- -	- -	ug/L	7,880	47,300	50,300	49,600
Chromium	- -	- -	ug/L	15 U	15 U	15 U	15 U
Cobalt	- -	- -	ug/L	5 U	5 U	5 U	5 U
Copper	1,300	- -	ug/L	1.9 B	10 U	10 U	1.2 J
Iron	- -	- -	ug/L	246	386	473 J	266 J
Lead	- -	- -	ug/L	5.1 J	5.3 J	3.3 J	7.7 J
Magnesium	- -	- -	ug/L	3,330	10,900	10,200	11,400
Manganese	50	100	ug/L	11.2	19.4	20.6 J	13.2 J
Nickel	610	4,600	ug/L	10 U	1.2 J	10 U	10 U
Potassium	- -	- -	ug/L	2,160	3,290	3,130	2,940
Silver	- -	- -	ug/L	5 U	5 U	5 U	5 U
Sodium	- -	- -	ug/L	12,100	20,600	20,000	19,400
Vanadium	- -	- -	ug/L	5 U	5 U	5 U	5 U
Zinc	7,400	26,000	ug/L	20 U	4.1 J	6.6 J	4.2 J
Detected Inorganics-Filtered							
Aluminum	- -	- -	ug/L	200 U	200 U	200 U	200 U
Arsenic	0.018	0.14	ug/L	2 U	2 U	2 U	2 U
Barium	1,000	- -	ug/L	27.1	67.4	66.3	62.5
Boron	- -	- -	ug/L	5.8 J	7.4 J	8.9 J	8.3 J
Cadmium	- -	- -	ug/L	5 U	5 U	5 U	5 U
Calcium	- -	- -	ug/L	7,870	47,200	51,600	52,900
Chromium	- -	- -	ug/L	15 U	15 U	15 U	15 U
Cobalt	- -	- -	ug/L	5 U	5 U	5 U	5 U
Copper	1,300	- -	ug/L	10 U	10 U	10 U	10 U
Iron	- -	- -	ug/L	105 J	53.3 J	52.3 J	37.8 J
Lead	- -	- -	ug/L	5.8 B	15 U	15 U	15 U
Magnesium	- -	- -	ug/L	3,310	10,700	10,500	11,200
Manganese	50	100	ug/L	9.3	13	12.5 J	9.5 J
Nickel	610	4,600	ug/L	10 U	10 U	10 U	10 U
Potassium	- -	- -	ug/L	2,150	3,150	3,060	2,900
Sodium	- -	- -	ug/L	12,100	20,200	20,300	19,300
Vanadium	- -	- -	ug/L	5 U	5 U	5 U	5 U
Zinc	7,400	26,000	ug/L	3.6 J	20 U	4.1 J	3.6 J
Detected Pesticides							
Beta-BHC	0.0091	0.017	ug/L	0.0098 U	0.0099 U	0.0099 U	0.01 U

Table A.7.5.4-7
Surface Water Analytical Results (Detect-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	AWQC Human Health - Fish Ingestion + Drinking Water (bold)	AWQC Human Health - Fish Ingestion Only (shade)	Units	SW-111 04/16/12 Surface Water Samples	SW-112 04/18/12 Surface Water Samples	SW-113 04/17/12 Surface Water Samples	SW-114 04/17/12 Surface Water Samples
Detected PCBs							
None Detected	- -	- -	- -	- -	- -	- -	- -
Detected Volatile Organics							
1,1,1-Trichloroethane	- -	- -	ug/L	0.5 U	0.1 J	0.5 U	0.5 U
1,1-Dichloroethene	330	7,100	ug/L	0.5 U	0.4 J	0.5 U	0.1 J
Acetone	- -	- -	ug/L	5.2	5 U	5 U	5 U
Chloroform	5.7	470	ug/L	0.5 U	1.1	0.2 J	0.4 J
cis-1,2-Dichloroethene	- -	- -	ug/L	0.5 U	0.6	0.5 U	0.5 U
Tetrachloroethene	0.69	3.3	ug/L	0.5 U	0.5 J	0.5 U	0.1 J
Toluene	1,300	15,000	ug/L	0.5	0.5 U	0.5 U	0.5 U
Trichloroethene	2.5	30	ug/L	0.5 U	**5.5**	0.5 J	1.2
Trichlorofluoromethane	- -	- -	ug/L	0.5 U	2.2	0.6	1
Detected Semivolatile Organics							
Naphthalene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U
Detected Inorganics							
Aluminum	- -	- -	ug/L	487	200 U	156 J	149 J
Arsenic	0.018	0.14	ug/L	**1.7 B**	2 U	2 U	2 U
Barium	1,000	- -	ug/L	46.6	59	69.4	71.6
Boron	- -	- -	ug/L	13.8 J	11 J	8.5 B	8.9 B
Calcium	- -	- -	ug/L	34,700	58,600	49,900	53,600
Chromium	- -	- -	ug/L	15 U	15 U	15 U	15 U
Cobalt	- -	- -	ug/L	5 U	5 U	5 U	5 U
Copper	1,300	- -	ug/L	2.7 J	10 U	1 B	10 U
Iron	- -	- -	ug/L	1,360 J	37.1 J	268	205
Lead	- -	- -	ug/L	3.3 J	5.9 J	5.1 J	6.6 J
Magnesium	- -	- -	ug/L	13,100	16,300	11,900	12,900
Manganese	50	100	ug/L	**248 J**	2.1 J	14.6	11.7
Nickel	610	4,600	ug/L	10 U	10 U	10 U	10 U
Potassium	- -	- -	ug/L	8,660	1,700	2,780	2,510
Silver	- -	- -	ug/L	5 U	5 U	5 U	5 U
Sodium	- -	- -	ug/L	7,010	10,500	18,800	17,200
Vanadium	- -	- -	ug/L	2.5 J	5 U	5 U	5 U
Zinc	7,400	26,000	ug/L	9.8 J	5.3 J	20 U	4.3 J
Detected Inorganics-Filtered							
Aluminum	- -	- -	ug/L	200 U	200 U	200 U	200 U
Arsenic	0.018	0.14	ug/L	**1.5 J**	2 U	2 U	2 U
Barium	1,000	- -	ug/L	40.7	58.7	65.7	67.5
Boron	- -	- -	ug/L	14.3 J	12.2 J	8.3 J	8.1 J
Cadmium	- -	- -	ug/L	5 U	5 U	5 U	5 U
Calcium	- -	- -	ug/L	38,400	62,200	50,500	50,400
Chromium	- -	- -	ug/L	15 U	1.1 J	15 U	15 U
Cobalt	- -	- -	ug/L	5 U	5 U	5 U	5 U
Copper	1,300	- -	ug/L	2.2 B	10 U	10 U	10 U
Iron	- -	- -	ug/L	577 J	200 U	43.4 J	22.9 J
Lead	- -	- -	ug/L	15 U	5.7 B	6.7 B	4.2 B
Magnesium	- -	- -	ug/L	12,500	16,300	11,700	13,100
Manganese	50	100	ug/L	**186 J**	1.6 J	10.7	8.7
Nickel	610	4,600	ug/L	10 U	10 U	10 U	10 U
Potassium	- -	- -	ug/L	8,220	1,660	2,720	2,480
Sodium	- -	- -	ug/L	6,760	10,500	18,400	17,500
Vanadium	- -	- -	ug/L	1 J	5 U	5 U	5 U
Zinc	7,400	26,000	ug/L	3.5 J	4.7 J	20 U	4.7 J
Detected Pesticides							
Beta-BHC	0.0091	0.017	ug/L	0.01 U	0.011 U	0.0099 U	0.01 U

Table A.7.5.4-7
Surface Water Analytical Results (Detect-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	AWQC Human Health - Fish Ingestion + Drinking Water (bold)	AWQC Human Health - Fish Ingestion Only (shade)	Units	SW-115 04/17/12 Surface Water Samples	SW-116 04/17/12 Surface Water Samples	V-117/Hospital Spri 04/17/12 Named Springs	SW-118 04/17/12 Surface Water Samples
Detected PCBs							
None Detected	- -	- -	- -	- -	- -	- -	- -
Detected Volatile Organics							
1,1,1-Trichloroethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	330	7,100	ug/L	0.2 J	0.2 J	0.5 U	0.2 J
Acetone	- -	- -	ug/L	5 U	5 U	5 U	5 U
Chloroform	5.7	470	ug/L	0.6	0.6	2.8	0.7
cis-1,2-Dichloroethene	- -	- -	ug/L	0.2 J	0.2 J	0.5 U	0.1 J
Tetrachloroethene	0.69	3.3	ug/L	0.2 J	0.2 J	0.5 U	0.1 J
Toluene	1,300	15,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	2.5	30	ug/L	2	2.2	0.3 J	1.6
Trichlorofluoromethane	- -	- -	ug/L	1.2	1.2	0.5 J	0.9
Detected Semivolatile Organics							
Naphthalene	- -	- -	ug/L	0.5 U	0.5 U	0.1 J	0.5 U
Detected Inorganics							
Aluminum	- -	- -	ug/L	128 J	137 J	200 U	82.7 J
Arsenic	0.018	0.14	ug/L	2 U	2 U	2 U	2 U
Barium	1,000	- -	ug/L	66.8	67.6	68.4	66.6
Boron	- -	- -	ug/L	8.1 B	9.1 B	11.9 J	8.7 J
Calcium	- -	- -	ug/L	54,600	54,500	89,300	60,800
Chromium	- -	- -	ug/L	15 U	15 U	15 U	15 U
Cobalt	- -	- -	ug/L	0.65 J	5 U	5 U	5 U
Copper	1,300	- -	ug/L	10 U	10 U	10 U	0.94 J
Iron	- -	- -	ug/L	191 J	191 J	20 J	126 J
Lead	- -	- -	ug/L	6.3 J	5.9 J	7.8 J	7.8 J
Magnesium	- -	- -	ug/L	13,000	12,800	12,300	13,100
Manganese	50	100	ug/L	10.8	10.7	1.5 J	9.9 J
Nickel	610	4,600	ug/L	10 U	10 U	10 U	10 U
Potassium	- -	- -	ug/L	2,440	2,370	2,260	2,290
Silver	- -	- -	ug/L	5 U	5 U	5 U	5 U
Sodium	- -	- -	ug/L	16,500	16,000	38,200	19,600
Vanadium	- -	- -	ug/L	5 U	5 U	5 U	5 U
Zinc	7,400	26,000	ug/L	3.7 J	3.7 J	20 U	3.5 J
Detected Inorganics-Filtered							
Aluminum	- -	- -	ug/L	200 U	200 U	200 U	200 U
Arsenic	0.018	0.14	ug/L	2 U	2 U	2 U	2 U
Barium	1,000	- -	ug/L	65.1	66.4	66.6	66
Boron	- -	- -	ug/L	7.8 J	7.8 J	11.1 J	8.6 J
Cadmium	- -	- -	ug/L	5 U	5 U	5 U	5 U
Calcium	- -	- -	ug/L	53,500	53,400	93,000	65,700
Chromium	- -	- -	ug/L	15 U	15 U	15 U	15 U
Cobalt	- -	- -	ug/L	5 U	5 U	5 U	5 U
Copper	1,300	- -	ug/L	10 U	10 U	10 U	10 U
Iron	- -	- -	ug/L	18.5 J	23.5 J	200 UJ	18.9 J
Lead	- -	- -	ug/L	4.1 B	5.8 B	3.2 B	2.9 B
Magnesium	- -	- -	ug/L	13,200	13,200	12,300	13,800
Manganese	50	100	ug/L	8.1	7.4	0.61 J	8.5 J
Nickel	610	4,600	ug/L	10 U	10 U	10 U	10 U
Potassium	- -	- -	ug/L	2,450	2,450	2,240	2,400
Sodium	- -	- -	ug/L	16,900	16,600	39,400	21,100
Vanadium	- -	- -	ug/L	5 U	5 U	5 U	5 U
Zinc	7,400	26,000	ug/L	4.4 J	4.5 J	6.6 J	20 U
Detected Pesticides							
Beta-BHC	0.0091	0.017	ug/L	0.01 U	0.0099 U	0.01 U	0.0099 U

Table A.7.5.4-7
Surface Water Analytical Results (Detect-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	AWQC Human Health - Fish Ingestion + Drinking Water (bold)	AWQC Human Health - Fish Ingestion Only (shade)	Units	SW-119 04/17/12 Surface Water Samples	SW-120 04/16/12 Surface Water Samples	SW-121 04/17/12 Surface Water Samples	SW-122 04/17/12 Surface Water Samples
Detected PCBs							
None Detected	- -	- -	- -	- -	- -	- -	- -
Detected Volatile Organics							
1,1,1-Trichloroethane	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	330	7,100	ug/L	0.5 U	0.5 U	0.1 J	0.5 U
Acetone	- -	- -	ug/L	5 U	5 U	5 U	5 U
Chloroform	5.7	470	ug/L	0.1 J	0.5 U	0.7	0.5
cis-1,2-Dichloroethene	- -	- -	ug/L	0.5 U	0.5 U	0.1 J	0.5 U
Tetrachloroethene	0.69	3.3	ug/L	0.5 U	0.5 U	0.1 J	0.5 U
Toluene	1,300	15,000	ug/L	0.1 J	0.5 U	0.5 U	0.5 U
Trichloroethene	2.5	30	ug/L	0.3 J	0.5 U	1.5	0.9
Trichlorofluoromethane	- -	- -	ug/L	0.1 J	0.5 U	0.8	0.4 J
Detected Semivolatile Organics							
Naphthalene	- -	- -	ug/L	0.5 U	0.5 U	0.5 U	0.1 J
Detected Inorganics							
Aluminum	- -	- -	ug/L	249	89.7 J	103 J	220
Arsenic	0.018	0.14	ug/L	2 U	2 U	2 U	2 U
Barium	1,000	- -	ug/L	56.5	43	66.5	68.4
Boron	- -	- -	ug/L	15.2 J	18.6 J	8.6 J	10.5 J
Calcium	- -	- -	ug/L	51,200	19,800	56,500	61,400
Chromium	- -	- -	ug/L	15 U	15 U	15 U	15 U
Cobalt	- -	- -	ug/L	5 U	5 U	5 U	5 U
Copper	1,300	- -	ug/L	2 J	1 J	10 U	0.95 J
Iron	- -	- -	ug/L	488 J	207 J	154 J	338 J
Lead	- -	- -	ug/L	6.7 J	5 J	7.1 J	8.6 J
Magnesium	- -	- -	ug/L	9,020	6,330	12,700	12,900
Manganese	50	100	ug/L	**55.9 J**	13.2 J	12.2 J	18.9 J
Nickel	610	4,600	ug/L	1.2 J	1.2 J	10 U	10 U
Potassium	- -	- -	ug/L	2,800	2,710	2,360	2,530
Silver	- -	- -	ug/L	5 U	5 U	5 U	5 U
Sodium	- -	- -	ug/L	29,700	27,300	19,600	24,300
Vanadium	- -	- -	ug/L	5 U	5 U	5 U	5 U
Zinc	7,400	26,000	ug/L	4.6 J	20 U	3.7 J	5.1 J
Detected Inorganics-Filtered							
Aluminum	- -	- -	ug/L	200 U	200 U	200 U	200 U
Arsenic	0.018	0.14	ug/L	2 U	2 U	2 U	2 U
Barium	1,000	- -	ug/L	52.6	42.7	67.7	61.6
Boron	- -	- -	ug/L	14.9 J	19.5 J	9.5 J	10.1 J
Cadmium	- -	- -	ug/L	5 U	5 U	5 U	5 U
Calcium	- -	- -	ug/L	50,000	19,800	63,100	66,100
Chromium	- -	- -	ug/L	15 U	15 U	15 U	15 U
Cobalt	- -	- -	ug/L	5 U	5 U	5 U	5 U
Copper	1,300	- -	ug/L	10 U	2.2 B	10 U	10 U
Iron	- -	- -	ug/L	78 J	50.3 J	22.4 J	200 UJ
Lead	- -	- -	ug/L	15 U	15 U	15 U	4.7 B
Magnesium	- -	- -	ug/L	9,000	6,370	12,800	12,500
Manganese	50	100	ug/L	**54.4 J**	11.2 J	10.7 J	14.4 J
Nickel	610	4,600	ug/L	10 U	10 U	10 U	10 U
Potassium	- -	- -	ug/L	2,760	2,630	2,210	2,380
Sodium	- -	- -	ug/L	28,700	30,600	19,900	25,800
Vanadium	- -	- -	ug/L	5 U	5 U	5 U	5 U
Zinc	7,400	26,000	ug/L	4.5 J	20 U	20 U	4.1 J
Detected Pesticides							
Beta-BHC	0.0091	0.017	ug/L	0.01 U	0.01 U	0.0099 U	0.0098 U

Table A.7.5.4-7
Surface Water Analytical Results (Detect-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	AWQC Human Health - Fish Ingestion + Drinking Water (bold)	AWQC Human Health - Fish Ingestion Only (shade)	Units	SW-123 04/16/12 Surface Water Samples	SW-124 04/16/12 Surface Water Samples	SW-126 04/16/12 Surface Water Samples	SW-127 04/16/12 Surface Water Samples
Detected PCBs							
None Detected	- -	- -	- -	- -	- -	- -	- -
Detected Volatile Organics							
1,1,1-Trichloroethane	- -	- -	ug/L	0.5 U	0.2 J	0.5 U	0.5 U
1,1-Dichloroethene	330	7,100	ug/L	0.5 U	0.5	0.5 U	0.5 U
Acetone	- -	- -	ug/L	5 U	5 U	5 U	5 U
Chloroform	5.7	470	ug/L	0.5 U	2.4	0.5 U	0.5 U
cis-1,2-Dichloroethene	- -	- -	ug/L	0.5 U	0.5 J	0.5 U	0.5 U
Tetrachloroethene	0.69	3.3	ug/L	0.5 U	0.5	0.5 U	0.5 U
Toluene	1,300	15,000	ug/L	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	2.5	30	ug/L	0.5 U	**11**	0.5 U	0.5 U
Trichlorofluoromethane	- -	- -	ug/L	0.5 U	2.6	0.5 U	0.5 U
Detected Semivolatile Organics							
Naphthalene	- -	- -	ug/L	0.5 U	0.1 J	0.1 J	0.5 U
Detected Inorganics							
Aluminum	- -	- -	ug/L	108 J	200 U	200 U	91 J
Arsenic	0.018	0.14	ug/L	2 U	2 U	2 U	2 U
Barium	1,000	- -	ug/L	39	93	40.4	38.4
Boron	- -	- -	ug/L	16.3 J	6.3 J	16.5 J	16.3 J
Calcium	- -	- -	ug/L	16,000	55,500	15,600	13,500
Chromium	- -	- -	ug/L	15 U	15 U	15 U	15 U
Cobalt	- -	- -	ug/L	5 U	5 U	5 U	5 U
Copper	1,300	- -	ug/L	1.7 J	0.96 J	2.6 J	1.1 J
Iron	- -	- -	ug/L	227 J	98.2 J	148 J	212 J
Lead	- -	- -	ug/L	5.4 J	9.5 J	7.5 J	7.4 J
Magnesium	- -	- -	ug/L	5,920	17,400	5,730	5,950
Manganese	50	100	ug/L	13.2 J	9.4 J	5.4 J	10.3 J
Nickel	610	4,600	ug/L	10 U	10 U	10 U	10 U
Potassium	- -	- -	ug/L	2,620	1,780	2,480	2,450
Silver	- -	- -	ug/L	5 U	5 U	0.98 J	5 U
Sodium	- -	- -	ug/L	29,000	18,800	27,500	27,600
Vanadium	- -	- -	ug/L	5 U	5 U	5 U	5 U
Zinc	7,400	26,000	ug/L	20 U	6.4 J	5.9 J	4.7 J
Detected Inorganics-Filtered							
Aluminum	- -	- -	ug/L	200 U	200 U	200 U	200 U
Arsenic	0.018	0.14	ug/L	2 U	2 U	2 U	2 U
Barium	1,000	- -	ug/L	39.1	47.4	38.2	36.9
Boron	- -	- -	ug/L	17.4 J	5.9 J	16.2 J	15.8 J
Cadmium	- -	- -	ug/L	5 U	5 U	5 U	5 U
Calcium	- -	- -	ug/L	16,400	56,000	15,300	14,000
Chromium	- -	- -	ug/L	15 U	15 U	15 U	15 U
Cobalt	- -	- -	ug/L	5 U	5 U	5 U	0.62 B
Copper	1,300	- -	ug/L	1.1 B	10 U	1.9 B	10 U
Iron	- -	- -	ug/L	48.2 J	200 UJ	19.7 J	200 UJ
Lead	- -	- -	ug/L	3.6 B	2.5 B	3.9 B	2.5 B
Magnesium	- -	- -	ug/L	6,060	16,800	5,620	6,180
Manganese	50	100	ug/L	11.6 J	2.8 J	2.8 J	2.9 J
Nickel	610	4,600	ug/L	10 U	10 U	10 U	10 U
Potassium	- -	- -	ug/L	2,530	1,590	2,440	2,490
Sodium	- -	- -	ug/L	30,400	18,100	29,100	28,800
Vanadium	- -	- -	ug/L	5 U	5 U	5 U	5 U
Zinc	7,400	26,000	ug/L	20 U	5.3 J	3.3 J	7 J
Detected Pesticides							
Beta-BHC	0.0091	0.017	ug/L	0.0096 U	0.01 U	0.01 U	0.01 U

Table A.7.5.4-7
Surface Water Analytical Results (Detect-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	AWQC Human Health - Fish Ingestion + Drinking Water (bold)	AWQC Human Health - Fish Ingestion Only (shade)	Units	SW-128 04/19/12 Surface Water Samples
Detected PCBs				
None Detected	- -	- -	- -	NA
Detected Volatile Organics				
1,1,1-Trichloroethane	- -	- -	ug/L	0.5 U
1,1-Dichloroethene	330	7,100	ug/L	0.5 U
Acetone	- -	- -	ug/L	5 U
Chloroform	5.7	470	ug/L	0.6
cis-1,2-Dichloroethene	- -	- -	ug/L	0.1 J
Tetrachloroethene	0.69	3.3	ug/L	0.1 J
Toluene	1,300	15,000	ug/L	0.5 U
Trichloroethene	2.5	30	ug/L	1.2
Trichlorofluoromethane	- -	- -	ug/L	0.4 J
Detected Semivolatile Organics				
Naphthalene	- -	- -	ug/L	NA
Detected Inorganics				
Aluminum	- -	- -	ug/L	NA
Arsenic	0.018	0.14	ug/L	NA
Barium	1,000	- -	ug/L	NA
Boron	- -	- -	ug/L	NA
Calcium	- -	- -	ug/L	NA
Chromium	- -	- -	ug/L	NA
Cobalt	- -	- -	ug/L	NA
Copper	1,300	- -	ug/L	NA
Iron	- -	- -	ug/L	NA
Lead	- -	- -	ug/L	NA
Magnesium	- -	- -	ug/L	NA
Manganese	50	100	ug/L	NA
Nickel	610	4,600	ug/L	NA
Potassium	- -	- -	ug/L	NA
Silver	- -	- -	ug/L	NA
Sodium	- -	- -	ug/L	NA
Vanadium	- -	- -	ug/L	NA
Zinc	7,400	26,000	ug/L	NA
Detected Inorganics-Filtered				
Aluminum	- -	- -	ug/L	NA
Arsenic	0.018	0.14	ug/L	NA
Barium	1,000	- -	ug/L	NA
Boron	- -	- -	ug/L	NA
Cadmium	- -	- -	ug/L	NA
Calcium	- -	- -	ug/L	NA
Chromium	- -	- -	ug/L	NA
Cobalt	- -	- -	ug/L	NA
Copper	1,300	- -	ug/L	NA
Iron	- -	- -	ug/L	NA
Lead	- -	- -	ug/L	NA
Magnesium	- -	- -	ug/L	NA
Manganese	50	100	ug/L	NA
Nickel	610	4,600	ug/L	NA
Potassium	- -	- -	ug/L	NA
Sodium	- -	- -	ug/L	NA
Vanadium	- -	- -	ug/L	NA
Zinc	7,400	26,000	ug/L	NA
Detected Pesticides				
Beta-BHC	0.0091	0.017	ug/L	NA

Table A.7.5.4-7
Surface Water Analytical Results (Detect-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Qualifier Type	Lab Qualifiers	Definition
Inorganic	B	Indicates an estimated value between the instrument detection limit and the Reporting Limit (RL).
Inorganic	J	Indicates an estimated value.
Inorganic	U	The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
Inorganic	UJ	The compound was analyzed for but not detected. The associated value is the compound quantitation limit. Indicates an estimated value.
Organic	J	Indicates an estimated value.
Organic	U	The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

Table A.7.5.4-8
Sediment Analytical Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	FTD72-SD-104 04/19/12 Sediment	FTD72-SD-105 04/19/12 Sediment	RISP-3-SED 04/20/12 Sediment	SD-101 04/19/12 Sediment	SD-102 04/19/12 Sediment	SD-103 04/19/12 Sediment
Detected PCBs									
Aroclor-1260	220	- -	ug/kg	25 U	23 U	26 U	22 U	22 U [21 U]	29 U
Detected PCBs - TCLP									
None Detected	- -	- -	- -	NA	NA	- -	NA	NA	NA
Detected Volatile Organics									
2-Butanone	28,000,000	- -	ug/kg	15 U	13 U	15 U	14 U	13 U [11 U]	16 U
Acetone	61,000,000	- -	ug/kg	120 J	72 J	110	38	61 [70]	62
Carbon Disulfide	820,000	0.851	ug/kg	7 U	6 U	2 J	7 U	7 U [6 U]	8 U
Chloroform	290	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U
cis-1,2-Dichloroethene	160,000	- -	ug/kg	7 U	6 U	7 U	7 U	7 U [6 U]	8 U
Tetrachloroethene	22,000	468	ug/kg	7 U	6 U	2 J	7 U	7 U [6 U]	8 U
Trichloroethene	910	96.9	ug/kg	7 U	6 U	14	7 U	7 U [6 U]	8 U
Detected VOCs - TCLP									
1,1,1-Trichloroethane	- -	- -	ug/L	NA	NA	0.2 J	NA	NA	NA
1,1-Dichloroethene	- -	- -	ug/L	NA	NA	0.6	NA	NA	NA
Chloroform	- -	- -	ug/L	NA	NA	1.7	NA	NA	NA
cis-1,2-Dichloroethene	- -	- -	ug/L	NA	NA	0.9	NA	NA	NA
Tetrachloroethene	- -	- -	ug/L	NA	NA	0.7	NA	NA	NA
Trichloroethene	- -	- -	ug/L	NA	NA	8.3	NA	NA	NA
Trichlorofluoromethane	- -	- -	ug/L	NA	NA	3.3	NA	NA	NA
Detected Semivolatile Organics									
2-Methylnaphthalene	230,000	20.2	ug/kg	25 U	24 U	9 J	22 U	22 U [4 J]	29 U
4-Methylphenol	6,100,000	670	ug/kg	50 U	46 U	51 U	43 U	43 U [41 U]	56 U
Acenaphthene	3,400,000	6.7	ug/kg	25 U	24 U	8 J	22 U	22 U [21 U]	29 U
Acenaphthylene	- -	5.9	ug/kg	25 U	24 U	13 J	22 U	22 U [21 U]	29 U
Anthracene	17,000,000	57.2	ug/kg	25 U	24 U	25 J	22 U	22 U [21 U]	29 U
Benzo(a)anthracene	150	108	ug/kg	18 J	5 J	76	6 J	10 J [4 J]	8 J
Benzo(a)pyrene	15	150	ug/kg	**19 J**	24 U	**84**	6 J	8 J [5 J]	7 J
Benzo(b)fluoranthene	150	- -	ug/kg	28	7 J	120	7 J	11 J [6 J]	14 J
Benzo(g,h,i)perylene	- -	170	ug/kg	15 J	5 J	55	5 J	7 J [5 J]	12 J
Benzo(k)fluoranthene	1,500	240	ug/kg	13 J	24 U	57	6 J	8 J [6 J]	10 J
Benzoic Acid	240,000,000	650	ug/kg	250 J	250 J	770 U	650 U	640 U [610 U]	390 J
Chrysene	15,000	166	ug/kg	24 J	6 J	98	8 J	8 J [5 J]	10 J
Dibenzo(a,h)anthracene	15	33	ug/kg	5 J	24 U	12 J	22 U	4 J [4 J]	8 J
Fluoranthene	2,300,000	423	ug/kg	46	7 J	170	7 J	13 J [21 U]	10 J
Fluorene	2,300,000	77.4	ug/kg	25 U	24 U	10 J	22 U	22 U [21 U]	29 U
Indeno(1,2,3-cd)pyrene	150	17	ug/kg	12 J	6 J	47	5 J	7 J [4 J]	12 J
Naphthalene	3,600	176	ug/kg	25 U	24 U	18 J	5 J	22 U [21 U]	29 U
Phenanthrene	- -	204	ug/kg	24 J	24 U	110	22 U	5 J [21 U]	29 U
Pyrene	1,700,000	195	ug/kg	40	9 J	160	22 U	12 J [6 J]	10 J
Detected SVOCs - TCLP									
Fluoranthene	- -	- -	ug/L	NA	NA	0.1 J	NA	NA	NA
Pyrene	- -	- -	ug/L	NA	NA	0.1 J	NA	NA	NA
Detected Inorganics									
Aluminum	77,000	- -	mg/kg	8,020	6,730	20,700	6,480	3,770 [4,110]	8,820
Antimony	31	2	mg/kg	2.86 U	2.75 U	1.71 J	2.61 U	2.53 U [2.43 U]	3.36 U
Arsenic	0.39	9.8	mg/kg	**1.13 J**	**1.15 J**	**6.36**	**4.55**	**3.76 [6.61]**	**5.21**
Barium	15,000	- -	mg/kg	65.4	53.4	145	74.4	34.1 [30.5]	71
Beryllium	160	- -	mg/kg	0.389 J	0.322 J	1.3	0.456 J	0.3 J [0.345 J]	0.461 J
Boron	16,000	- -	mg/kg	4.05 J	3.25 J	11.1	3.41 J	1.7 J [1.95 J]	2.89 J
Cadmium	70	0.99	mg/kg	0.714 U	0.688 U	0.0639 J	0.155 J	0.0911 J [0.124 J]	0.106 J
Calcium	- -	- -	mg/kg	615	606	15,200	519	293 [285]	1,070
Chromium	- -	43.4	mg/kg	9.13	10.9	27.2	11.3	7.55 [11.9]	8.41
Cobalt	23	50	mg/kg	6.54	5.39	19.7	7.43	4.88 [5.88]	8.96
Copper	3,100	31.6	mg/kg	6.41	6.98	19	9.87	6.03 [7.19]	7.27
Iron	55,000	20,000	mg/kg	15,200	11,900	35,300	18,600	13,500 [24,300]	18,600
Lead	400	35.8	mg/kg	13	10.4	60.3	13.8	9 [7.28]	11.4
Magnesium	- -	- -	mg/kg	1,550	1,330	2,570	1,550	1,220 [954]	1,830
Manganese	1,800	460	mg/kg	191	147	**2,030**	237	152 [148]	265
Mercury	10	0.18	mg/kg	0.143 U	0.138 U	0.0923 J	0.129 U	0.122 U [0.119 U]	0.165 U
Nickel	1,500	22.7	mg/kg	7.57	6.92	17.7	9.48	5.75 [8.06]	12.1
Potassium	- -	- -	mg/kg	1,230	1,040	2,530	1,370	639 [589]	1,020
Selenium	390	2	mg/kg	2.86 U	2.75 U	2.97 U	3.57	2.24 J [3.64]	2.68 J
Silver	390	1	mg/kg	0.714 U	0.688 U	0.372 J	0.651 U	0.633 U [0.607 U]	0.841 U
Sodium	- -	- -	mg/kg	40.2 J	35.5 J	53.5 J	39.5 J	20.1 J [17.5 J]	70.5 J
Thallium	0.78	- -	mg/kg	**1.63 J**	**0.858 J**	**5.09**	3.91 U	3.8 U [3.64 U]	5.04 U
Vanadium	- -	- -	mg/kg	10.5	9.69	42.9	10.6	5.94 [8.2]	9.11
Zinc	23,000	121	mg/kg	43.3	36.6	66.1	56.1	38.2 [44.1]	100
Detected Inorganics-Filtered									

Table A.7.5.4-8
Sediment Analytical Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	FTD72-SD-104 04/19/12 Sediment	FTD72-SD-105 04/19/12 Sediment	RISP-3-SED 04/20/12 Sediment	SD-101 04/19/12 Sediment	SD-102 04/19/12 Sediment	SD-103 04/19/12 Sediment
Aluminum	- -	- -	ug/L	NA	NA	1,380	NA	NA	NA
Barium	- -	- -	ug/L	NA	NA	69.7	NA	NA	NA
Boron	- -	- -	ug/L	NA	NA	12 J	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	65,000	NA	NA	NA
Chromium	- -	- -	ug/L	NA	NA	1.9 J	NA	NA	NA
Copper	- -	- -	ug/L	NA	NA	2.5 J	NA	NA	NA
Iron	- -	- -	ug/L	NA	NA	1,890	NA	NA	NA
Lead	- -	- -	ug/L	NA	NA	15 U	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	16,300	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	73.4	NA	NA	NA
Nickel	- -	- -	ug/L	NA	NA	0.95 J	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	1,900	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	10,600	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	2 J	NA	NA	NA
Zinc	- -	- -	ug/L	NA	NA	7.8 J	NA	NA	NA
Detected Miscellaneous									
Chloride	- -	- -	mg/kg	NA	NA	27.5	NA	NA	NA
Nitrate-N	130,000	- -	mg/kg	NA	NA	4.9	NA	NA	NA
Percent Moisture	- -	- -	%	32.7	28	34.7	24	23.3 [19.2]	41.7
Sulfate	- -	- -	mg/kg	NA	NA	17.2 J	NA	NA	NA
Detected Herbicides									
None Detected	- -	- -	- -	NA	NA	- -	NA	NA	NA
Detected Pesticides									
4,4'-DDD	2,000	4.88	ug/kg	2.5 U	2.4 U	2.6 U	2.2 U	2.2 U [2.1 U]	2.9 U
4,4'-DDE	1,400	3.16	ug/kg	2.5 U	2.4 U	2.6 U	2.2 U	2.2 U [2.1 U]	2.9 U
4,4'-DDT	1,700	- -	ug/kg	2.5 U	2.4 U	2.6 U	2.2 U	2.2 U [2.1 U]	2.9 U
Aldrin	29	2	ug/kg	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U [1 U]	1.4 U
Alpha-BHC	77	6	ug/kg	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U [1 U]	0.44 J
Alpha-Chlordane	- -	- -	ug/kg	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U [1 U]	0.45 J
Beta-BHC	270	5	ug/kg	2.8 U	2.6 U	2.9 U	2.5 U	2.5 U [2.4 U]	3.3 U
Delta-BHC	- -	6,400	ug/kg	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U [1 U]	1.4 U
Dieldrin	30	1.9	ug/kg	2.5 U	2.4 U	2.6 U	2.2 U	2.2 U [2.1 U]	2.9 U
Endosulfan I	- -	2.9	ug/kg	1.2 U	1.2 U	1.3 U	0.82 J	1.1 U [1 U]	1.4 U
Endosulfan II	- -	14	ug/kg	2.5 U	2.4 U	2.6 U	2.2 U	2.2 U [2.1 U]	2.9 U
Endrin	18,000	2.22	ug/kg	2.5 U	2.4 U	2.6 U	2.2 U	2.2 U [2.1 U]	2.9 U
Endrin Aldehyde	- -	- -	ug/kg	2.5 U	2.4 U	2.6 U	2.2 U	2.2 U [2.1 U]	2.9 U
Gamma-BHC (Lindane)	520	2.37	ug/kg	1.2 U	1.2 U	1.3 U	0.72 J	1.1 U [1 U]	0.41 J
Gamma-Chlordane	- -	- -	ug/kg	1.2 U	1.2 U	0.42 J	1.1 U	1.1 U [0.25 J]	1.4 U
Heptachlor	110	68	ug/kg	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U [1 U]	1.4 U
Heptachlor Epoxide	53	2.47	ug/kg	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U [1 U]	1.4 U
Methoxychlor	310,000	18.7	ug/kg	12 U	12 U	13 U	11 U	11 U [10 U]	14 U
Detected Pesticides - TCLP									
None Detected	- -	- -	- -	NA	NA	- -	NA	NA	NA
Detected Dioxins									
1,2,3,4,6,7,8-HpCDD	- -	- -	ng/kg	NA	NA	88.8 B	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	ng/kg	NA	NA	1.7 BJ	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	ng/kg	NA	NA	0.176 BJ	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	ng/kg	NA	NA	0.751 BJ	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	ng/kg	NA	NA	0.463 BJ	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	ng/kg	NA	NA	1.42 BJ	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	ng/kg	NA	NA	0.471 BJ	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	ng/kg	NA	NA	1.76 BJ	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	ng/kg	NA	NA	0.401 J	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	ng/kg	NA	NA	0.308 BJ	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	ng/kg	NA	NA	0.373 BJ	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	ng/kg	NA	NA	0.43 BJ	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	ng/kg	NA	NA	0.501 BJ	NA	NA	NA
2,3,7,8-TCDD	- -	- -	ng/kg	NA	NA	0.111 JQ	NA	NA	NA
2,3,7,8-TCDF	- -	- -	ng/kg	NA	NA	0.402 J	NA	NA	NA
Octachlorodibenzofuran	- -	- -	ng/kg	NA	NA	2.46 BJ	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	ng/kg	NA	NA	8,850 EB	NA	NA	NA
Detected Radiochemistry									
Gross Alpha	- -	- -	pci/g	NA	NA	13.7	NA	NA	NA
Gross Beta	- -	- -	pci/g	NA	NA	24.9	NA	NA	NA

Table A.7.5.4-8
Sediment Analytical Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-106 04/18/12 Sediment	SD-107 04/18/12 Sediment	SD-108 04/17/12 Sediment	SD-109 04/16/12 Sediment	SD-110 04/16/12 Sediment	SD-111 04/16/12 Sediment	SD-112 04/18/12 Sediment
Detected PCBs										
Aroclor-1260	220	- -	ug/kg	31 U	53 U	22 U	11 U	13 U	5.2 U	28 U
Detected PCBs - TCLP										
None Detected	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA
Detected Volatile Organics										
2-Butanone	28,000,000	- -	ug/kg	17 U	31 J	12 U	16 U	19 U	13 U	20 J
Acetone	61,000,000	- -	ug/kg	45	330	16 J	33	47	22 J	46 J
Carbon Disulfide	820,000	0.851	ug/kg	8 U	24 U	1 J	8 U	4 J	6 U	12 U
Chloroform	290	- -	ug/kg	8 U	24 U	6 U	8 U	9 U	6 U	12 U
cis-1,2-Dichloroethene	160,000	- -	ug/kg	8 U	24 U	6 U	8 U	9 U	6 U	12 U
Tetrachloroethene	22,000	468	ug/kg	8 U	24 U	6 U	8 U	9 U	6 U	12 U
Trichloroethene	910	96.9	ug/kg	8 U	24 U	6 U	8 U	5 J	6 U	12 U
Detected VOCs - TCLP										
1,1,1-Trichloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Chloroform	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Detected Semivolatile Organics										
2-Methylnaphthalene	230,000	20.2	ug/kg	31 U	52 U	21 U	27 U	31 U	26 U	28 U
4-Methylphenol	6,100,000	670	ug/kg	60 U	450	42 U	53 U	61 U	51 U	55 U
Acenaphthene	3,400,000	6.7	ug/kg	31 U	52 U	21 U	27 U	31 U	26 U	28 U
Acenaphthylene	- -	5.9	ug/kg	31 U	52 U	21 U	27 U	31 U	26 U	28 U
Anthracene	17,000,000	57.2	ug/kg	31 U	52 U	21 U	27 U	6 J	26 U	32
Benzo(a)anthracene	150	108	ug/kg	7 J	16 J	19 J	27 U	28 J	26 U	110
Benzo(a)pyrene	15	150	ug/kg	31 U	**16 J**	**24**	6 J	**39**	5 J	**65**
Benzo(b)fluoranthene	150	- -	ug/kg	10 J	24 J	32	9 J	68	9 J	100
Benzo(g,h,i)perylene	- -	170	ug/kg	10 J	22 J	24	7 J	41	9 J	41
Benzo(k)fluoranthene	1,500	240	ug/kg	8 J	18 J	19 J	6 J	21 J	6 J	49
Benzoic Acid	240,000,000	650	ug/kg	900 U	1,500 U	630 U	800 U	910 U	770 U	830 U
Chrysene	15,000	166	ug/kg	10 J	21 J	26	6 J	49	10 J	180
Dibenzo(a,h)anthracene	15	33	ug/kg	31 U	52 U	21 U	27 U	8 J	26 U	**19 J**
Fluoranthene	2,300,000	423	ug/kg	8 J	21 J	31	6 J	72	7 J	90
Fluorene	2,300,000	77.4	ug/kg	31 U	52 U	21 U	27 U	31 U	26 U	14 J
Indeno(1,2,3-cd)pyrene	150	17	ug/kg	10 J	21 J	20 J	7 J	34	5 J	37
Naphthalene	3,600	176	ug/kg	31 U	52 U	21 U	27 U	31 U	26 U	28 U
Phenanthrene	- -	204	ug/kg	7 J	52 U	13 J	27 U	24 J	6 J	79
Pyrene	1,700,000	195	ug/kg	9 J	24 J	29	8 J	69	8 J	75
Detected SVOCs - TCLP										
Fluoranthene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Pyrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Detected Inorganics										
Aluminum	77,000	- -	mg/kg	10,800	11,000	2,230	2,870	8,800	13,000	4,590
Antimony	31	2	mg/kg	3.63 U	6.03 U	2.49 U	3.11 U	3.68 U	2.99 U	3.3 U
Arsenic	0.39	9.8	mg/kg	**6.12**	**7.43**	**2.35 J**	**2.41 J**	**4**	**5.89**	**2.66 J**
Barium	15,000	- -	mg/kg	89.3	119	31	25	75.8	107	46
Beryllium	160	- -	mg/kg	0.91	0.693 J	0.248 J	0.294 J	0.567 J	0.919	0.343 J
Boron	16,000	- -	mg/kg	4.95 J	4.2 J	1.67 J	1.09 J	2.71 J	4.24 J	2.98 J
Cadmium	70	0.99	mg/kg	0.162 J	0.172 J	0.086 J	0.777 U	0.0589 J	0.748 U	0.122 J
Calcium	- -	- -	mg/kg	3,560	1,360	1,860	1,470	1,750	1,210	35,900
Chromium	- -	43.4	mg/kg	18.7	15.3	6.7	7.02	11.5	48.5	14.4
Cobalt	23	50	mg/kg	7.96	8.64	2.32	2.11	8.2	10.4	2.22
Copper	3,100	31.6	mg/kg	10.3	10.5	3.05	3.68	8.35	6.38	4.59
Iron	55,000	20,000	mg/kg	15,900	20,900	6,250	5,710	12,500	19,200	7,620
Lead	400	35.8	mg/kg	16.5	22.7	6.1	9.68	15.2	20.3	43.4
Magnesium	- -	- -	mg/kg	2,480	1,780	544	684	1,870	2,410	1,800
Manganese	1,800	460	mg/kg	198	225	61.1	65.8	201	205	46
Mercury	10	0.18	mg/kg	0.175 U	0.294 U	0.123 U	0.157 U	0.171 U	0.0178 J	0.165 U
Nickel	1,500	22.7	mg/kg	11.4	11.2	2.88	2.51	8.09	10.8	4.2
Potassium	- -	- -	mg/kg	1,260	1,940	445	520	1,540	1,880	615
Selenium	390	2	mg/kg	3.63 U	3.39 J	0.931 J	3.11 U	3.68 U	2.99 U	3.3 U
Silver	390	1	mg/kg	0.908 U	1.51 U	0.623 U	0.777 U	0.921 U	0.748 U	0.824 U
Sodium	- -	- -	mg/kg	66.4 J	97.4 J	25.8 J	22.5 J	44.1 J	41.7 J	44.7 J
Thallium	0.78	- -	mg/kg	5.45 U	9.05 U	3.74 U	4.66 U	5.52 U	4.49 U	4.94 U
Vanadium	- -	- -	mg/kg	22.5	17.8	5.7	5.08	12.6	27.6	8.7
Zinc	23,000	121	mg/kg	53.5	62.7	25.1	17.7	48.5	62.8	29.3
Detected Inorganics-Filtered										

Table A.7.5.4-8
Sediment Analytical Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-106 04/18/12 Sediment	SD-107 04/18/12 Sediment	SD-108 04/17/12 Sediment	SD-109 04/16/12 Sediment	SD-110 04/16/12 Sediment	SD-111 04/16/12 Sediment	SD-112 04/18/12 Sediment
Aluminum	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Barium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Boron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Chromium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Copper	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Iron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Lead	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Detected Miscellaneous										
Chloride	- -	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	130,000	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	45.5	67.8	22.1	37.5	45.7	35.1	40.5
Sulfate	- -	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA
Detected Herbicides										
None Detected	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA
Detected Pesticides										
4,4'-DDD	2,000	4.88	ug/kg	3.1 U	5.3 U	0.73 J	0.53 J	0.76 J	2.6 U	2.9 U
4,4'-DDE	1,400	3.16	ug/kg	1.1 J	5.3 U	2.2 U	0.54 J	3.1 U	0.76 J	0.72 J
4,4'-DDT	1,700	- -	ug/kg	3.1 U	5.3 U	2.2 U	2.7 U	3.1 U	2.6 U	0.69 J
Aldrin	29	2	ug/kg	1.5 U	2.6 U	8.6	2.3	1.5 U	1.3 U	**37**
Alpha-BHC	77	6	ug/kg	0.4 J	2.6 U	15 U	2.3	0.89 J	1.3 U	74 U
Alpha-Chlordane	- -	- -	ug/kg	0.77 J	2.6 U	1.1 U	1.3 U	1.5 U	1.3 U	1.4 U
Beta-BHC	270	5	ug/kg	3.5 U	5.9 U	13 U	2.2 J	3.5 U	2.9 U	30
Delta-BHC	- -	6,400	ug/kg	1.5 U	2.6 U	5.3 U	1.3 U	1.5 U	1.3 U	1.4 U
Dieldrin	30	1.9	ug/kg	3.1 U	5.3 U	4.2	2.7 U	3.1 U	2.6 U	3.6
Endosulfan I	- -	2.9	ug/kg	1.5 U	2.6 U	2.4	0.76 J	1.5 U	1.3 U	1.4 U
Endosulfan II	- -	14	ug/kg	3.1 U	5.3 U	2.2 U	2.7 U	3.1 U	2.6 U	2.9 U
Endrin	18,000	2.22	ug/kg	3.1 U	5.3 U	0.49 J	2.7 U	3.1 U	2.6 U	5
Endrin Aldehyde	- -	- -	ug/kg	3.1 U	5.3 U	1.1 J	2.7 U	3.1 U	2.6 U	2.9 U
Gamma-BHC (Lindane)	520	2.37	ug/kg	2.5	0.57 J	1.8	0.78 J	1.5 U	1.3 U	8.5
Gamma-Chlordane	- -	- -	ug/kg	1.5 U	2.6 U	0.25 J	1.3 U	1.4 J	1.3 U	1.4 U
Heptachlor	110	68	ug/kg	2.5	2.6 U	8.7	4.7	0.81 J	1.3 U	1.4 U
Heptachlor Epoxide	53	2.47	ug/kg	1.5 U	2.6 U	7.7	1.3 U	1.5 U	1.3 U	**59**
Methoxychlor	310,000	18.7	ug/kg	15 U	26 U	11 U	13 U	15 U	13 U	6 J
Detected Pesticides - TCLP										
None Detected	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA
Detected Dioxins										
1,2,3,4,6,7,8-HpCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
Detected Radiochemistry										
Gross Alpha	- -	- -	pci/g	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/g	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-8
Sediment Analytical Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-113 04/17/12 Sediment	SD-114 04/17/12 Sediment	SD-115 04/17/12 Sediment	SD-116 04/17/12 Sediment	SD-117 04/17/12 Sediment	SD-118 04/17/12 Sediment	SD-119 04/17/12 Sediment
Detected PCBs										
Aroclor-1260	220	- -	ug/kg	25 U	25 U	23 U	27 U	10 U	14 U	17 U
Detected PCBs - TCLP										
None Detected	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA
Detected Volatile Organics										
2-Butanone	28,000,000	- -	ug/kg	14 U	15 U	14 U	16 U	15 U	21 U	28 U
Acetone	61,000,000	- -	ug/kg	27 J	26 J	17 J	48	16 J	77	52 J
Carbon Disulfide	820,000	0.851	ug/kg	7 U	7 U	7 U	8 U	7 U	11 U	4 J
Chloroform	290	- -	ug/kg	7 U	7 U	7 U	8 U	3 J	11 U	14 U
cis-1,2-Dichloroethene	160,000	- -	ug/kg	7 U	7 U	7 U	8 U	7 U	11 U	14 U
Tetrachloroethene	22,000	468	ug/kg	7 U	7 U	7 U	8 U	7 U	11 U	14 U
Trichloroethene	910	96.9	ug/kg	7 U	2 J	7 U	3 J	7 U	2 J	14 U
Detected VOCs - TCLP										
1,1,1-Trichloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Chloroform	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Detected Semivolatile Organics										
2-Methylnaphthalene	230,000	20.2	ug/kg	25 U	25 U	23 U	27 U	19 J	35 U	43 U
4-Methylphenol	6,100,000	670	ug/kg	49 U	49 U	45 U	53 U	27 J	69 U	72 J
Acenaphthene	3,400,000	6.7	ug/kg	25 U	25 U	11 J	8 J	25 U	35 U	43 U
Acenaphthylene	- -	5.9	ug/kg	25 U	25 U	23 U	6 J	22 J	35 U	43 U
Anthracene	17,000,000	57.2	ug/kg	7 J	7 J	19 J	16 J	26	10 J	43 U
Benzo(a)anthracene	150	108	ug/kg	28	38	70	48	150	62	9 J
Benzo(a)pyrene	15	150	ug/kg	**23 J**	**45**	**61**	**48**	**150**	**73**	15 J
Benzo(b)fluoranthene	150	- -	ug/kg	26	53	87	60	**180**	110	25 J
Benzo(g,h,i)perylene	- -	170	ug/kg	21 J	44	45	41	84	59	17 J
Benzo(k)fluoranthene	1,500	240	ug/kg	16 J	37	33	38	73	40	43 U
Benzoic Acid	240,000,000	650	ug/kg	730 U	740 U	680 U	800 U	740 U	1,000 U	1,300 U
Chrysene	15,000	166	ug/kg	24 J	42	74	55	130	71	17 J
Dibenzo(a,h)anthracene	15	33	ug/kg	25 U	**28**	11 J	27 U	**31**	**16 J**	43 U
Fluoranthene	2,300,000	423	ug/kg	34	74	150	95	170	130	21 J
Fluorene	2,300,000	77.4	ug/kg	25 U	25 U	12 J	10 J	8 J	35 U	43 U
Indeno(1,2,3-cd)pyrene	150	17	ug/kg	19 J	38	42	38	83	55	15 J
Naphthalene	3,600	176	ug/kg	25 U	25 U	5 J	27 U	29	8 J	43 U
Phenanthrene	- -	204	ug/kg	15 J	34	90	56	77	43	43 U
Pyrene	1,700,000	195	ug/kg	31	64	120	80	160	110	22 J
Detected SVOCs - TCLP										
Fluoranthene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Pyrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Detected Inorganics										
Aluminum	77,000	- -	mg/kg	1,980	4,040	5,620	4,230	3,130	7,630	14,100
Antimony	31	2	mg/kg	2.93 U	2.95 U	2.7 U	3.19 U	2.93 U	4.03 U	5.04 U
Arsenic	0.39	9.8	mg/kg	**2.25 J**	**1.08 J**	**2.88**	**2.66 J**	**3.33**	**4.21**	**6.08**
Barium	15,000	- -	mg/kg	25.9	52	61.7	36.3	22.2	66.2	104
Beryllium	160	- -	mg/kg	0.25 J	0.265 J	0.408 J	0.241 J	0.34 J	0.493 J	0.809 J
Boron	16,000	- -	mg/kg	2.05 J	2.25 J	2.87 J	2.26 J	2.13 J	2.61 J	3.74 J
Cadmium	70	0.99	mg/kg	0.0658 J	0.407 J	0.137 J	0.083 J	0.0807 J	0.0665 J	1.26 U
Calcium	- -	- -	mg/kg	1,290	2,410	2,710	5,790	14,600	3,320	2,350
Chromium	- -	43.4	mg/kg	5.66	6.54	8.73	5.42	7.92	9.45	14.8
Cobalt	23	50	mg/kg	2.98	3.98	4.33	2.5	2.2	4.58	8.19
Copper	3,100	31.6	mg/kg	2.58	4.8	8.24	4.04	4	7.17	11.5
Iron	55,000	20,000	mg/kg	7,830	7,830	8,510	5,720	6,870	10,200	18,400
Lead	400	35.8	mg/kg	4.83	8.1	9.95	7.06	29.8	11.9	17.4
Magnesium	- -	- -	mg/kg	622	1,200	1,960	1,610	2,680	1,620	2,320
Manganese	1,800	460	mg/kg	61.2	152	67	90.7	41.5	164	187
Mercury	10	0.18	mg/kg	0.147 U	0.145 U	0.133 U	0.155 U	0.0398 J	0.198 U	0.238 U
Nickel	1,500	22.7	mg/kg	3.61	4.34	6.15	3.41	3.43	6.52	11.8
Potassium	- -	- -	mg/kg	469	761	926	557	529	1,290	1,970
Selenium	390	2	mg/kg	2.93 U	2.95 U	1.51 J	3.19 U	2.93 U	4.03 U	5.04 U
Silver	390	1	mg/kg	0.732 U	0.737 U	0.676 U	0.798 U	0.733 U	1.01 U	1.26 U
Sodium	- -	- -	mg/kg	21.9 J	49.1 J	40.4 J	35.9 J	66.8 J	66.4 J	108 J
Thallium	0.78	- -	mg/kg	0.707 J	4.42 U	**0.928 J**	4.79 U	4.4 U	6.04 U	7.56 U
Vanadium	- -	- -	mg/kg	6.24	7.36	9.45	5.44	6.78	10.4	18.4
Zinc	23,000	121	mg/kg	19.7	35.3	41	25.8	35.5	45.4	63.3
Detected Inorganics-Filtered										

Table A.7.5.4-8
Sediment Analytical Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-113 04/17/12 Sediment	SD-114 04/17/12 Sediment	SD-115 04/17/12 Sediment	SD-116 04/17/12 Sediment	SD-117 04/17/12 Sediment	SD-118 04/17/12 Sediment	SD-119 04/17/12 Sediment
Aluminum	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Barium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Boron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Chromium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Copper	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Iron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Lead	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Detected Miscellaneous										
Chloride	- -	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	130,000	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	33	33.5	27.5	38.6	32.5	51.8	60.7
Sulfate	- -	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA
Detected Herbicides										
None Detected	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA
Detected Pesticides										
4,4'-DDD	2,000	4.88	ug/kg	2.5 U	2.6 U	2.3 U	2.8 U	2.5 U	3.5 U	2.1 J
4,4'-DDE	1,400	3.16	ug/kg	2.5 U	2.6 U	2.3 U	2.8 U	2 J	2.8 J	2.7 J
4,4'-DDT	1,700	- -	ug/kg	2.5 U	2.6 U	2.3 U	2.8 U	0.69 J	3.5 U	4.3 U
Aldrin	29	2	ug/kg	1.2 U	1.2 U	0.95 J	1.1 J	1.2 U	1.2 J	2.1 U
Alpha-BHC	77	6	ug/kg	1.2 U	1.2 U	1.1 U	1.4 U	3.6	1.7 U	2.2
Alpha-Chlordane	- -	- -	ug/kg	1.2 U	1.2 U	1.1 U	1.4 U	1.1 J	0.77 J	0.47 J
Beta-BHC	270	5	ug/kg	8.2 U	2.9 U	2.7	3.6	2.8 U	8.2	9.7
Delta-BHC	- -	6,400	ug/kg	1.2 U	1.2 U	1.1 U	1.4 U	4 U	3.4 U	1.5 J
Dieldrin	30	1.9	ug/kg	2.5 U	2.6 U	0.62 J	2.2 J	2.5 U	3.5 U	4.3 U
Endosulfan I	- -	2.9	ug/kg	1.2 U	1.2 U	0.82 J	1.1 J	0.84 J	1.7 U	2.7
Endosulfan II	- -	14	ug/kg	2.5 U	2.6 U	2.3 U	2.8 U	2.5 U	3.5 U	3.4 J
Endrin	18,000	2.22	ug/kg	2.5 U	2.6 U	2.3 U	0.6 J	2.5 U	3.5 U	4.3 U
Endrin Aldehyde	- -	- -	ug/kg	2.5 U	2.6 U	2.3 U	2.8 U	2.5 U	3.5 U	4.3 U
Gamma-BHC (Lindane)	520	2.37	ug/kg	0.48 J	0.26 J	0.97 J	1.5	0.55 J	1.1 J	2.1 U
Gamma-Chlordane	- -	- -	ug/kg	1.2 U	1.2 U	1.1 U	1.4 U	1.4 U	3.4	2.1 U
Heptachlor	110	68	ug/kg	1.2 U	1.2 U	1.1 U	1.4 U	2.5	13	46
Heptachlor Epoxide	53	2.47	ug/kg	0.88 J	0.32 J	3	3.6	1.2 U	1.7 U	2.1 U
Methoxychlor	310,000	18.7	ug/kg	12 U	12 U	11 U	14 U	12 U	17 U	21 U
Detected Pesticides - TCLP										
None Detected	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA
Detected Dioxins										
1,2,3,4,6,7,8-HpCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
Detected Radiochemistry										
Gross Alpha	- -	- -	pci/g	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/g	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-8
Sediment Analytical Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-120 04/16/12 Sediment	SD-121 04/17/12 Sediment	SD-122 04/17/12 Sediment	SD-123 04/16/12 Sediment	SD-124 04/16/12 Sediment	SD-125 04/16/12 Sediment	SD-126 04/16/12 Sediment
Detected PCBs										
Aroclor-1260	220	- -	ug/kg	5.7 U	5.9 U	11 U	13 U	6.1 U	1.1 J	11 U
Detected PCBs - TCLP										
None Detected	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA
Detected Volatile Organics										
2-Butanone	28,000,000	- -	ug/kg	17 U	16 U	19 U	29 U	23 U	15 U	16 U
Acetone	61,000,000	- -	ug/kg	42	35	40	77	65	110	48
Carbon Disulfide	820,000	0.851	ug/kg	8 U	8 U	3 J	15 U	12 U	7 U	8 U
Chloroform	290	- -	ug/kg	8 U	8 U	10 U	15 U	12 U	7 U	8 U
cis-1,2-Dichloroethene	160,000	- -	ug/kg	8 U	8 U	10 U	15 U	3 J	7 U	8 U
Tetrachloroethene	22,000	468	ug/kg	8 U	8 U	10 U	15 U	6 J	7 U	8 U
Trichloroethene	910	96.9	ug/kg	8 U	8 U	10 U	15 U	54	7 U	8 U
Detected VOCs - TCLP										
1,1,1-Trichloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Chloroform	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Detected Semivolatile Organics										
2-Methylnaphthalene	230,000	20.2	ug/kg	23 J	30 U	6 J	32 U	30 U	19 U	27 U
4-Methylphenol	6,100,000	670	ug/kg	56 U	47 J	56 U	73	59 U	37 U	54 U
Acenaphthene	3,400,000	6.7	ug/kg	29 U	30 U	15 J	32 U	30 U	19 U	27 U
Acenaphthylene	- -	5.9	ug/kg	29 U	30 U	29 U	32 U	30 U	19 U	27 U
Anthracene	17,000,000	57.2	ug/kg	29 U	12 J	35	7 J	30 U	19 U	27 U
Benzo(a)anthracene	150	108	ug/kg	29 U	42	120	25 J	30 U	19 U	19 J
Benzo(a)pyrene	15	150	ug/kg	7 J	**48**	**150**	**25 J**	7 J	5 J	**21 J**
Benzo(b)fluoranthene	150	- -	ug/kg	7 J	72	**250**	43	6 J	8 J	31
Benzo(g,h,i)perylene	- -	170	ug/kg	29 U	40	120	20 J	6 J	6 J	17 J
Benzo(k)fluoranthene	1,500	240	ug/kg	6 J	25 J	81	23 J	7 J	5 J	17 J
Benzoic Acid	240,000,000	650	ug/kg	840 U	870 U	840 U	950 U	890 U	560 U	810 U
Chrysene	15,000	166	ug/kg	7 J	44	160	38	30 U	5 J	27
Dibenzo(a,h)anthracene	15	33	ug/kg	29 U	30 U	**20 J**	11 J	30 U	19 U	27 U
Fluoranthene	2,300,000	423	ug/kg	6 J	87	270	100	30 U	4 J	47
Fluorene	2,300,000	77.4	ug/kg	29 U	30 U	22 J	6 J	30 U	19 U	27 U
Indeno(1,2,3-cd)pyrene	150	17	ug/kg	29 U	28 J	120	19 J	30 U	5 J	18 J
Naphthalene	3,600	176	ug/kg	37	14 J	14 J	32 U	30 U	19 U	27 U
Phenanthrene	- -	204	ug/kg	10 J	53	140	76	30 U	19 U	18 J
Pyrene	1,700,000	195	ug/kg	8 J	98	240	78	30 U	5 J	35
Detected SVOCs - TCLP										
Fluoranthene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Pyrene	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Detected Inorganics										
Aluminum	77,000	- -	mg/kg	6,970	8,530	5,710	10,400	27,900	20,500	5,870
Antimony	31	2	mg/kg	3.28 U	3.46 U	3.38 U	3.73 U	3.57 U	2.26 U	3.17 U
Arsenic	0.39	9.8	mg/kg	**5.68**	**4.52**	**3.62**	**5**	**9.12**	**4.75**	**4.98**
Barium	15,000	- -	mg/kg	33.5	68.4	50.6	68	356	130	52.4
Beryllium	160	- -	mg/kg	0.543 J	0.555 J	0.412 J	0.542 J	1.74	0.866	0.576 J
Boron	16,000	- -	mg/kg	2.17 J	2.79 J	2.46 J	2.56 J	8.29 J	4.34 J	3.27 J
Cadmium	70	0.99	mg/kg	0.82 U	0.102 J	0.103 J	0.056 J	0.207 J	0.566 U	0.117 J
Calcium	- -	- -	mg/kg	842	6,390	6,760	1,130	2,480	2,950	1,510
Chromium	- -	43.4	mg/kg	12	11.6	9.13	11.5	29.4	23	13.2
Cobalt	23	50	mg/kg	10.9	4.99	3.76	6.07	14.4	6.14	8.66
Copper	3,100	31.6	mg/kg	7.94	9.09	8.04	10.9	20.1	6.94	17.6
Iron	55,000	20,000	mg/kg	24,300	11,200	8,230	16,800	33,200	16,500	33,100
Lead	400	35.8	mg/kg	10.4	13.3	12.4	17.7	18.5	17.9	42.8
Magnesium	- -	- -	mg/kg	1,850	1,870	1,560	1,300	2,690	2,200	1,130
Manganese	1,800	460	mg/kg	192	77.2	88.7	66.3	**3,130**	448	307
Mercury	10	0.18	mg/kg	0.159 U	0.0127 J	0.0257 J	0.0196 J	0.0339 J	0.0165 J	0.153 U
Nickel	1,500	22.7	mg/kg	10.6	7.34	5.7	9.65	23.1	10.6	13.5
Potassium	- -	- -	mg/kg	923	1,430	903	1,300	3,640	2,350	1,180
Selenium	390	2	mg/kg	2.14 J	3.46 U	3.38 U	3.73 U	3.01 J	2.26 U	3.91
Silver	390	1	mg/kg	0.82 U	0.864 U	0.845 U	0.934 U	0.892 U	0.566 U	0.793 U
Sodium	- -	- -	mg/kg	34.7 J	78.2 J	71 J	98.3 J	84.6 J	76.3 J	59.8 J
Thallium	0.78	- -	mg/kg	4.92 U	5.18 U	5.07 U	5.6 U	5.35 U	3.39 U	4.76 U
Vanadium	- -	- -	mg/kg	12.7	11.8	9.34	14.5	46.3	32.8	15.2
Zinc	23,000	121	mg/kg	54.8	48.7	73.1	65.5	54	60.8	151
Detected Inorganics-Filtered										

Table A.7.5.4-8
Sediment Analytical Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-120 04/16/12 Sediment	SD-121 04/17/12 Sediment	SD-122 04/17/12 Sediment	SD-123 04/16/12 Sediment	SD-124 04/16/12 Sediment	SD-125 04/16/12 Sediment	SD-126 04/16/12 Sediment
Aluminum	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Barium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Boron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Chromium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Copper	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Iron	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Lead	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Nickel	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Zinc	- -	- -	ug/L	NA	NA	NA	NA	NA	NA	NA
Detected Miscellaneous										
Chloride	- -	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	130,000	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA
Percent Moisture	- -	- -	%	40.8	42.7	40.8	47.5	44.5	12.5	38.8
Sulfate	- -	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA
Detected Herbicides										
None Detected	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA
Detected Pesticides										
4,4'-DDD	2,000	4.88	ug/kg	2.8 U	2.9 U	2.8 U	3.2 U	0.88 J	1.9 U	2.7 U
4,4'-DDE	1,400	3.16	ug/kg	2.8 U	1.9 J	3	3.2 U	1.5 J	1.9 U	2.7 U
4,4'-DDT	1,700	- -	ug/kg	2.8 U	2.9 U	2.8 U	3.2 U	1.7 J	1.9 U	2.7 U
Aldrin	29	2	ug/kg	1.4 U	1.4 U	1.4 U	1.6 U	1.5 U	0.94 U	1.3 U
Alpha-BHC	77	6	ug/kg	1.4 U	2	2.2	1.6 U	0.37 J	0.94 U	1.3 U
Alpha-Chlordane	- -	- -	ug/kg	1.4 U	0.3 J	1.4	1.6 U	1.5 U	0.94 U	1.3 U
Beta-BHC	270	5	ug/kg	3.2 U	3.3 U	2.6 J	3.6 U	3.4 U	2.1 U	3.1 U
Delta-BHC	- -	6,400	ug/kg	1.4 U	1.4 U	2.8 U	3.2 U	3 U	0.95 U	2.7 U
Dieldrin	30	1.9	ug/kg	2.8 U	2.9 U	2.8 U	3.2 U	3.1 U	1.9 U	1.2 J
Endosulfan I	- -	2.9	ug/kg	1.4 U	1.4 U	1.2 J	1.6 U	1.5 U	0.94 U	1.3 U
Endosulfan II	- -	14	ug/kg	2.8 U	2.9 U	2.8 U	3.2 U	3.1 U	1.9 U	2.7 U
Endrin	18,000	2.22	ug/kg	2.8 U	2.9 U	2.8 U	3.2 U	3.1 U	1.9 U	2.7 U
Endrin Aldehyde	- -	- -	ug/kg	2.8 U	2.9 U	1.4 J	3.2 U	3.1 U	1.9 U	2.7 U
Gamma-BHC (Lindane)	520	2.37	ug/kg	1.4 U	1.4 U	4.1	1.6 U	1.5 U	0.94 U	1.3 U
Gamma-Chlordane	- -	- -	ug/kg	1.4 U	1.4 J	3.2 U	1.6 U	9.7	0.94 U	1.3 U
Heptachlor	110	68	ug/kg	1.4 U	0.79 J	24	0.33 J	1.5 U	0.94 U	1.3 U
Heptachlor Epoxide	53	2.47	ug/kg	1.4 U	0.31 J	1.4 U	1.6 U	1.5 U	0.94 U	1.3 U
Methoxychlor	310,000	18.7	ug/kg	14 U	14 U	14 U	16 U	15 U	9.4 U	13 U
Detected Pesticides - TCLP										
None Detected	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA
Detected Dioxins										
1,2,3,4,6,7,8-HpCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-Dioxin	- -	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA
Detected Radiochemistry										
Gross Alpha	- -	- -	pci/g	NA	NA	NA	NA	NA	NA	NA
Gross Beta	- -	- -	pci/g	NA	NA	NA	NA	NA	NA	NA

Table A.7.5.4-8
Sediment Analytical Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-127 04/16/12 Sediment	STR5SD-30 04/16/12 Sediment	STR5SD-31 04/16/12 Sediment	STR5SD-53 04/16/12 Sediment	UnnamedBoils-SED 04/17/12 Sediment
Detected PCBs								
Aroclor-1260	220	- -	ug/kg	4.6 U	8.1	5 U [4.4 J]	5 U	34 U
Detected PCBs - TCLP								
None Detected	- -	- -	- -	NA	NA	NA	NA	NA
Detected Volatile Organics								
2-Butanone	28,000,000	- -	ug/kg	17 U	14 U	15 U [14 U]	15 U	22 U
Acetone	61,000,000	- -	ug/kg	64	45	22 J [16 J]	17 J	44 J
Carbon Disulfide	820,000	0.851	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Chloroform	290	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
cis-1,2-Dichloroethene	160,000	- -	ug/kg	9 U	7 U	8 U [7 U]	8 U	11 U
Tetrachloroethene	22,000	468	ug/kg	9 U	7 U	8 U [7 U]	8 U	3 J
Trichloroethene	910	96.9	ug/kg	9 U	2 J	4 J [3 J]	8 U	16
Detected VOCs - TCLP								
1,1,1-Trichloroethane	- -	- -	ug/L	NA	NA	NA	NA	NA
1,1-Dichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA
Chloroform	- -	- -	ug/L	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA
Tetrachloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA
Trichloroethene	- -	- -	ug/L	NA	NA	NA	NA	NA
Trichlorofluoromethane	- -	- -	ug/L	NA	NA	NA	NA	NA
Detected Semivolatile Organics								
2-Methylnaphthalene	230,000	20.2	ug/kg	23 U	25 U	24 U [23 U]	5 J	35 U
4-Methylphenol	6,100,000	670	ug/kg	44 U	50 U	48 U [46 U]	49 U	68 U
Acenaphthene	3,400,000	6.7	ug/kg	23 U	25 U	5 J [11 J]	20 J	35 U
Acenaphthylene	- -	5.9	ug/kg	23 U	25 U	24 U [6 J]	25 U	35 U
Anthracene	17,000,000	57.2	ug/kg	23 U	25 U	15 J [32]	81	35 U
Benzo(a)anthracene	150	108	ug/kg	23 U	9 J	29 [57]	120	36
Benzo(a)pyrene	15	150	ug/kg	5 J	11 J	**30 [51]**	**95**	**47**
Benzo(b)fluoranthene	150	- -	ug/kg	5 J	11 J	32 [66]	120	60
Benzo(g,h,i)perylene	- -	170	ug/kg	8 J	12 J	19 J [39]	48	38
Benzo(k)fluoranthene	1,500	240	ug/kg	5 J	9 J	16 J [24]	64	35
Benzoic Acid	240,000,000	650	ug/kg	670 U	740 U	720 U [690 U]	740 U	1,000 U
Chrysene	15,000	166	ug/kg	5 J	11 J	35 [53]	110	47
Dibenzo(a,h)anthracene	15	33	ug/kg	23 U	5 J	5 J [11 J]	**16 J**	14 J
Fluoranthene	2,300,000	423	ug/kg	23 U	15 J	77 [110]	280	83
Fluorene	2,300,000	77.4	ug/kg	23 U	25 U	9 J [18 J]	29	35 U
Indeno(1,2,3-cd)pyrene	150	17	ug/kg	6 J	9 J	17 J [33]	52	35
Naphthalene	3,600	176	ug/kg	6 J	25 U	24 U [23 U]	25 U	35 U
Phenanthrene	- -	204	ug/kg	23 U	7 J	67 [110]	270	28 J
Pyrene	1,700,000	195	ug/kg	23 U	17 J	70 [110]	210	76
Detected SVOCs - TCLP								
Fluoranthene	- -	- -	ug/L	NA	NA	NA	NA	NA
Pyrene	- -	- -	ug/L	NA	NA	NA	NA	NA
Detected Inorganics								
Aluminum	77,000	- -	mg/kg	10,500	5,820	3,990 [5,040]	5,190	9,870
Antimony	31	2	mg/kg	2.58 U	2.89 U	2.86 U [2.72 U]	2.88 U	4.12 U
Arsenic	0.39	9.8	mg/kg	**4.34**	**3.41**	**1.77 J [3.23]**	**2.96**	**4.87**
Barium	15,000	- -	mg/kg	49.6	44.4	33 [39.5]	46.3	88
Beryllium	160	- -	mg/kg	0.607 J	0.428 J	0.293 J [0.369 J]	0.362 J	0.537 J
Boron	16,000	- -	mg/kg	4.83 J	2.08 J	1.75 J [2.21 J]	2.04 J	4.63 J
Cadmium	70	0.99	mg/kg	0.0387 J	0.0317 J	0.716 U [0.679 U]	0.0504 J	0.165 J
Calcium	- -	- -	mg/kg	59,900	1,990	4,000 [6,500]	1,220	4,710
Chromium	- -	43.4	mg/kg	12.6	10.1	4.91 [7.45]	7.87	12.2
Cobalt	23	50	mg/kg	9.89	4.29	2.73 [3.73]	3.24	5.79
Copper	3,100	31.6	mg/kg	12.9	4.65	3.24 [4.01]	4.75	10.2
Iron	55,000	20,000	mg/kg	30,100	10,900	6,090 [8,480]	8,140	12,800
Lead	400	35.8	mg/kg	10.4	12.5	6.72 [8.68]	10.6	16.2
Magnesium	- -	- -	mg/kg	4,690	1,660	1,020 [2,060]	1,160	2,030
Manganese	1,800	460	mg/kg	459	166	59.9 [147]	142	82.8
Mercury	10	0.18	mg/kg	0.128 U	0.139 U	0.139 U [0.129 U]	0.0927 J	0.196 U
Nickel	1,500	22.7	mg/kg	15.2	5.58	3.65 [5.2]	4.54	8.51
Potassium	- -	- -	mg/kg	1,880	896	646 [773]	916	1,340
Selenium	390	2	mg/kg	2.58 U	2.89 U	2.86 U [2.72 U]	2.88 U	4.12 U
Silver	390	1	mg/kg	0.645 U	0.721 U	0.716 U [0.679 U]	0.72 U	1.03 U
Sodium	- -	- -	mg/kg	49.3 J	26.7 J	29.5 J [22.4 J]	25.1 J	68.7 J
Thallium	0.78	- -	mg/kg	3.87 U	4.33 U	4.29 U [4.07 U]	4.32 U	**0.924 J**
Vanadium	- -	- -	mg/kg	12.3	11	6.11 [9.31]	8.03	12.5
Zinc	23,000	121	mg/kg	88.6	28.7	17.6 [23.9]	27	60.7
Detected Inorganics-Filtered								

Table A.7.5.4-8
Sediment Analytical Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Location ID: Date Collected: Sampling Area:	RSL - Sediment (bold)	Freshwater Sediment Benchmarks (shade)	Units	SD-127 04/16/12 Sediment	STR5SD-30 04/16/12 Sediment	STR5SD-31 04/16/12 Sediment	STR5SD-53 04/16/12 Sediment	UnnamedBoils-SED 04/17/12 Sediment
Aluminum	- -	- -	ug/L	NA	NA	NA	NA	NA
Barium	- -	- -	ug/L	NA	NA	NA	NA	NA
Boron	- -	- -	ug/L	NA	NA	NA	NA	NA
Calcium	- -	- -	ug/L	NA	NA	NA	NA	NA
Chromium	- -	- -	ug/L	NA	NA	NA	NA	NA
Copper	- -	- -	ug/L	NA	NA	NA	NA	NA
Iron	- -	- -	ug/L	NA	NA	NA	NA	NA
Lead	- -	- -	ug/L	NA	NA	NA	NA	NA
Magnesium	- -	- -	ug/L	NA	NA	NA	NA	NA
Manganese	- -	- -	ug/L	NA	NA	NA	NA	NA
Nickel	- -	- -	ug/L	NA	NA	NA	NA	NA
Potassium	- -	- -	ug/L	NA	NA	NA	NA	NA
Sodium	- -	- -	ug/L	NA	NA	NA	NA	NA
Vanadium	- -	- -	ug/L	NA	NA	NA	NA	NA
Zinc	- -	- -	ug/L	NA	NA	NA	NA	NA
Detected Miscellaneous								
Chloride	- -	- -	mg/kg	NA	20.3	21.3 [23.7]	21.6	47.7
Nitrate-N	130,000	- -	mg/kg	NA	3.7	1.2 J [2.7]	3.1	3.1 U
Percent Moisture	- -	- -	%	25.5	32.7	31.5 [27.8]	32.6	NA
Sulfate	- -	- -	mg/kg	NA	14.4 J	54.3 [27.8]	15.4 J	48.6
Detected Herbicides								
None Detected	- -	- -	- -	NA	- -	- - [- -]	- -	- -
Detected Pesticides								
4,4'-DDD	2,000	4.88	ug/kg	2.3 U	2.7	2.5 U [0.52 J]	2.5 U	3.5 U
4,4'-DDE	1,400	3.16	ug/kg	2.3 U	7.4	2.5 U [2.7]	2.5 U	3.5 U
4,4'-DDT	1,700	- -	ug/kg	2.3 U	2.4 J	2.5 U [2.3 J]	2.5 U	3.5 U
Aldrin	29	2	ug/kg	1.1 U	1.2 U	0.33 J [0.28 J]	1.2 U	0.63 J
Alpha-BHC	77	6	ug/kg	1.1 U	1.2 U	0.59 J [1.7]	1.2 U	1.7 U
Alpha-Chlordane	- -	- -	ug/kg	1.1 U	1.3	1.2 U [0.89 J]	1.2 U	1.7 U
Beta-BHC	270	5	ug/kg	2.5 U	2.8 U	2.8 U [2.6 U]	2.8 U	8.6 U
Delta-BHC	- -	6,400	ug/kg	1.1 U	1.2 U	2.4 U [2.3 U]	1.2 U	1.7 U
Dieldrin	30	1.9	ug/kg	2.3 U	2.5 U	2.5 U [2.3 U]	2.5 U	3.5 U
Endosulfan I	- -	2.9	ug/kg	1.1 U	1.2 U	1.2 U [1.1 U]	1.2 U	0.68 J
Endosulfan II	- -	14	ug/kg	2.3 U	2.5 U	2.5 U [2.3 U]	2.5 U	3.5 U
Endrin	18,000	2.22	ug/kg	2.3 U	2.5 U	2.5 U [2.3 U]	2.5 U	3.5 U
Endrin Aldehyde	- -	- -	ug/kg	2.3 U	2.5 U	2.5 U [2.3 U]	2.5 U	3.5 U
Gamma-BHC (Lindane)	520	2.37	ug/kg	1.1 U	1.2 U	1.2 U [1.1 U]	1.2 U	1.7 U
Gamma-Chlordane	- -	- -	ug/kg	1.1 U	1.2 U	1.2 U [1.1 U]	1.2 U	1.7 U
Heptachlor	110	68	ug/kg	1.1 U	1.2 U	1.2 U [1.1 U]	1.2 U	1.7 U
Heptachlor Epoxide	53	2.47	ug/kg	1.1 U	1.2 U	1.2 U [1.1 U]	1.2 U	1.7 U
Methoxychlor	310,000	18.7	ug/kg	11 U	12 U	12 U [11 U]	12 U	17 U
Detected Pesticides - TCLP								
None Detected	- -	- -	- -	NA	NA	NA	NA	NA
Detected Dioxins								
1,2,3,4,6,7,8-HpCDD	- -	- -	ng/kg	NA	393 B	48.7 B [23.7 B]	47.9 B	104 B
1,2,3,4,6,7,8-HpCDF	- -	- -	ng/kg	NA	65.4 B	3.77 BJ [1.9 BJ]	8.04 B	18.3 B
1,2,3,4,7,8,9-HpCDF	- -	- -	ng/kg	NA	4.72 BJ	0.285 BJ [0.165 BJ]	0.576 BJ	1.15 BJ
1,2,3,4,7,8-HxCDD	- -	- -	ng/kg	NA	3.3 BJ	0.604 BJ [0.404 BJ]	0.302 BJQ	1.44 BJ
1,2,3,4,7,8-HxCDF	- -	- -	ng/kg	NA	3.46 BJ	0.654 BJ [0.436 BJ]	0.321 BJ	1.19 BJ
1,2,3,6,7,8-HxCDD	- -	- -	ng/kg	NA	9.86 B	1.09 BJ [0.605 BJ]	0.988 BJ	3.07 BJ
1,2,3,6,7,8-HxCDF	- -	- -	ng/kg	NA	2.11 BJ	0.397 BJ [0.357 BJ]	0.254 BJQ	1.19 BJ
1,2,3,7,8,9-HxCDD	- -	- -	ng/kg	NA	6.85 BJ	1.13 BJ [1 BJ]	0.659 BJ	2.92 BJ
1,2,3,7,8,9-HxCDF	- -	- -	ng/kg	NA	0.65 BJ	0.0678 BJQ [6.89 U]	0.133 BJQ	0.307 BJ
1,2,3,7,8-PeCDD	- -	- -	ng/kg	NA	1.02 J	0.21 J [0.168 JQ]	0.11 JQ	0.654 J
1,2,3,7,8-PeCDF	- -	- -	ng/kg	NA	2.11 BJ	0.377 BJQ [0.261 BJ]	0.134 BJQ	0.519 BJ
2,3,4,6,7,8-HxCDF	- -	- -	ng/kg	NA	3.36 BJ	0.528 BJ [0.506 BJ]	0.303 BJ	1.39 BJ
2,3,4,7,8-PeCDF	- -	- -	ng/kg	NA	7.39 U	0.538 JQ [0.502 JQ]	0.0989 JQ	0.854 J
2,3,7,8-TCDD	- -	- -	ng/kg	NA	1 J	0.116 J [0.0672 JQ]	0.119 JQ	0.341 J
2,3,7,8-TCDF	- -	- -	ng/kg	NA	1.12 J	0.13 J [0.0465 JQ]	1.46 U	0.277 J
Octachlorodibenzofuran	- -	- -	ng/kg	NA	334 B	10.3 BJ [4.4 BJ]	35.9 B	58.4 B
Octachlorodibenzo-p-Dioxin	- -	- -	ng/kg	NA	9,040 EB	2,840 B [1,330 B]	1,710 B	3,750 B
Detected Radiochemistry								
Gross Alpha	- -	- -	pci/g	NA	17.1	8.27 [8.92]	11.8	11.9
Gross Beta	- -	- -	pci/g	NA	16.6	17 [27.5]	6.73	26.5

Table A.7.5.4-8
Sediment Analytical Results (Detects-Only)
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Qualifier Type	Lab Qualifiers	Definition
Inorganic	J	Indicates an estimated value.
Inorganic	U	The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
Organic	B	Analyte was also detected in the associated method blank.
Organic	BJ	Analyte was also detected in the associated method blank. Indicates an estimated value.
Organic	BJQ	Analyte was also detected in the associated method blank. Indicates an estimated value.
Organic	EB	
Organic	J	Indicates an estimated value.
Organic	JQ	Indicates an estimated value.
Organic	U	The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

Table A.7.5.4-9
Round 1 Tentatively Identified Compounds
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Sampling Area	Location ID	Sample Name	Matrix	Date Collected	Parameter Group	Analyte	Result Value	Result Qualifiers	Result Units
Area B Monitoring wells	BMW11	FTD72-BMW11(032912)	WG	3/29/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW11	FTD72-BMW11(032912)	WG	3/29/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW11D	FTD72-BMW11D(033012)	WG	3/30/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW11D	FTD72-BMW11D(033012)	WG	3/30/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW16	FTD72-BMW16(040612)	WG	4/6/2012	SVOCs TICs	Diacetone Alcohol	36	J	ug/l
Area B Monitoring wells	BMW16	FTD72-BMW16(040612)	WG	4/6/2012	SVOCs TICs	Mesityl Oxide	9	BJ	ug/l
Area B Monitoring wells	BMW16	FTD72-BMW16(040612)	WG	4/6/2012	SVOCs TICs	Total SVOC TICs	54	BJ	ug/l
Area B Monitoring wells	BMW16	FTD72-BMW16(040612)	WG	4/6/2012	SVOCs TICs	Unknown1	6	J	ug/l
Area B Monitoring wells	BMW16	FTD72-BMW16(040612)	WG	4/6/2012	SVOCs TICs	Unknown1	4	J	ug/l
Area B Monitoring wells	BMW16	FTD72-BMW16(040612)	WG	4/6/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW18	FTD72-BMW18(040512)	WG	4/5/2012	SVOCs TICs	Diacetone Alcohol	18	J	ug/l
Area B Monitoring wells	BMW18	FTD72-BMW18(040512)	WG	4/5/2012	SVOCs TICs	Total SVOC TICs	91	J	ug/l
Area B Monitoring wells	BMW18	FTD72-BMW18(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	5	J	ug/l
Area B Monitoring wells	BMW18	FTD72-BMW18(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	4	J	ug/l
Area B Monitoring wells	BMW18	FTD72-BMW18(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	10	J	ug/l
Area B Monitoring wells	BMW18	FTD72-BMW18(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	22	J	ug/l
Area B Monitoring wells	BMW18	FTD72-BMW18(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	21	J	ug/l
Area B Monitoring wells	BMW18	FTD72-BMW18(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	11	J	ug/l
Area B Monitoring wells	BMW18	FTD72-BMW18(040512)	WG	4/5/2012	VOCs TICs	Dichloromonofluoromethan	9	J	ug/l
Area B Monitoring wells	BMW18	FTD72-BMW18(040512)	WG	4/5/2012	VOCs TICs	Total VOC TICs	9	J	ug/l
Area B Monitoring wells	BMW20	FTD72-BMW20(040512)	WG	4/5/2012	SVOCs TICs	Diacetone Alcohol	22	J	ug/l
Area B Monitoring wells	BMW20	FTD72-BMW20(040512)	WG	4/5/2012	SVOCs TICs	Mesityl Oxide	6	BJ	ug/l
Area B Monitoring wells	BMW20	FTD72-BMW20(040512)	WG	4/5/2012	SVOCs TICs	Total SVOC TICs	56	BJ	ug/l
Area B Monitoring wells	BMW20	FTD72-BMW20(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	20	J	ug/l
Area B Monitoring wells	BMW20	FTD72-BMW20(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	7	J	ug/l
Area B Monitoring wells	BMW20	FTD72-BMW20(040512)	WG	4/5/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW20D	FTD72-BMW20D(040512)	WG	4/5/2012	SVOCs TICs	Diacetone Alcohol	53	J	ug/l
Area B Monitoring wells	BMW20D	FTD72-BMW20D(040512)	WG	4/5/2012	SVOCs TICs	Mesityl Oxide	8	BJ	ug/l
Area B Monitoring wells	BMW20D	FTD72-BMW20D(040512)	WG	4/5/2012	SVOCs TICs	Total SVOC TICs	180	BJ	ug/l
Area B Monitoring wells	BMW20D	FTD72-BMW20D(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	4	J	ug/l
Area B Monitoring wells	BMW20D	FTD72-BMW20D(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	5	J	ug/l
Area B Monitoring wells	BMW20D	FTD72-BMW20D(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	8	J	ug/l
Area B Monitoring wells	BMW20D	FTD72-BMW20D(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	26	J	ug/l
Area B Monitoring wells	BMW20D	FTD72-BMW20D(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	73	J	ug/l
Area B Monitoring wells	BMW20D	FTD72-BMW20D(040512)	WG	4/5/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW21	FTD72-BMW21(040512)	WG	4/5/2012	SVOCs TICs	Diacetone Alcohol	26	J	ug/l
Area B Monitoring wells	BMW21	FTD72-BMW21(040512)	WG	4/5/2012	SVOCs TICs	Total SVOC TICs	77	J	ug/l
Area B Monitoring wells	BMW21	FTD72-BMW21(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	9	J	ug/l
Area B Monitoring wells	BMW21	FTD72-BMW21(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	9	J	ug/l
Area B Monitoring wells	BMW21	FTD72-BMW21(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	10	J	ug/l
Area B Monitoring wells	BMW21	FTD72-BMW21(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	24	J	ug/l
Area B Monitoring wells	BMW21	FTD72-BMW21(040512)	WG	4/5/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW21D	FTD72-BMW21D(040612)	WG	4/6/2012	SVOCs TICs	Diacetone Alcohol	30	J	ug/l
Area B Monitoring wells	BMW21D	FTD72-BMW21D(040612)	WG	4/6/2012	SVOCs TICs	Mesityl Oxide	7	BJ	ug/l
Area B Monitoring wells	BMW21D	FTD72-BMW21D(040612)	WG	4/6/2012	SVOCs TICs	Total SVOC TICs	71	BJ	ug/l
Area B Monitoring wells	BMW21D	FTD72-BMW21D(040612)	WG	4/6/2012	SVOCs TICs	Unknown1	7	J	ug/l
Area B Monitoring wells	BMW21D	FTD72-BMW21D(040612)	WG	4/6/2012	SVOCs TICs	Unknown1	7	J	ug/l
Area B Monitoring wells	BMW21D	FTD72-BMW21D(040612)	WG	4/6/2012	SVOCs TICs	Unknown1	20	J	ug/l
Area B Monitoring wells	BMW21D	FTD72-BMW21D(040612)	WG	4/6/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW24	FTD72-BMW24(040512)	WG	4/5/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW24	FTD72-BMW24(040512)	WG	4/5/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW24D	FTD72-BMW24D(040512)	WG	4/5/2012	SVOCs TICs	Total SVOC TICs	130	J	ug/l
Area B Monitoring wells	BMW24D	FTD72-BMW24D(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	5	J	ug/l
Area B Monitoring wells	BMW24D	FTD72-BMW24D(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	120	J	ug/l
Area B Monitoring wells	BMW24D	FTD72-BMW24D(040512)	WG	4/5/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW29A	FTD72-BMW29A(033012)	WG	3/30/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW29A	FTD72-BMW29A(033012)	WG	3/30/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW29B	FTD72-BMW29B(033012)	WG	3/30/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW29B	FTD72-BMW29B(033012)	WG	3/30/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW31	FTD72-BMW31(040412)	WG	4/4/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW31	FTD72-BMW31(040412)	WG	4/4/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW31D	FTD72-BMW31D(040512)	WG	4/5/2012	SVOCs TICs	Diacetone Alcohol	13	J	ug/l
Area B Monitoring wells	BMW31D	FTD72-BMW31D(040512)	WG	4/5/2012	SVOCs TICs	Mesityl Oxide	9	BJ	ug/l
Area B Monitoring wells	BMW31D	FTD72-BMW31D(040512)	WG	4/5/2012	SVOCs TICs	Total SVOC TICs	21	BJ	ug/l
Area B Monitoring wells	BMW31D	FTD72-BMW31D(040512)	WG	4/5/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW32D	FTD72-BMW32D(040512)	WG	4/5/2012	SVOCs TICs	Total SVOC TICs	14	J	ug/l
Area B Monitoring wells	BMW32D	FTD72-BMW32D(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	14	J	ug/l
Area B Monitoring wells	BMW32D	FTD72-BMW32D(040512)	WG	4/5/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW33	FTD72-BMW33(032912)	WG	3/29/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW33	FTD72-BMW33(032912)	WG	3/29/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW34	FTD72-BMW34(033012)	WG	3/30/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW34	FTD72-BMW34(033012)	WG	3/30/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW35	FTD72-BMW35(032912)	WG	3/29/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW35	FTD72-BMW35(032912)	WG	3/29/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW35D	FTD72-BMW35D(032912)	WG	3/29/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW35D	FTD72-BMW35D(032912)	WG	3/29/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW36	FTD72-BMW36(033012)	WG	3/30/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW36	FTD72-BMW36(033012)	WG	3/30/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW36D	FTD72-BMW36D(033012)	WG	3/30/2012	SVOCs TICs	Total SVOC TICs	24	J	ug/l
Area B Monitoring wells	BMW36D	FTD72-BMW36D(033012)	WG	3/30/2012	SVOCs TICs	Unknown1	24	J	ug/l
Area B Monitoring wells	BMW36D	FTD72-BMW36D(033012)	WG	3/30/2012	VOCs TICs	Total VOC TICs	0		ug/l

Table A.7.5.4-9
Round 1 Tentatively Identified Compounds
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Sampling Area	Location ID	Sample Name	Matrix	Date Collected	Parameter Group	Analyte	Result Value	Result Qualifiers	Result Units
Area B Monitoring wells	BMW37	FTD72-BMW37(040912)	WG	4/9/2012	SVOC E525.2 TIC	Total SVOC TICs	4	J	ug/l
Area B Monitoring wells	BMW37	FTD72-BMW37(040912)	WG	4/9/2012	SVOC E525.2 TIC	Unknown1	4	J	ug/l
Area B Monitoring wells	BMW37	FTD72-BMW37(040912)	WG	4/9/2012	VOCs TICs	Dichloromonofluoromethan	2	J	ug/l
Area B Monitoring wells	BMW37	FTD72-BMW37(040912)	WG	4/9/2012	VOCs TICs	Total VOC TICs	2	J	ug/l
Area B Monitoring wells	BMW37D	FTD72-BMW37D(040912)	WG	4/9/2012	SVOC E525.2 TIC	Total SVOC TICs	100	J	ug/l
Area B Monitoring wells	BMW37D	FTD72-BMW37D(040912)	WG	4/9/2012	SVOC E525.2 TIC	Unknown1	100	J	ug/l
Area B Monitoring wells	BMW37D	FTD72-BMW37D(040912)	WG	4/9/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW38	FTD72-BMW38(040512)	WG	4/5/2012	SVOCs TICs	Diacetone Alcohol	27	J	ug/l
Area B Monitoring wells	BMW38	FTD72-BMW38(040512)	WG	4/5/2012	SVOCs TICs	Mesityl Oxide	8	BJ	ug/l
Area B Monitoring wells	BMW38	FTD72-BMW38(040512)	WG	4/5/2012	SVOCs TICs	Total SVOC TICs	70	BJ	ug/l
Area B Monitoring wells	BMW38	FTD72-BMW38(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	5	J	ug/l
Area B Monitoring wells	BMW38	FTD72-BMW38(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	4	J	ug/l
Area B Monitoring wells	BMW38	FTD72-BMW38(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	26	J	ug/l
Area B Monitoring wells	BMW38	FTD72-BMW38(040512)	WG	4/5/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW4	FTD72-BMW4(033012)	WG	3/30/2012	SVOCs TICs	Total SVOC TICs	24	J	ug/l
Area B Monitoring wells	BMW4	FTD72-BMW4(033012)	WG	3/30/2012	SVOCs TICs	Unknown1	24	J	ug/l
Area B Monitoring wells	BMW4	FTD72-BMW4(033012)	WG	3/30/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW40	FTD72-BMW40(040312)	WG	4/3/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW40	FTD72-BMW40(040312)	WG	4/3/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW41D	FTD72-BMW41D(040212)	WG	4/2/2012	SVOCs TICs	Mesityl Oxide	6	JAB	ug/l
Area B Monitoring wells	BMW41D	FTD72-BMW41D(040212)	WG	4/2/2012	SVOCs TICs	Total SVOC TICs	6	JAB	ug/l
Area B Monitoring wells	BMW41D	FTD72-BMW41D(040212)	WG	4/2/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW42	FTD72-BMW42(040212)	WG	4/2/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW42	FTD72-BMW42(040212)	WG	4/2/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW43	FTD72-BMW43(040212)	WG	4/2/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW43	FTD72-BMW43(040212)	WG	4/2/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW44	FTD72-BMW44(033012)	WG	3/30/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW44	FTD72-BMW44(033012)	WG	3/30/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW45	FTD72-BMW45(032912)	WG	3/29/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW45	FTD72-BMW45(032912)	WG	3/29/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW47D	FTD72-BMW47D(040612)	WG	4/6/2012	SVOCs TICs	Diacetone Alcohol	38	J	ug/l
Area B Monitoring wells	BMW47D	FTD72-BMW47D(040612)	WG	4/6/2012	SVOCs TICs	Mesityl Oxide	9	BJ	ug/l
Area B Monitoring wells	BMW47D	FTD72-BMW47D(040612)	WG	4/6/2012	SVOCs TICs	Total SVOC TICs	60	BJ	ug/l
Area B Monitoring wells	BMW47D	FTD72-BMW47D(040612)	WG	4/6/2012	SVOCs TICs	Unknown1	6	J	ug/l
Area B Monitoring wells	BMW47D	FTD72-BMW47D(040612)	WG	4/6/2012	SVOCs TICs	Unknown1	7	J	ug/l
Area B Monitoring wells	BMW47D	FTD72-BMW47D(040612)	WG	4/6/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW49	FTD72-BMW49(040212)	WG	4/2/2012	SVOCs TICs	Total SVOC TICs	88	J	ug/l
Area B Monitoring wells	BMW49	FTD72-BMW49(040212)	WG	4/2/2012	SVOCs TICs	Unknown1	84	J	ug/l
Area B Monitoring wells	BMW49	FTD72-BMW49(040212)	WG	4/2/2012	SVOCs TICs	Unknown1	4	J	ug/l
Area B Monitoring wells	BMW49	FTD72-BMW49(040212)	WG	4/2/2012	VOCs TICs	Chlorodifluoromethane	2	J	ug/l
Area B Monitoring wells	BMW49	FTD72-BMW49(040212)	WG	4/2/2012	VOCs TICs	Dichloromonofluoromethan	7	J	ug/l
Area B Monitoring wells	BMW49	FTD72-BMW49(040212)	WG	4/2/2012	VOCs TICs	Ethyl Ether	2	J	ug/l
Area B Monitoring wells	BMW49	FTD72-BMW49(040212)	WG	4/2/2012	VOCs TICs	Methane, chlorofluoro-	1	J	ug/l
Area B Monitoring wells	BMW49	FTD72-BMW49(040212)	WG	4/2/2012	VOCs TICs	Total VOC TICs	12	J	ug/l
Area B Monitoring wells	BMW5	FTD72-BMW5(033012)	WG	3/30/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW5	FTD72-BMW5(033012)	WG	3/30/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW52D	FTD72-BMW52D(040312)	WG	4/3/2012	SVOCs TICs	Diacetone Alcohol	9	JA	ug/l
Area B Monitoring wells	BMW52D	FTD72-DUP-002(040312)FD	WG	4/3/2012	SVOCs TICs	Mesityl Oxide	5	JAB	ug/l
Area B Monitoring wells	BMW52D	FTD72-BMW52D(040312)	WG	4/3/2012	SVOCs TICs	Total SVOC TICs	23	JA	ug/l
Area B Monitoring wells	BMW52D	FTD72-DUP-002(040312)FD	WG	4/3/2012	SVOCs TICs	Total SVOC TICs	11	JAB	ug/l
Area B Monitoring wells	BMW52D	FTD72-DUP-002(040312)FD	WG	4/3/2012	SVOCs TICs	Unknown1	6	J	ug/l
Area B Monitoring wells	BMW52D	FTD72-BMW52D(040312)	WG	4/3/2012	SVOCs TICs	Unknown1	14	J	ug/l
Area B Monitoring wells	BMW52D	FTD72-BMW52D(040312)	WG	4/3/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW52D	FTD72-DUP-002(040312)FD	WG	4/3/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW53A	FTD72-BMW53A(040312)	WG	4/3/2012	SVOCs TICs	Diacetone Alcohol	21	JA	ug/l
Area B Monitoring wells	BMW53A	FTD72-BMW53A(040312)	WG	4/3/2012	SVOCs TICs	Mesityl Oxide	7	JAB	ug/l
Area B Monitoring wells	BMW53A	FTD72-BMW53A(040312)	WG	4/3/2012	SVOCs TICs	Total SVOC TICs	28	JAB	ug/l
Area B Monitoring wells	BMW53A	FTD72-BMW53A(040312)	WG	4/3/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW53B	FTD72-BMW53B(040312)	WG	4/3/2012	SVOCs TICs	Diacetone Alcohol	15	JA	ug/l
Area B Monitoring wells	BMW53B	FTD72-BMW53B(040312)	WG	4/3/2012	SVOCs TICs	Mesityl Oxide	8	JAB	ug/l
Area B Monitoring wells	BMW53B	FTD72-BMW53B(040312)	WG	4/3/2012	SVOCs TICs	Total SVOC TICs	23	JAB	ug/l
Area B Monitoring wells	BMW53B	FTD72-BMW53B(040312)	WG	4/3/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW53D	FTD72-BMW53D(040312)	WG	4/3/2012	SVOCs TICs	Diacetone Alcohol	14	JA	ug/l
Area B Monitoring wells	BMW53D	FTD72-BMW53D(040312)	WG	4/3/2012	SVOCs TICs	Mesityl Oxide	7	JAB	ug/l
Area B Monitoring wells	BMW53D	FTD72-BMW53D(040312)	WG	4/3/2012	SVOCs TICs	Total SVOC TICs	70	JAB	ug/l
Area B Monitoring wells	BMW53D	FTD72-BMW53D(040312)	WG	4/3/2012	SVOCs TICs	Unknown1	48	J	ug/l
Area B Monitoring wells	BMW53D	FTD72-BMW53D(040312)	WG	4/3/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW53E	FTD72-BMW53E(040312)	WG	4/3/2012	SVOCs TICs	Diacetone Alcohol	14	JA	ug/l
Area B Monitoring wells	BMW53E	FTD72-BMW53E(040312)	WG	4/3/2012	SVOCs TICs	Mesityl Oxide	7	JAB	ug/l
Area B Monitoring wells	BMW53E	FTD72-BMW53E(040312)	WG	4/3/2012	SVOCs TICs	Total SVOC TICs	21	JAB	ug/l
Area B Monitoring wells	BMW53E	FTD72-BMW53E(040312)	WG	4/3/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW53F	FTD72-BMW53F(040312)	WG	4/3/2012	SVOCs TICs	Diacetone Alcohol	14	JA	ug/l
Area B Monitoring wells	BMW53F	FTD72-BMW53F(040312)	WG	4/3/2012	SVOCs TICs	Mesityl Oxide	7	JAB	ug/l
Area B Monitoring wells	BMW53F	FTD72-BMW53F(040312)	WG	4/3/2012	SVOCs TICs	Total SVOC TICs	29	JAB	ug/l
Area B Monitoring wells	BMW53F	FTD72-BMW53F(040312)	WG	4/3/2012	SVOCs TICs	Unknown1	7	J	ug/l
Area B Monitoring wells	BMW53F	FTD72-BMW53F(040312)	WG	4/3/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW54D	FTD72-BMW54D(040412)	WG	4/4/2012	SVOCs TICs	Mesityl Oxide	5	J	ug/l
Area B Monitoring wells	BMW54D	FTD72-BMW54D(040412)	WG	4/4/2012	SVOCs TICs	Total SVOC TICs	5	J	ug/l
Area B Monitoring wells	BMW54D	FTD72-BMW54D(040412)	WG	4/4/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW55D	FTD72-BMW55D(040512)	WG	4/5/2012	SVOCs TICs	Mesityl Oxide	8	BJ	ug/l
Area B Monitoring wells	BMW55D	FTD72-BMW55D(040512)	WG	4/5/2012	SVOCs TICs	Total SVOC TICs	57	BJ	ug/l

Table A.7.5.4-9
Round 1 Tentatively Identified Compounds
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Sampling Area	Location ID	Sample Name	Matrix	Date Collected	Parameter Group	Analyte	Result Value	Result Qualifiers	Result Units
Area B Monitoring wells	BMW55D	FTD72-BMW55D(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	6	J	ug/l
Area B Monitoring wells	BMW55D	FTD72-BMW55D(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	8	J	ug/l
Area B Monitoring wells	BMW55D	FTD72-BMW55D(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	35	J	ug/l
Area B Monitoring wells	BMW55D	FTD72-BMW55D(040512)	WG	4/5/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW56D	FTD72-BMW56D(040912)	WG	4/9/2012	SVOC E525.2 TIC	Total SVOC TICs	270	J	ug/l
Area B Monitoring wells	BMW56D	FTD72-BMW56D(040912)	WG	4/9/2012	SVOC E525.2 TIC	Unknown1	67	J	ug/l
Area B Monitoring wells	BMW56D	FTD72-BMW56D(040912)	WG	4/9/2012	SVOC E525.2 TIC	Unknown1	11	J	ug/l
Area B Monitoring wells	BMW56D	FTD72-BMW56D(040912)	WG	4/9/2012	SVOC E525.2 TIC	Unknown1	6	J	ug/l
Area B Monitoring wells	BMW56D	FTD72-BMW56D(040912)	WG	4/9/2012	SVOC E525.2 TIC	Unknown1	47	J	ug/l
Area B Monitoring wells	BMW56D	FTD72-BMW56D(040912)	WG	4/9/2012	SVOC E525.2 TIC	Unknown1	23	J	ug/l
Area B Monitoring wells	BMW56D	FTD72-BMW56D(040912)	WG	4/9/2012	SVOC E525.2 TIC	Unknown1	66	J	ug/l
Area B Monitoring wells	BMW56D	FTD72-BMW56D(040912)	WG	4/9/2012	SVOC E525.2 TIC	Unknown1	17	J	ug/l
Area B Monitoring wells	BMW56D	FTD72-BMW56D(040912)	WG	4/9/2012	SVOC E525.2 TIC	Unknown1	6	J	ug/l
Area B Monitoring wells	BMW56D	FTD72-BMW56D(040912)	WG	4/9/2012	SVOC E525.2 TIC	Unknown1	7	J	ug/l
Area B Monitoring wells	BMW56D	FTD72-BMW56D(040912)	WG	4/9/2012	SVOC E525.2 TIC	Unknown1	19	J	ug/l
Area B Monitoring wells	BMW56D	FTD72-BMW56D(040912)	WG	4/9/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW57D	FTD72-BMW57D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Total SVOC TICs	110	J	ug/l
Area B Monitoring wells	BMW57D	FTD72-BMW57D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	8	J	ug/l
Area B Monitoring wells	BMW57D	FTD72-BMW57D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	12	J	ug/l
Area B Monitoring wells	BMW57D	FTD72-BMW57D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	16	J	ug/l
Area B Monitoring wells	BMW57D	FTD72-BMW57D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	19	J	ug/l
Area B Monitoring wells	BMW57D	FTD72-BMW57D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	39	J	ug/l
Area B Monitoring wells	BMW57D	FTD72-BMW57D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	5	J	ug/l
Area B Monitoring wells	BMW57D	FTD72-BMW57D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	5	J	ug/l
Area B Monitoring wells	BMW57D	FTD72-BMW57D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	6	J	ug/l
Area B Monitoring wells	BMW57D	FTD72-BMW57D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	5	J	ug/l
Area B Monitoring wells	BMW57D	FTD72-BMW57D(041012)	WG	4/10/2012	VOCs TICs	Dichloromonofluoromethan	34	J	ug/l
Area B Monitoring wells	BMW57D	FTD72-BMW57D(041012)	WG	4/10/2012	VOCs TICs	Total VOC TICs	34	J	ug/l
Area B Monitoring wells	BMW58D	FTD72-BMW58D(040612)	WG	4/6/2012	SVOCs TICs	Diacetone Alcohol	31	J	ug/l
Area B Monitoring wells	BMW58D	FTD72-BMW58D(040612)	WG	4/6/2012	SVOCs TICs	Mesityl Oxide	6	BJ	ug/l
Area B Monitoring wells	BMW58D	FTD72-BMW58D(040612)	WG	4/6/2012	SVOCs TICs	Total SVOC TICs	120	JAB	ug/l
Area B Monitoring wells	BMW58D	FTD72-BMW58D(040612)	WG	4/6/2012	SVOCs TICs	Unknown alkane1	10	J	ug/l
Area B Monitoring wells	BMW58D	FTD72-BMW58D(040612)	WG	4/6/2012	SVOCs TICs	Unknown1	47	J	ug/l
Area B Monitoring wells	BMW58D	FTD72-BMW58D(040612)	WG	4/6/2012	SVOCs TICs	Unknown1	25	J	ug/l
Area B Monitoring wells	BMW58D	FTD72-BMW58D(040612)	WG	4/6/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW59D	FTD72-DUP003(040612)FD	WG	4/6/2012	SVOCs TICs	Diacetone Alcohol	44	J	ug/l
Area B Monitoring wells	BMW59D	FTD72-BMW59D(040612)	WG	4/6/2012	SVOCs TICs	Diacetone Alcohol	27	J	ug/l
Area B Monitoring wells	BMW59D	FTD72-DUP003(040612)FD	WG	4/6/2012	SVOCs TICs	Mesityl Oxide	9	BJ	ug/l
Area B Monitoring wells	BMW59D	FTD72-BMW59D(040612)	WG	4/6/2012	SVOCs TICs	Mesityl Oxide	8	BJ	ug/l
Area B Monitoring wells	BMW59D	FTD72-DUP003(040612)FD	WG	4/6/2012	SVOCs TICs	Total SVOC TICs	99	BJ	ug/l
Area B Monitoring wells	BMW59D	FTD72-BMW59D(040612)	WG	4/6/2012	SVOCs TICs	Total SVOC TICs	47	BJ	ug/l
Area B Monitoring wells	BMW59D	FTD72-DUP003(040612)FD	WG	4/6/2012	SVOCs TICs	Unknown1	26	J	ug/l
Area B Monitoring wells	BMW59D	FTD72-DUP003(040612)FD	WG	4/6/2012	SVOCs TICs	Unknown1	5	J	ug/l
Area B Monitoring wells	BMW59D	FTD72-BMW59D(040612)	WG	4/6/2012	SVOCs TICs	Unknown1	8	J	ug/l
Area B Monitoring wells	BMW59D	FTD72-BMW59D(040612)	WG	4/6/2012	SVOCs TICs	Unknown1	5	J	ug/l
Area B Monitoring wells	BMW59D	FTD72-DUP003(040612)FD	WG	4/6/2012	SVOCs TICs	Unknown1	7	J	ug/l
Area B Monitoring wells	BMW59D	FTD72-DUP003(040612)FD	WG	4/6/2012	SVOCs TICs	Unknown1	9	J	ug/l
Area B Monitoring wells	BMW59D	FTD72-BMW59D(040612)	WG	4/6/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW59D	FTD72-DUP003(040612)FD	WG	4/6/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW5D	FTD72-BMW5D(033012)	WG	3/30/2012	SVOCs TICs	N-(3-Methylbutyl)acetamide	82	J	ug/l
Area B Monitoring wells	BMW5D	FTD72-BMW5D(033012)	WG	3/30/2012	SVOCs TICs	Total SVOC TICs	82	J	ug/l
Area B Monitoring wells	BMW5D	FTD72-BMW5D(033012)	WG	3/30/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW61	FTD72-BMW61(040412)	WG	4/4/2012	SVOCs TICs	Diacetone Alcohol	7	J	ug/l
Area B Monitoring wells	BMW61	FTD72-BMW61(040412)	WG	4/4/2012	SVOCs TICs	Mesityl Oxide	5	J	ug/l
Area B Monitoring wells	BMW61	FTD72-BMW61(040412)	WG	4/4/2012	SVOCs TICs	Total SVOC TICs	12	J	ug/l
Area B Monitoring wells	BMW61	FTD72-BMW61(040412)	WG	4/4/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW62	FTD72-BMW62(040212)	WG	4/2/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW62	FTD72-BMW62(040212)	WG	4/2/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW63	FTD72-BMW63(040212)	WG	4/2/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW63	FTD72-BMW63(040212)	WG	4/2/2012	VOCs TICs	Chlorodifluoromethane	3	J	ug/l
Area B Monitoring wells	BMW63	FTD72-BMW63(040212)	WG	4/2/2012	VOCs TICs	Ethyl Ether	1	J	ug/l
Area B Monitoring wells	BMW63	FTD72-BMW63(040212)	WG	4/2/2012	VOCs TICs	Total VOC TICs	4	J	ug/l
Area B Monitoring wells	BMW64	FTD72-BMW64(040312)	WG	4/3/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW64	FTD72-BMW64(040312)	WG	4/3/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Total SVOC TICs	590	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown Semivoloatile TIC	9	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	51	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	66	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	15	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	17	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	18	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	37	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	96	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	21	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	28	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	22	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	22	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	21	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	18	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	25	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	17	J	ug/l

Table A.7.5.4-9
Round 1 Tentatively Identified Compounds
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Sampling Area	Location ID	Sample Name	Matrix	Date Collected	Parameter Group	Analyte	Result Value	Result Qualifiers	Result Units
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown16	14	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown16	9	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown16	9	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown16	10	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown16	11	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown16	12	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown16	13	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown16	15	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	SVOCs TICs	Unknown16	15	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	VOCs TICs	2-Ethyl-1-Hexanol	3	J	ug/l
Area B Monitoring wells	BMW65A	FTD72-BMW65A(041112)	WG	4/11/2012	VOCs TICs	Total VOC TICs	3	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Total SVOC TICs	380	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown alkane1	5	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown alkane1	6	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown1	78	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown1	11	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown1	56	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown1	54	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown1	25	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown1	21	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown1	19	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown1	11	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown1	7	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown1	8	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown1	8	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown1	9	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown1	10	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown1	10	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown1	18	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown16	6	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown16	4	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown16	5	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown16	5	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	SVOCs TICs	Unknown16	6	J	ug/l
Area B Monitoring wells	BMW65B	FTD72-BMW65B(041012)	WG	4/10/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW66B	FTD72-BMW66B(040412)	WG	4/4/2012	SVOCs TICs	Diacetone Alcohol	9	J	ug/l
Area B Monitoring wells	BMW66B	FTD72-BMW66B(040412)	WG	4/4/2012	SVOCs TICs	Mesityl Oxide	5	J	ug/l
Area B Monitoring wells	BMW66B	FTD72-BMW66B(040412)	WG	4/4/2012	SVOCs TICs	Total SVOC TICs	19	J	ug/l
Area B Monitoring wells	BMW66B	FTD72-BMW66B(040412)	WG	4/4/2012	SVOCs TICs	Unknown1	4	J	ug/l
Area B Monitoring wells	BMW66B	FTD72-BMW66B(040412)	WG	4/4/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW66D	FTD72-BMW66D(040412)	WG	4/4/2012	SVOCs TICs	Diacetone Alcohol	8	J	ug/l
Area B Monitoring wells	BMW66D	FTD72-BMW66D(040412)	WG	4/4/2012	SVOCs TICs	Mesityl Oxide	5	J	ug/l
Area B Monitoring wells	BMW66D	FTD72-BMW66D(040412)	WG	4/4/2012	SVOCs TICs	Total SVOC TICs	13	J	ug/l
Area B Monitoring wells	BMW66D	FTD72-BMW66D(040412)	WG	4/4/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW67A	FTD72-BMW67A(041112)	WG	4/11/2012	SVOCs TICs	Mesityl Oxide	19	JA	ug/l
Area B Monitoring wells	BMW67A	FTD72-BMW67A(041112)	WG	4/11/2012	SVOCs TICs	Total SVOC TICs	140	JA	ug/l
Area B Monitoring wells	BMW67A	FTD72-BMW67A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	11	J	ug/l
Area B Monitoring wells	BMW67A	FTD72-BMW67A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	5	J	ug/l
Area B Monitoring wells	BMW67A	FTD72-BMW67A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	6	J	ug/l
Area B Monitoring wells	BMW67A	FTD72-BMW67A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	5	J	ug/l
Area B Monitoring wells	BMW67A	FTD72-BMW67A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	8	J	ug/l
Area B Monitoring wells	BMW67A	FTD72-BMW67A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	11	J	ug/l
Area B Monitoring wells	BMW67A	FTD72-BMW67A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	14	J	ug/l
Area B Monitoring wells	BMW67A	FTD72-BMW67A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	46	J	ug/l
Area B Monitoring wells	BMW67A	FTD72-BMW67A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	4	J	ug/l
Area B Monitoring wells	BMW67A	FTD72-BMW67A(041112)	WG	4/11/2012	SVOCs TICs	Unknown1	8	J	ug/l
Area B Monitoring wells	BMW67A	FTD72-BMW67A(041112)	WG	4/11/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW67C	FTD72-BMW67C(041112)	WG	4/11/2012	SVOC E525.2 TIC	1-Methylnaphthalene	40	J	ug/l
Area B Monitoring wells	BMW67C	FTD72-BMW67C(041112)	WG	4/11/2012	SVOC E525.2 TIC	Total SVOC TICs	620	J	ug/l
Area B Monitoring wells	BMW67C	FTD72-BMW67C(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	8	J	ug/l
Area B Monitoring wells	BMW67C	FTD72-BMW67C(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	130	J	ug/l
Area B Monitoring wells	BMW67C	FTD72-BMW67C(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	15	J	ug/l
Area B Monitoring wells	BMW67C	FTD72-BMW67C(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	14	J	ug/l
Area B Monitoring wells	BMW67C	FTD72-BMW67C(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	18	J	ug/l
Area B Monitoring wells	BMW67C	FTD72-BMW67C(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	30	J	ug/l
Area B Monitoring wells	BMW67C	FTD72-BMW67C(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	41	J	ug/l
Area B Monitoring wells	BMW67C	FTD72-BMW67C(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	5	J	ug/l
Area B Monitoring wells	BMW67C	FTD72-BMW67C(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	99	J	ug/l
Area B Monitoring wells	BMW67C	FTD72-BMW67C(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	54	J	ug/l
Area B Monitoring wells	BMW67C	FTD72-BMW67C(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	55	J	ug/l
Area B Monitoring wells	BMW67C	FTD72-BMW67C(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	81	J	ug/l
Area B Monitoring wells	BMW67C	FTD72-BMW67C(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	32	J	ug/l
Area B Monitoring wells	BMW67C	FTD72-BMW67C(041112)	WG	4/11/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW67C	BMW67C(12042011)	AA	12/4/2011	VOCs TICs	Unknown alkane1	2	J	ppbv
Area B Monitoring wells	BMW67C	BMW67C(12042011)	AA	12/4/2011	VOCs TICs	Unknown aromatic	290	J	ppbv
Area B Monitoring wells	BMW67C	BMW67C(12042011)	AA	12/4/2011	VOCs TICs	Unknown aromatic	4	J	ppbv
Area B Monitoring wells	BMW67C	BMW67C(12042011)	AA	12/4/2011	VOCs TICs	Unknown aromatic	2	J	ppbv
Area B Monitoring wells	BMW67D	FTD72-BMW67D(041112)	WG	4/11/2012	SVOC E525.2 TIC	Total SVOC TICs	24	J	ug/l
Area B Monitoring wells	BMW67D	FTD72-BMW67D(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	10	J	ug/l
Area B Monitoring wells	BMW67D	FTD72-BMW67D(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	8	J	ug/l
Area B Monitoring wells	BMW67D	FTD72-BMW67D(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	6	J	ug/l

Table A.7.5.4-9
Round 1 Tentatively Identified Compounds
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Sampling Area	Location ID	Sample Name	Matrix	Date Collected	Parameter Group	Analyte	Result Value	Result Qualifiers	Result Units
Area B Monitoring wells	BMW67D	FTD72-BMW67D(041112)	WG	4/11/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW68A	FTD72-BMW68A(041012)	WG	4/10/2012	SVOC E525.2 TIC	Total SVOC TICs	68	J	ug/l
Area B Monitoring wells	BMW68A	FTD72-BMW68A(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	8	J	ug/l
Area B Monitoring wells	BMW68A	FTD72-BMW68A(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	8	J	ug/l
Area B Monitoring wells	BMW68A	FTD72-BMW68A(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	5	J	ug/l
Area B Monitoring wells	BMW68A	FTD72-BMW68A(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	48	J	ug/l
Area B Monitoring wells	BMW68A	FTD72-BMW68A(041012)	WG	4/10/2012	VOCs TICs	Dichloromonofluoromethan	24	J	ug/l
Area B Monitoring wells	BMW68A	FTD72-BMW68A(041012)	WG	4/10/2012	VOCs TICs	Total VOC TICs	24	J	ug/l
Area B Monitoring wells	BMW68B	FTD72-BMW68B(040912)	WG	4/9/2012	SVOC E525.2 TIC	Mesityl Oxide	15	JA	ug/l
Area B Monitoring wells	BMW68B	FTD72-BMW68B(040912)	WG	4/9/2012	SVOC E525.2 TIC	Total SVOC TICs	85	JA	ug/l
Area B Monitoring wells	BMW68B	FTD72-BMW68B(040912)	WG	4/9/2012	SVOC E525.2 TIC	Unknown1	12	J	ug/l
Area B Monitoring wells	BMW68B	FTD72-BMW68B(040912)	WG	4/9/2012	SVOC E525.2 TIC	Unknown1	10	J	ug/l
Area B Monitoring wells	BMW68B	FTD72-BMW68B(040912)	WG	4/9/2012	SVOC E525.2 TIC	Unknown1	8	J	ug/l
Area B Monitoring wells	BMW68B	FTD72-BMW68B(040912)	WG	4/9/2012	SVOC E525.2 TIC	Unknown1	5	J	ug/l
Area B Monitoring wells	BMW68B	FTD72-BMW68B(040912)	WG	4/9/2012	SVOC E525.2 TIC	Unknown1	5	J	ug/l
Area B Monitoring wells	BMW68B	FTD72-BMW68B(040912)	WG	4/9/2012	SVOC E525.2 TIC	Unknown1	29	J	ug/l
Area B Monitoring wells	BMW68B	FTD72-BMW68B(040912)	WG	4/9/2012	VOCs TICs	Dichloromonofluoromethan	32	J	ug/l
Area B Monitoring wells	BMW68B	FTD72-BMW68B(040912)	WG	4/9/2012	VOCs TICs	Total VOC TICs	32	J	ug/l
Area B Monitoring wells	BMW68C	FTD72-BMW68C(041012)	WG	4/10/2012	SVOC E525.2 TIC	Total SVOC TICs	65	J	ug/l
Area B Monitoring wells	BMW68C	FTD72-BMW68C(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	39	J	ug/l
Area B Monitoring wells	BMW68C	FTD72-BMW68C(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	5	J	ug/l
Area B Monitoring wells	BMW68C	FTD72-BMW68C(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	13	J	ug/l
Area B Monitoring wells	BMW68C	FTD72-BMW68C(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	4	J	ug/l
Area B Monitoring wells	BMW68C	FTD72-BMW68C(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	4	J	ug/l
Area B Monitoring wells	BMW68C	FTD72-BMW68C(041012)	WG	4/10/2012	VOCs TICs	Total VOC TICs	30	J	ug/l
Area B Monitoring wells	BMW68C	FTD72-BMW68C(041012)	WG	4/10/2012	VOCs TICs	Unknown alkane1	30	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Total SVOC TICs	160	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown alkane1	6	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	7	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	6	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	6	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	6	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	6	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	10	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	8	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	8	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	7	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	7	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	7	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	7	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	7	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	23	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	8	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown16	6	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown16	5	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown16	5	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown16	5	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown16	5	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown16	5	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	VOCs TICs	Total VOC TICs	29	J	ug/l
Area B Monitoring wells	BMW68D	FTD72-BMW68D(041012)	WG	4/10/2012	VOCs TICs	Unknown alkane1	29	J	ug/l
Area B Monitoring wells	BMW68E	FTD72-BMW68E(040912)	WG	4/9/2012	SVOC E525.2 TIC	Total SVOC TICs	100	J	ug/l
Area B Monitoring wells	BMW68E	FTD72-BMW68E(040912)	WG	4/9/2012	SVOC E525.2 TIC	Unknown1	71	J	ug/l
Area B Monitoring wells	BMW68E	FTD72-BMW68E(040912)	WG	4/9/2012	SVOC E525.2 TIC	Unknown1	7	J	ug/l
Area B Monitoring wells	BMW68E	FTD72-BMW68E(040912)	WG	4/9/2012	SVOC E525.2 TIC	Unknown1	24	J	ug/l
Area B Monitoring wells	BMW68E	FTD72-BMW68E(040912)	WG	4/9/2012	VOCs TICs	Total VOC TICs	27	J	ug/l
Area B Monitoring wells	BMW68E	FTD72-BMW68E(040912)	WG	4/9/2012	VOCs TICs	Unknown alkane1	27	J	ug/l
Area B Monitoring wells	BMW69A	FTD72-BMW69A(040412)	WG	4/4/2012	SVOCs TICs	Total SVOC TICs	5	J	ug/l
Area B Monitoring wells	BMW69A	FTD72-BMW69A(040412)	WG	4/4/2012	SVOCs TICs	Unknown1	5	J	ug/l
Area B Monitoring wells	BMW69A	FTD72-BMW69A(040412)	WG	4/4/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW70A	FTD72-BMW70A(040412)	WG	4/4/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW70A	FTD72-BMW70A(040412)	WG	4/4/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW70B	FTD72-BMW70B(040412)	WG	4/4/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW70B	FTD72-BMW70B(040412)	WG	4/4/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW70C	FTD72-BMW70C(040412)	WG	4/4/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW70C	FTD72-BMW70C(040412)	WG	4/4/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW71A	FTD72-BMW71A(032812)	WG	3/28/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW71A	FTD72-BMW71A(032812)	WG	3/28/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW71B	FTD72-BMW71B(032812)	WG	3/28/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW71B	FTD72-BMW71B(032812)	WG	3/28/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW71C	FTD72-BMW71C(032912)	WG	3/29/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW71C	FTD72-BMW71C(032912)	WG	3/29/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW72	FTD72-DUP-001(032912)FD	WG	3/29/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW72	FTD72-BMW72(032912)	WG	3/29/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW72	FTD72-BMW72(032912)	WG	3/29/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW72	FTD72-DUP-001(032912)FD	WG	3/29/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW73	FTD72-BMW73(041012)	WG	4/10/2012	SVOC E525.2 TIC	Total SVOC TICs	27	J	ug/l
Area B Monitoring wells	BMW73	FTD72-BMW73(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown alkane1	7	J	ug/l
Area B Monitoring wells	BMW73	FTD72-BMW73(041012)	WG	4/10/2012	SVOC E525.2 TIC	Unknown1	20	J	ug/l
Area B Monitoring wells	BMW73	FTD72-BMW73(041012)	WG	4/10/2012	VOCs TICs	Total VOC TICs	0		ug/l

Table A.7.5.4-9
Round 1 Tentatively Identified Compounds
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Sampling Area	Location ID	Sample Name	Matrix	Date Collected	Parameter Group	Analyte	Result Value	Result Qualifiers	Result Units
Area B Monitoring wells	BMW74	FTD72-BMW74(040512)	WG	4/5/2012	SVOCs TICs	Total SVOC TICs	5	J	ug/l
Area B Monitoring wells	BMW74	FTD72-BMW74(040512)	WG	4/5/2012	SVOCs TICs	Unknown1	5	J	ug/l
Area B Monitoring wells	BMW74	FTD72-BMW74(040512)	WG	4/5/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW76	FTD72-BMW76(040212)	WG	4/2/2012	SVOCs TICs	Total SVOC TICs	83	J	ug/l
Area B Monitoring wells	BMW76	FTD72-BMW76(040212)	WG	4/2/2012	SVOCs TICs	Unknown alkane1	76	J	ug/l
Area B Monitoring wells	BMW76	FTD72-BMW76(040212)	WG	4/2/2012	SVOCs TICs	Unknown1	6	J	ug/l
Area B Monitoring wells	BMW76	FTD72-BMW76(040212)	WG	4/2/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW77	FTD72-BMW77(040212)	WG	4/2/2012	SVOCs TICs	Total SVOC TICs	13	J	ug/l
Area B Monitoring wells	BMW77	FTD72-BMW77(040212)	WG	4/2/2012	SVOCs TICs	Unknown1	13	J	ug/l
Area B Monitoring wells	BMW77	FTD72-BMW77(040212)	WG	4/2/2012	VOCs TICs	Chlorodifluoromethane	1	J	ug/l
Area B Monitoring wells	BMW77	FTD72-BMW77(040212)	WG	4/2/2012	VOCs TICs	Total VOC TICs	1	J	ug/l
Area B Monitoring wells	BMW78A	FTD72-BMW78A(040312)	WG	4/3/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW78A	FTD72-BMW78A(040312)	WG	4/3/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW78B	FTD72-BMW78B(040312)	WG	4/3/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Area B Monitoring wells	BMW78B	FTD72-BMW78B(040312)	WG	4/3/2012	VOCs TICs	Total VOC TICs	0		ug/l
Area B Monitoring wells	BMW9D	FTD72-BMW9D(040312)	WG	4/3/2012	SVOCs TICs	Mesityl Oxide	6	JAB	ug/l
Area B Monitoring wells	BMW9D	FTD72-BMW9D(040312)	WG	4/3/2012	SVOCs TICs	Total SVOC TICs	83	JAB	ug/l
Area B Monitoring wells	BMW9D	FTD72-BMW9D(040312)	WG	4/3/2012	SVOCs TICs	Unknown alkane1	77	J	ug/l
Area B Monitoring wells	BMW9D	FTD72-BMW9D(040312)	WG	4/3/2012	VOCs TICs	Total VOC TICs	0		ug/l
Dock Spring	STR5SW-53	FTD72-STR5SW-53(041612)	WG	4/16/2012	SVOCs TICs	Total SVOC TICs	14	J	ug/l
Dock Spring	STR5SW-53	FTD72-STR5SW-53(041612)	WG	4/16/2012	SVOCs TICs	Unknown1	6	J	ug/l
Dock Spring	STR5SW-53	FTD72-STR5SW-53(041612)	WG	4/16/2012	SVOCs TICs	Unknown1	8	J	ug/l
Dock Spring	STR5SW-53	FTD72-STR5SW-53(041612)	WG	4/16/2012	VOCs TICs	Total VOC TICs	0		ug/l
Hospital Spring	SW-117	FTD72-SW-117(041712)	WS	4/17/2012	SVOCs TICs	Mesityl Oxide	7	B	ug/l
Hospital Spring	SW-117	FTD72-SW-117(041712)	WS	4/17/2012	SVOCs TICs	Total SVOC TICs	14	JB	ug/l
Hospital Spring	SW-117	FTD72-SW-117(041712)	WS	4/17/2012	SVOCs TICs	Unknown alkane1	7	J	ug/l
Hospital Spring	SW-117	FTD72-SW-117(041712)	WS	4/17/2012	VOCs TICs	Total VOC TICs	0		ug/l
IDW	BMW67B	FTD72-DUP-004(041112)FD	WG	4/11/2012	SVOC E525.2 TIC	1-Methylnaphthalene	6	J	ug/l
IDW	BMW67B	FTD72-DUP-004(041112)FD	WG	4/11/2012	SVOC E525.2 TIC	Total SVOC TICs	4600	J	ug/l
IDW	BMW67B	FTD72-BMW67B(041112)	WG	4/11/2012	SVOC E525.2 TIC	Total SVOC TICs	200	J	ug/l
IDW	BMW67B	FTD72-DUP-004(041112)FD	WG	4/11/2012	SVOC E525.2 TIC	Unknown alkane1	8	J	ug/l
IDW	BMW67B	FTD72-BMW67B(041112)	WG	4/11/2012	SVOC E525.2 TIC	UNKNOWN PAH1	35	J	ug/l
IDW	BMW67B	FTD72-BMW67B(041112)	WG	4/11/2012	SVOC E525.2 TIC	UNKNOWN PAH1	5	J	ug/l
IDW	BMW67B	FTD72-DUP-004(041112)FD	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	1000	J	ug/l
IDW	BMW67B	FTD72-DUP-004(041112)FD	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	67	J	ug/l
IDW	BMW67B	FTD72-DUP-004(041112)FD	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	67	J	ug/l
IDW	BMW67B	FTD72-BMW67B(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	52	J	ug/l
IDW	BMW67B	FTD72-BMW67B(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	30	J	ug/l
IDW	BMW67B	FTD72-BMW67B(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	25	J	ug/l
IDW	BMW67B	FTD72-BMW67B(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	15	J	ug/l
IDW	BMW67B	FTD72-BMW67B(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	11	J	ug/l
IDW	BMW67B	FTD72-BMW67B(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	10	J	ug/l
IDW	BMW67B	FTD72-BMW67B(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	4	J	ug/l
IDW	BMW67B	FTD72-DUP-004(041112)FD	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	91	J	ug/l
IDW	BMW67B	FTD72-DUP-004(041112)FD	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	13	J	ug/l
IDW	BMW67B	FTD72-DUP-004(041112)FD	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	7	J	ug/l
IDW	BMW67B	FTD72-DUP-004(041112)FD	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	3100	J	ug/l
IDW	BMW67B	FTD72-BMW67B(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	10	J	ug/l
IDW	BMW67B	FTD72-DUP-004(041112)FD	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	5	J	ug/l
IDW	BMW67B	FTD72-DUP-004(041112)FD	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	6	J	ug/l
IDW	BMW67B	FTD72-DUP-004(041112)FD	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	110	J	ug/l
IDW	BMW67B	FTD72-BMW67B(041112)	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	5	J	ug/l
IDW	BMW67B	FTD72-DUP-004(041112)FD	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	38	J	ug/l
IDW	BMW67B	FTD72-DUP-004(041112)FD	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	4	J	ug/l
IDW	BMW67B	FTD72-DUP-004(041112)FD	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	15	J	ug/l
IDW	BMW67B	FTD72-DUP-004(041112)FD	WG	4/11/2012	SVOC E525.2 TIC	Unknown1	28	J	ug/l
IDW	BMW67B	FTD72-DUP-004(041112)FD	WG	4/11/2012	VOCs TICs	Total VOC TICs	0		ug/l
IDW	BMW67B	FTD72-BMW67B(041112)	WG	4/11/2012	VOCs TICs	Total VOC TICs	0		ug/l
North Armory Spring	STR5SW-30	FTD72-STR5SW-30(041612)	WG	4/16/2012	SVOCs TICs	Total SVOC TICs	130	J	ug/l
North Armory Spring	STR5SW-30	FTD72-STR5SW-30(041612)	WG	4/16/2012	SVOCs TICs	Unknown alkane1	5	J	ug/l
North Armory Spring	STR5SW-30	FTD72-STR5SW-30(041612)	WG	4/16/2012	SVOCs TICs	Unknown alkane1	6	J	ug/l
North Armory Spring	STR5SW-30	FTD72-STR5SW-30(041612)	WG	4/16/2012	SVOCs TICs	Unknown1	11	J	ug/l
North Armory Spring	STR5SW-30	FTD72-STR5SW-30(041612)	WG	4/16/2012	SVOCs TICs	Unknown1	110	J	ug/l
North Armory Spring	STR5SW-30	FTD72-STR5SW-30(041612)	WG	4/16/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	EB001	FTD72-EB001(040212)	WQ	4/2/2012	SVOCs TICs	Mesityl Oxide	7	JAB	ug/l
QA/QC	EB001	FTD72-EB001(041712)	WQ	4/17/2012	SVOCs TICs	Mesityl Oxide	6	B	ug/l
QA/QC	EB001	FTD72-EB001(041912)	WQ	4/19/2012	SVOCs TICs	Total SVOC TICs	5	J	ug/l
QA/QC	EB001	FTD72-EB001(040212)	WQ	4/2/2012	SVOCs TICs	Total SVOC TICs	11	JAB	ug/l
QA/QC	EB001	FTD72-EB001(041712)	WQ	4/17/2012	SVOCs TICs	Total SVOC TICs	14	BJ	ug/l
QA/QC	EB001	FTD72-EB001(041912)	WQ	4/19/2012	SVOCs TICs	Unknown alkane1	5	J	ug/l
QA/QC	EB001	FTD72-EB001(041712)	WQ	4/17/2012	SVOCs TICs	Unknown alkane1	8	J	ug/l
QA/QC	EB001	FTD72-EB001(040212)	WQ	4/2/2012	SVOCs TICs	Unknown1	4	J	ug/l
QA/QC	EB001	FTD72-EB001(041912)	WQ	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	EB001	FTD72-EB001(040212)	WQ	4/2/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	EB001	FTD72-EB001(041712)	WQ	4/17/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	EB002	FTD72-EB002(040312)	WQ	4/3/2012	SVOCs TICs	Diacetone Alcohol	25	JA	ug/l
QA/QC	EB002	FTD72-EB002(040312)	WQ	4/3/2012	SVOCs TICs	Mesityl Oxide	7	JAB	ug/l
QA/QC	EB002	FTD72-EB002(042012)	WQ	4/20/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
QA/QC	EB002	FTD72-EB002(040312)	WQ	4/3/2012	SVOCs TICs	Total SVOC TICs	55	BJ	ug/l
QA/QC	EB002	FTD72-EB002(040312)	WQ	4/3/2012	SVOCs TICs	Unknown1	23	J	ug/l
QA/QC	EB002	FTD72-EB002(042012)	WQ	4/20/2012	VOCs TICs	Tetrahydrofuran	1	J	ug/l

Table A.7.5.4-9
Round 1 Tentatively Identified Compounds
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Sampling Area	Location ID	Sample Name	Matrix	Date Collected	Parameter Group	Analyte	Result Value	Result Qualifiers	Result Units
QA/QC	EB002	FTD72-EB002(042012)	WQ	4/20/2012	VOCs TICs	Total VOC TICs	1	J	ug/l
QA/QC	EB002	FTD72-EB002(040312)	WQ	4/3/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	EB003	FTD72-EB003(040512)	WQ	4/5/2012	SVOCs TICs	Total SVOC TICs	160	J	ug/l
QA/QC	EB003	FTD72-EB003(040512)	WQ	4/5/2012	SVOCs TICs	Unknown1	6	J	ug/l
QA/QC	EB003	FTD72-EB003(040512)	WQ	4/5/2012	SVOCs TICs	Unknown1	9	J	ug/l
QA/QC	EB003	FTD72-EB003(040512)	WQ	4/5/2012	SVOCs TICs	Unknown1	27	J	ug/l
QA/QC	EB003	FTD72-EB003(040512)	WQ	4/5/2012	SVOCs TICs	Unknown1	110	J	ug/l
QA/QC	EB003	FTD72-EB003(040512)	WQ	4/5/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	EB004	FTD72-EB004(041012)	WQ	4/10/2012	SVOC E525.2 TIC	Total SVOC TICs	0		ug/l
QA/QC	EB004	FTD72-EB004(041012)	WQ	4/10/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	TB001	FTD72-TB001(041812)	WQ	4/18/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	TB001	FTD72-TB001(040512)	WQ	4/5/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	TB001	FTD72-TB001(041712)	WQ	4/17/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	TB001	FTD72-TB001(041112)	WQ	4/11/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	TB001	FTD72-TB001(041812)	WQ	4/18/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	TB001	FTD72-TB001(041712)	WQ	4/17/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	TB001	FTD72-TB001(041012)	WQ	4/10/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	TB001	FTD72-TB001(041912)	WQ	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	TB001	FTD72-TB001(042412)	WQ	4/24/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	TB001	FTD72-TB001(042012)	WQ	4/20/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	TB001	FTD72-TB001(053012)	WQ	5/30/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	TB001	FTD72-TB001(040612)	WQ	4/6/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	TB001	FTD72-TB001(041912)	WQ	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	TB001	FTD72-TB001(041912)	WQ	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	TB002	FTD72-TB002(040412)	WQ	4/4/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	TB002	FTD72-TB002(033012)	WQ	3/30/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	TB002	FTD72-TB002(040212)	WQ	4/2/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	TB002	FTD72-TB002(042012)	WQ	4/20/2012	VOCs TICs	Total VOC TICs	0		ug/l
QA/QC	TB002	FTD72-TB002(040312)	WQ	4/3/2012	VOCs TICs	Total VOC TICs	0		ug/l
Residential Wells	DWGRAN-17	FTD72-DWGRAN-17(053012)	WG	5/30/2012	VOCs TICs	Total VOC TICs	0		ug/l
Residential Wells	DWSRD-1	FTD72-DWSRD-1(042412)	WG	4/24/2012	VOCs TICs	Total VOC TICs	0		ug/l
Residential Wells	DWSRD-26	FTD72-DUP001(042412)FD	WG	4/24/2012	VOCs TICs	Total VOC TICs	0		ug/l
Residential Wells	DWSRD-26	FTD72-DWSRD-26(042412)	WG	4/24/2012	VOCs TICs	Total VOC TICs	0		ug/l
Robinson Box Spring	RISP-3	FTD72-RISP-3(042012)	SE	4/20/2012	SVOCs TICs	Diacetone Alcohol	1500	JAB	ug/kg
Robinson Box Spring	RISP-3	FTD72-RISP-3(042012)	SE	4/20/2012	SVOCs TICs	Mesityl Oxide	300	JAB	ug/kg
Robinson Box Spring	RISP-3	FTD72-RISP-3(042012)	SE	4/20/2012	SVOCs TICs	Total SVOC TICs	1800	JAB	ug/kg
Robinson Box Spring	RISP-3	FTD72-RISP-3(042012)	SE	4/20/2012	SVOCs TICs	Total SVOC TICs	62	J	ug/l
Robinson Box Spring	RISP-3	FTD72-RISP-3(042012)	SE	4/20/2012	SVOCs TICs	Unknown1	62	J	ug/l
Robinson Box Spring	RISP-3	FTD72-RISP-3(042012)	SE	4/20/2012	VOCs TICs	Total VOC TICs	0		ug/l
Robinson Box Spring	RISP-3	FTD72-RISP-3(042012)	SE	4/20/2012	VOCs TICs	Total VOC TICs	27	J	ug/kg
Robinson Box Spring	RISP-3	FTD72-RISP-3(042012)	SE	4/20/2012	VOCs TICs	Unknown1	27	J	ug/kg
Robinson Rock Spring	RISP-4	FTD72-RISP-4(042012)	WG	4/20/2012	SVOCs TICs	Total SVOC TICs	58	J	ug/l
Robinson Rock Spring	RISP-4	FTD72-RISP-4(042012)	WG	4/20/2012	SVOCs TICs	Unknown1	58	J	ug/l
Robinson Rock Spring	RISP-4	FTD72-RISP-4(042012)	WG	4/20/2012	VOCs TICs	Total VOC TICs	0		ug/l
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	SVOCs TICs	Diacetone Alcohol	960	B	ug/kg
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	SVOCs TICs	Total SVOC TICs	10000	AJ	ug/kg
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	SVOCs TICs	Unknown alkane1	500	J	ug/kg
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	SVOCs TICs	Unknown alkane1	1300	J	ug/kg
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	SVOCs TICs	Unknown alkane1	1000	J	ug/kg
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	SVOCs TICs	Unknown alkane1	320	J	ug/kg
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	680	J	ug/kg
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	1000	J	ug/kg
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	220	J	ug/kg
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	1400	J	ug/kg
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	340	J	ug/kg
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	740	J	ug/kg
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	340	J	ug/kg
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	490	J	ug/kg
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	280	J	ug/kg
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	290	J	ug/kg
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	VOCs TICs	Total VOC TICs	220	J	ug/kg
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	VOCs TICs	Unknown alkane1	10	J	ug/kg
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	VOCs TICs	Unknown siloxane	12	B	ug/kg
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	VOCs TICs	Unknown1	170	J	ug/kg
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	VOCs TICs	Unknown1	24	J	ug/kg
Sediment	FTD72-SD-104	FTD72-SD-104(041912)	SE	4/19/2012	VOCs TICs	Unknown1	8	J	ug/kg
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	SVOCs TICs	Diacetone Alcohol	1100	B	ug/kg
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	SVOCs TICs	Total SVOC TICs	19000	AJ	ug/kg
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	SVOCs TICs	Unknown alkane1	1800	J	ug/kg
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	SVOCs TICs	Unknown alkane1	1500	J	ug/kg
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	SVOCs TICs	Unknown alkane1	900	J	ug/kg
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	SVOCs TICs	Unknown alkane1	810	J	ug/kg
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	SVOCs TICs	Unknown alkane1	640	J	ug/kg
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	330	J	ug/kg
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	1100	J	ug/kg
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	2200	J	ug/kg
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	2600	J	ug/kg
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	3600	J	ug/kg
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	370	J	ug/kg
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	740	J	ug/kg
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	320	J	ug/kg

Table A.7.5.4-9
Round 1 Tentatively Identified Compounds
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Sampling Area	Location ID	Sample Name	Matrix	Date Collected	Parameter Group	Analyte	Result Value	Result Qualifiers	Result Units
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	720	J	ug/kg
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	VOCs TICs	Total VOC TICs	120	J	ug/kg
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	VOCs TICs	Unknown siloxane	12	B	ug/kg
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	VOCs TICs	Unknown1	9	J	ug/kg
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	VOCs TICs	Unknown1	76	J	ug/kg
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	VOCs TICs	Unknown1	9	J	ug/kg
Sediment	FTD72-SD-105	FTD72-SD-105(041912)	SE	4/19/2012	VOCs TICs	Unknown1	10	J	ug/kg
Sediment	SD-101	FTD72-SD-101(041912)	SE	4/19/2012	SVOCs TICs	Diacetone Alcohol	1300	JA	ug/kg
Sediment	SD-101	FTD72-SD-101(041912)	SE	4/19/2012	SVOCs TICs	Mesityl Oxide	3600	JAB	ug/kg
Sediment	SD-101	FTD72-SD-101(041912)	SE	4/19/2012	SVOCs TICs	Total SVOC TICs	8700	J	ug/kg
Sediment	SD-101	FTD72-SD-101(041912)	SE	4/19/2012	SVOCs TICs	Unknown alkane1	650	J	ug/kg
Sediment	SD-101	FTD72-SD-101(041912)	SE	4/19/2012	SVOCs TICs	Unknown alkane1	460	J	ug/kg
Sediment	SD-101	FTD72-SD-101(041912)	SE	4/19/2012	SVOCs TICs	Unknown alkane1	210	J	ug/kg
Sediment	SD-101	FTD72-SD-101(041912)	SE	4/19/2012	SVOCs TICs	Unknown alkane1	300	J	ug/kg
Sediment	SD-101	FTD72-SD-101(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	590	J	ug/kg
Sediment	SD-101	FTD72-SD-101(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	490	J	ug/kg
Sediment	SD-101	FTD72-SD-101(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	300	J	ug/kg
Sediment	SD-101	FTD72-SD-101(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	230	J	ug/kg
Sediment	SD-101	FTD72-SD-101(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	200	J	ug/kg
Sediment	SD-101	FTD72-SD-101(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	180	J	ug/kg
Sediment	SD-101	FTD72-SD-101(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	190	J	ug/kg
Sediment	SD-101	FTD72-SD-101(041912)	SE	4/19/2012	VOCs TICs	Total VOC TICs	57	J	ug/kg
Sediment	SD-101	FTD72-SD-101(041912)	SE	4/19/2012	VOCs TICs	Unknown siloxane	15	BJ	ug/kg
Sediment	SD-101	FTD72-SD-101(041912)	SE	4/19/2012	VOCs TICs	Unknown1	42	J	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	SVOCs TICs	Diacetone Alcohol	1100	JA	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	SVOCs TICs	Diacetone Alcohol	1100	JAB	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	SVOCs TICs	Mesityl Oxide	5700	JAB	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	SVOCs TICs	Total SVOC TICs	5400	JAB	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	SVOCs TICs	Total SVOC TICs	17000	JAB	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	SVOCs TICs	Unknown alkane1	360	J	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	SVOCs TICs	Unknown alkane1	210	J	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	SVOCs TICs	Unknown alkane1	170	BJ	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	SVOCs TICs	Unknown alkane1	340	J	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	SVOCs TICs	Unknown alkane1	190	J	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	SVOCs TICs	Unknown alkane1	180	J	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	SVOCs TICs	Unknown alkane1	800	J	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	SVOCs TICs	Unknown1	180	J	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	SVOCs TICs	Unknown1	640	J	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	SVOCs TICs	Unknown1	160	J	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	SVOCs TICs	Unknown1	520	J	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	SVOCs TICs	Unknown1	460	J	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	SVOCs TICs	Unknown1	430	J	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	SVOCs TICs	Unknown1	270	J	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	SVOCs TICs	Unknown1	260	J	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	SVOCs TICs	Unknown1	240	J	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	SVOCs TICs	Unknown1	200	J	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	320	J	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	SVOCs TICs	Unknown1	240	J	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	320	J	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	360	J	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	270	J	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	360	J	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	410	J	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	730	J	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	1100	J	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	170	J	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	4900	J	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	240	J	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	VOCs TICs	Total VOC TICs	110	J	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	VOCs TICs	Total VOC TICs	160	J	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	VOCs TICs	Unknown siloxane	8	BJ	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	VOCs TICs	Unknown siloxane	14	BJ	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	VOCs TICs	Unknown1	8	J	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	VOCs TICs	Unknown1	13	J	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	VOCs TICs	Unknown1	13	J	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	VOCs TICs	Unknown1	99	J	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	VOCs TICs	Unknown1	64	J	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	VOCs TICs	Unknown1	7	J	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	VOCs TICs	Unknown1	7	J	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	VOCs TICs	Unknown1	7	J	ug/kg
Sediment	SD-102	FTD72-SD-102(041912)	SE	4/19/2012	VOCs TICs	Unknown1	7	J	ug/kg
Sediment	SD-102	FTD72-DUP-002(041912)FD	SE	4/19/2012	VOCs TICs	Unknown1	14	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Mesityl Oxide	7500	JAB	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Total SVOC TICs	30000	JAB	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown alkane1	3100	BJ	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown alkane1	990	BJ	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown alkane1	890	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown alkane1	460	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	2100	J	ug/kg

Table A.7.5.4-9
Round 1 Tentatively Identified Compounds
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Sampling Area	Location ID	Sample Name	Matrix	Date Collected	Parameter Group	Analyte	Result Value	Result Qualifiers	Result Units
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	1500	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	1100	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	400	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	870	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	2200	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	660	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	640	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	890	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	490	BJ	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	510	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	520	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	580	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	3600	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown1	440	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown16	400	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown16	390	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	SVOCs TICs	Unknown16	340	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	VOCs TICs	Total VOC TICs	110	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	VOCs TICs	Unknown siloxane	10	BJ	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	VOCs TICs	Unknown1	16	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	VOCs TICs	Unknown1	18	J	ug/kg
Sediment	SD-103	FTD72-SD-103(041912)	SE	4/19/2012	VOCs TICs	Unknown1	67	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Diacetone Alcohol	2400	JA	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Mesityl Oxide	6600	JAB	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Total SVOC TICs	25000	JAB	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Unknown alkane1	740	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Unknown alkane1	420	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Unknown alkane1	400	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	2100	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	740	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	850	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	390	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	1100	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	490	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	1400	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	2000	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	660	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	340	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	350	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	380	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	470	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	2200	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	350	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Unknown16	280	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Unknown16	330	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	SVOCs TICs	Unknown16	300	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	VOCs TICs	Total VOC TICs	11	J	ug/kg
Sediment	SD-106	FTD72-SD-106(041812)	SE	4/18/2012	VOCs TICs	Unknown1	11	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Diacetone Alcohol	2700	JA	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Mesityl Oxide	12000	JAB	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Total SVOC TICs	52000	JAB	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Unknown alkane1	1700	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Unknown alkane1	3600	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Unknown alkane1	3300	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Unknown alkane1	2100	BJ	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Unknown alkane1	1800	BJ	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Unknown alkane1	3900	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	630	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	1000	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	1400	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	1400	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	1500	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	1500	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	1600	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	2100	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	610	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	790	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	810	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	1000	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	3500	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	2700	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	810	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	VOCs TICs	Total VOC TICs	860	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	VOCs TICs	Unknown siloxane	96	BJ	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	VOCs TICs	Unknown1	100	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	VOCs TICs	Unknown1	23	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	VOCs TICs	Unknown1	30	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	VOCs TICs	Unknown1	61	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	VOCs TICs	Unknown1	110	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	VOCs TICs	Unknown1	380	J	ug/kg
Sediment	SD-107	FTD72-SD-107(041812)	SE	4/18/2012	VOCs TICs	Unknown1	55	J	ug/kg

Table A.7.5.4-9
Round 1 Tentatively Identified Compounds
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Sampling Area	Location ID	Sample Name	Matrix	Date Collected	Parameter Group	Analyte	Result Value	Result Qualifiers	Result Units
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Diacetone Alcohol	1300	JA	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Mesityl Oxide	5600	JAB	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Toluene	430	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Total SVOC TICs	20000	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	530	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	720	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	400	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	380	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	580	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	520	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	490	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	540	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	590	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	650	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	740	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	760	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	190	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	290	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	290	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	360	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	360	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	3400	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	460	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	VOCs TICs	Total VOC TICs	41	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	VOCs TICs	Unknown siloxane	34	J	ug/kg
Sediment	SD-108	FTD72-SD-108(041712)	SE	4/17/2012	VOCs TICs	Unknown1	8	J	ug/kg
Sediment	SD-109	FTD72-SD-109(041612)	SE	4/16/2012	SVOCs TICs	Chlolesterol	240	J	ug/kg
Sediment	SD-109	FTD72-SD-109(041612)	SE	4/16/2012	SVOCs TICs	Diacetone Alcohol	1300	JA	ug/kg
Sediment	SD-109	FTD72-SD-109(041612)	SE	4/16/2012	SVOCs TICs	Mesityl Oxide	6200	JAB	ug/kg
Sediment	SD-109	FTD72-SD-109(041612)	SE	4/16/2012	SVOCs TICs	Total SVOC TICs	19000	JAB	ug/kg
Sediment	SD-109	FTD72-SD-109(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	240	J	ug/kg
Sediment	SD-109	FTD72-SD-109(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	350	J	ug/kg
Sediment	SD-109	FTD72-SD-109(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	440	J	ug/kg
Sediment	SD-109	FTD72-SD-109(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	490	J	ug/kg
Sediment	SD-109	FTD72-SD-109(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	650	J	ug/kg
Sediment	SD-109	FTD72-SD-109(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1000	J	ug/kg
Sediment	SD-109	FTD72-SD-109(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1600	J	ug/kg
Sediment	SD-109	FTD72-SD-109(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	6500	J	ug/kg
Sediment	SD-109	FTD72-SD-109(041612)	SE	4/16/2012	VOCs TICs	Total VOC TICs	72	J	ug/kg
Sediment	SD-109	FTD72-SD-109(041612)	SE	4/16/2012	VOCs TICs	Unknown siloxane	24	J	ug/kg
Sediment	SD-109	FTD72-SD-109(041612)	SE	4/16/2012	VOCs TICs	Unknown1	38	J	ug/kg
Sediment	SD-109	FTD72-SD-109(041612)	SE	4/16/2012	VOCs TICs	Unknown1	11	J	ug/kg
Sediment	SD-110	FTD72-SD-110(041612)	SE	4/16/2012	SVOCs TICs	Diacetone Alcohol	1700	JA	ug/kg
Sediment	SD-110	FTD72-SD-110(041612)	SE	4/16/2012	SVOCs TICs	Mesityl Oxide	5200	JAB	ug/kg
Sediment	SD-110	FTD72-SD-110(041612)	SE	4/16/2012	SVOCs TICs	Total SVOC TICs	19000	JAB	ug/kg
Sediment	SD-110	FTD72-SD-110(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	860	J	ug/kg
Sediment	SD-110	FTD72-SD-110(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	5400	J	ug/kg
Sediment	SD-110	FTD72-SD-110(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	320	J	ug/kg
Sediment	SD-110	FTD72-SD-110(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	310	J	ug/kg
Sediment	SD-110	FTD72-SD-110(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	990	J	ug/kg
Sediment	SD-110	FTD72-SD-110(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	860	J	ug/kg
Sediment	SD-110	FTD72-SD-110(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	830	J	ug/kg
Sediment	SD-110	FTD72-SD-110(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	700	J	ug/kg
Sediment	SD-110	FTD72-SD-110(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	560	J	ug/kg
Sediment	SD-110	FTD72-SD-110(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	370	J	ug/kg
Sediment	SD-110	FTD72-SD-110(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	350	J	ug/kg
Sediment	SD-110	FTD72-SD-110(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	250	J	ug/kg
Sediment	SD-110	FTD72-SD-110(041612)	SE	4/16/2012	VOCs TICs	Total VOC TICs	150	J	ug/kg
Sediment	SD-110	FTD72-SD-110(041612)	SE	4/16/2012	VOCs TICs	Unknown siloxane	39	J	ug/kg
Sediment	SD-110	FTD72-SD-110(041612)	SE	4/16/2012	VOCs TICs	Unknown1	98	J	ug/kg
Sediment	SD-110	FTD72-SD-110(041612)	SE	4/16/2012	VOCs TICs	Unknown1	12	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Mesityl Oxide	5900	JAB	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Total SVOC TICs	25000	JAB	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown alkane1	380	BJ	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown alkane1	440	BJ	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown alkane1	460	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown alkane1	470	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown alkane1	310	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown alkane1	320	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	970	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	760	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	700	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	700	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	660	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1200	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	260	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	330	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1800	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	480	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	630	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	5200	J	ug/kg

Table A.7.5.4-9
Round 1 Tentatively Identified Compounds
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Sampling Area	Location ID	Sample Name	Matrix	Date Collected	Parameter Group	Analyte	Result Value	Result Qualifiers	Result Units
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1600	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	270	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	260	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown16	220	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown16	250	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	SVOCs TICs	Unknown16	230	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	VOCs TICs	Total VOC TICs	81	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	VOCs TICs	Unknown siloxane	8	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	VOCs TICs	Unknown1	53	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	VOCs TICs	Unknown1	13	J	ug/kg
Sediment	SD-111	FTD72-SD-111(041612)	SE	4/16/2012	VOCs TICs	Unknown1	7	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Diacetone Alcohol	2900	JA	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Mesityl Oxide	6100	JAB	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Total SVOC TICs	29000	JAB	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Unknown alkane1	1000	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Unknown alkane1	830	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Unknown alkane1	630	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Unknown alkane1	520	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Unknown alkane1	1700	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	610	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	760	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	610	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	1400	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	1200	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	4300	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	1000	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	720	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	610	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	520	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	580	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	580	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	1100	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	550	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Unknown1	520	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	SVOCs TICs	Unknown16	480	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	VOCs TICs	Total VOC TICs	66	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	VOCs TICs	Unknown1	17	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	VOCs TICs	Unknown1	16	J	ug/kg
Sediment	SD-112	FTD72-SD-112(041812)	SE	4/18/2012	VOCs TICs	Unknown1	33	J	ug/kg
Sediment	SD-113	FTD72-SD-113(041712)	SE	4/17/2012	SVOCs TICs	Diacetone Alcohol	1200	JA	ug/kg
Sediment	SD-113	FTD72-SD-113(041712)	SE	4/17/2012	SVOCs TICs	Mesityl Oxide	4400	JAB	ug/kg
Sediment	SD-113	FTD72-SD-113(041712)	SE	4/17/2012	SVOCs TICs	Total SVOC TICs	17000	J	ug/kg
Sediment	SD-113	FTD72-SD-113(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	650	J	ug/kg
Sediment	SD-113	FTD72-SD-113(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	370	J	ug/kg
Sediment	SD-113	FTD72-SD-113(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	370	J	ug/kg
Sediment	SD-113	FTD72-SD-113(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	270	J	ug/kg
Sediment	SD-113	FTD72-SD-113(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	3900	J	ug/kg
Sediment	SD-113	FTD72-SD-113(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	220	J	ug/kg
Sediment	SD-113	FTD72-SD-113(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	200	J	ug/kg
Sediment	SD-113	FTD72-SD-113(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	590	J	ug/kg
Sediment	SD-113	FTD72-SD-113(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	640	J	ug/kg
Sediment	SD-113	FTD72-SD-113(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	3600	J	ug/kg
Sediment	SD-113	FTD72-SD-113(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	250	J	ug/kg
Sediment	SD-113	FTD72-SD-113(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	250	J	ug/kg
Sediment	SD-113	FTD72-SD-113(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	230	J	ug/kg
Sediment	SD-113	FTD72-SD-113(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	220	J	ug/kg
Sediment	SD-113	FTD72-SD-113(041712)	SE	4/17/2012	VOCs TICs	Total VOC TICs	24	J	ug/kg
Sediment	SD-113	FTD72-SD-113(041712)	SE	4/17/2012	VOCs TICs	Unknown siloxane	14	J	ug/kg
Sediment	SD-113	FTD72-SD-113(041712)	SE	4/17/2012	VOCs TICs	Unknown1	10	J	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	SVOCs TICs	Diacetone Alcohol	1100	JA	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	SVOCs TICs	Mesityl Oxide	4200	JAB	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	SVOCs TICs	Toluene	240	J	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	SVOCs TICs	Total SVOC TICs	14000	J	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	340	J	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	330	J	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	220	J	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	200	J	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	840	J	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	710	J	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	570	J	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	490	J	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	330	J	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	3000	J	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	320	J	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	280	J	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	240	J	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	210	J	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	250	J	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	330	J	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	VOCs TICs	Total VOC TICs	110	J	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	VOCs TICs	Unknown siloxane	33	J	ug/kg

Table A.7.5.4-9
Round 1 Tentatively Identified Compounds
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Sampling Area	Location ID	Sample Name	Matrix	Date Collected	Parameter Group	Analyte	Result Value	Result Qualifiers	Result Units
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	VOCs TICs	Unknown1	12	J	ug/kg
Sediment	SD-114	FTD72-SD-114(041712)	SE	4/17/2012	VOCs TICs	Unknown1	60	J	ug/kg
Sediment	SD-115	FTD72-SD-115(041712)	SE	4/17/2012	SVOCs TICs	Toluene	220	J	ug/kg
Sediment	SD-115	FTD72-SD-115(041712)	SE	4/17/2012	SVOCs TICs	Total SVOC TICs	17000	J	ug/kg
Sediment	SD-115	FTD72-SD-115(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	290	J	ug/kg
Sediment	SD-115	FTD72-SD-115(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	500	J	ug/kg
Sediment	SD-115	FTD72-SD-115(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	4300	J	ug/kg
Sediment	SD-115	FTD72-SD-115(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1800	J	ug/kg
Sediment	SD-115	FTD72-SD-115(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	500	J	ug/kg
Sediment	SD-115	FTD72-SD-115(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	4200	J	ug/kg
Sediment	SD-115	FTD72-SD-115(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	210	J	ug/kg
Sediment	SD-115	FTD72-SD-115(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	200	J	ug/kg
Sediment	SD-115	FTD72-SD-115(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1900	J	ug/kg
Sediment	SD-115	FTD72-SD-115(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	840	J	ug/kg
Sediment	SD-115	FTD72-SD-115(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	870	J	ug/kg
Sediment	SD-115	FTD72-SD-115(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	290	J	ug/kg
Sediment	SD-115	FTD72-SD-115(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	250	J	ug/kg
Sediment	SD-115	FTD72-SD-115(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	240	J	ug/kg
Sediment	SD-115	FTD72-SD-115(041712)	SE	4/17/2012	VOCs TICs	Total VOC TICs	38	J	ug/kg
Sediment	SD-115	FTD72-SD-115(041712)	SE	4/17/2012	VOCs TICs	Unknown siloxane	27	J	ug/kg
Sediment	SD-115	FTD72-SD-115(041712)	SE	4/17/2012	VOCs TICs	Unknown1	11	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Diacetone Alcohol	1600	JA	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Mesityl Oxide	4400	JAB	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Total SVOC TICs	17000	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	400	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	1200	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	640	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	300	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	290	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	330	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	540	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	560	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	590	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	720	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	770	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	940	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	310	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	290	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	310	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1500	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	290	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	280	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	SVOCs TICs	Unknown16	280	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	VOCs TICs	Total VOC TICs	200	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	VOCs TICs	Unknown siloxane	16	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	VOCs TICs	Unknown siloxane	38	BJ	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	VOCs TICs	Unknown1	10	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	VOCs TICs	Unknown1	12	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	VOCs TICs	Unknown1	22	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	VOCs TICs	Unknown1	23	J	ug/kg
Sediment	SD-116	FTD72-SD-116(041712)	SE	4/17/2012	VOCs TICs	Unknown1	76	J	ug/kg
Sediment	SD-117	FTD72-SD-117(041712)	SE	4/17/2012	SVOCs TICs	4-Methyl-4-penten-2-one	200	JAB	ug/kg
Sediment	SD-117	FTD72-SD-117(041712)	SE	4/17/2012	SVOCs TICs	Mesityl Oxide	7000	JA	ug/kg
Sediment	SD-117	FTD72-SD-117(041712)	SE	4/17/2012	SVOCs TICs	Total SVOC TICs	24000	JAB	ug/kg
Sediment	SD-117	FTD72-SD-117(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	2800	J	ug/kg
Sediment	SD-117	FTD72-SD-117(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	980	J	ug/kg
Sediment	SD-117	FTD72-SD-117(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	2600	J	ug/kg
Sediment	SD-117	FTD72-SD-117(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	260	J	ug/kg
Sediment	SD-117	FTD72-SD-117(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	480	J	ug/kg
Sediment	SD-117	FTD72-SD-117(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1300	J	ug/kg
Sediment	SD-117	FTD72-SD-117(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	7200	J	ug/kg
Sediment	SD-117	FTD72-SD-117(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	360	J	ug/kg
Sediment	SD-117	FTD72-SD-117(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	200	J	ug/kg
Sediment	SD-117	FTD72-SD-117(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	260	J	ug/kg
Sediment	SD-117	FTD72-SD-117(041712)	SE	4/17/2012	VOCs TICs	Total VOC TICs	52	J	ug/kg
Sediment	SD-117	FTD72-SD-117(041712)	SE	4/17/2012	VOCs TICs	Unknown siloxane	16	J	ug/kg
Sediment	SD-117	FTD72-SD-117(041712)	SE	4/17/2012	VOCs TICs	Unknown1	36	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Diacetone Alcohol	3000	JA	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Mesityl Oxide	7400	JAB	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Total SVOC TICs	41000	JAB	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	660	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	720	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	3000	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	590	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	2300	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1700	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1700	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1600	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1500	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1200	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	2100	J	ug/kg

Table A.7.5.4-9
Round 1 Tentatively Identified Compounds
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Sampling Area	Location ID	Sample Name	Matrix	Date Collected	Parameter Group	Analyte	Result Value	Result Qualifiers	Result Units
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	940	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	560	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	610	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1100	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1000	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	6200	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown16	520	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown16	520	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown16	500	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown16	490	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown16	450	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	SVOCs TICs	Unknown16	380	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	VOCs TICs	Total VOC TICs	240	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	VOCs TICs	Unknown1	25	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	VOCs TICs	Unknown1	41	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	VOCs TICs	Unknown1	130	J	ug/kg
Sediment	SD-118	FTD72-SD-118(041712)	SE	4/17/2012	VOCs TICs	Unknown1	44	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Cyclic octaatomic sulfur	1400	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Diacetone Alcohol	3300	BJ	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Mesityl Oxide	8500	JAB	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Total SVOC TICs	49000	BJ	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	3400	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1200	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1200	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1000	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1000	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1400	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	880	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	850	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	8000	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1700	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1300	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1700	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1400	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	2300	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	3400	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown16	830	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown16	810	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown16	770	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown16	740	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown16	760	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown16	730	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	SVOCs TICs	Unknown16	750	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	VOCs TICs	Total VOC TICs	39	J	ug/kg
Sediment	SD-119	FTD72-SD-119(041712)	SE	4/17/2012	VOCs TICs	Unknown siloxane	39	J	ug/kg
Sediment	SD-120	FTD72-SD-120(041612)	SE	4/16/2012	SVOCs TICs	Diacetone Alcohol	1400	JA	ug/kg
Sediment	SD-120	FTD72-SD-120(041612)	SE	4/16/2012	SVOCs TICs	Mesityl Oxide	5500	JAB	ug/kg
Sediment	SD-120	FTD72-SD-120(041612)	SE	4/16/2012	SVOCs TICs	Total SVOC TICs	18000	JAB	ug/kg
Sediment	SD-120	FTD72-SD-120(041612)	SE	4/16/2012	SVOCs TICs	Unknown alkane1	370	BJ	ug/kg
Sediment	SD-120	FTD72-SD-120(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1100	J	ug/kg
Sediment	SD-120	FTD72-SD-120(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	230	J	ug/kg
Sediment	SD-120	FTD72-SD-120(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	430	J	ug/kg
Sediment	SD-120	FTD72-SD-120(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	480	J	ug/kg
Sediment	SD-120	FTD72-SD-120(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	520	BJ	ug/kg
Sediment	SD-120	FTD72-SD-120(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1100	J	ug/kg
Sediment	SD-120	FTD72-SD-120(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1700	J	ug/kg
Sediment	SD-120	FTD72-SD-120(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1400	J	ug/kg
Sediment	SD-120	FTD72-SD-120(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	290	J	ug/kg
Sediment	SD-120	FTD72-SD-120(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	360	J	ug/kg
Sediment	SD-120	FTD72-SD-120(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	2300	J	ug/kg
Sediment	SD-120	FTD72-SD-120(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1100	J	ug/kg
Sediment	SD-120	FTD72-SD-120(041612)	SE	4/16/2012	VOCs TICs	Total VOC TICs	89	J	ug/kg
Sediment	SD-120	FTD72-SD-120(041612)	SE	4/16/2012	VOCs TICs	Unknown alkane1	9	J	ug/kg
Sediment	SD-120	FTD72-SD-120(041612)	SE	4/16/2012	VOCs TICs	Unknown siloxane	18	J	ug/kg
Sediment	SD-120	FTD72-SD-120(041612)	SE	4/16/2012	VOCs TICs	Unknown1	15	J	ug/kg
Sediment	SD-120	FTD72-SD-120(041612)	SE	4/16/2012	VOCs TICs	Unknown1	47	J	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	SVOCs TICs	Diacetone Alcohol	3600	JA	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	SVOCs TICs	Total SVOC TICs	26000	JA	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	1500	J	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	3600	J	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	970	J	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1400	J	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	690	J	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	720	J	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	920	J	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1000	J	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1700	J	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	2700	J	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	520	J	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	600	J	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	670	J	ug/kg

Table A.7.5.4-9
Round 1 Tentatively Identified Compounds
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Sampling Area	Location ID	Sample Name	Matrix	Date Collected	Parameter Group	Analyte	Result Value	Result Qualifiers	Result Units
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	4100	J	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	940	J	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	580	J	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	VOCs TICs	Total VOC TICs	76	J	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	VOCs TICs	Unknown siloxane	11	J	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	VOCs TICs	Unknown1	13	J	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	VOCs TICs	Unknown1	43	J	ug/kg
Sediment	SD-121	FTD72-SD-121(041712)	SE	4/17/2012	VOCs TICs	Unknown1	9	J	ug/kg
Sediment	SD-122	FTD72-SD-122(041712)	SE	4/17/2012	SVOCs TICs	Diacetone Alcohol	3300	JA	ug/kg
Sediment	SD-122	FTD72-SD-122(041712)	SE	4/17/2012	SVOCs TICs	Total SVOC TICs	38000	JA	ug/kg
Sediment	SD-122	FTD72-SD-122(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	2800	J	ug/kg
Sediment	SD-122	FTD72-SD-122(041712)	SE	4/17/2012	SVOCs TICs	Unknown alkane1	2500	J	ug/kg
Sediment	SD-122	FTD72-SD-122(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	4200	J	ug/kg
Sediment	SD-122	FTD72-SD-122(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	2900	J	ug/kg
Sediment	SD-122	FTD72-SD-122(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1500	J	ug/kg
Sediment	SD-122	FTD72-SD-122(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1500	J	ug/kg
Sediment	SD-122	FTD72-SD-122(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1600	J	ug/kg
Sediment	SD-122	FTD72-SD-122(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	2700	J	ug/kg
Sediment	SD-122	FTD72-SD-122(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1400	J	ug/kg
Sediment	SD-122	FTD72-SD-122(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	6300	J	ug/kg
Sediment	SD-122	FTD72-SD-122(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1200	J	ug/kg
Sediment	SD-122	FTD72-SD-122(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1600	J	ug/kg
Sediment	SD-122	FTD72-SD-122(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1200	J	ug/kg
Sediment	SD-122	FTD72-SD-122(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1100	J	ug/kg
Sediment	SD-122	FTD72-SD-122(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1300	J	ug/kg
Sediment	SD-122	FTD72-SD-122(041712)	SE	4/17/2012	SVOCs TICs	Unknown1	1300	J	ug/kg
Sediment	SD-122	FTD72-SD-122(041712)	SE	4/17/2012	VOCs TICs	Total VOC TICs	44	J	ug/kg
Sediment	SD-122	FTD72-SD-122(041712)	SE	4/17/2012	VOCs TICs	Unknown siloxane	44	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Mesityl Oxide	4700	JAB	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Total SVOC TICs	32000	JAB	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown alkane1	640	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown alkane1	660	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown alkane1	1600	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown alkane1	680	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown alkane1	790	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown alkane1	710	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	2800	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	880	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1000	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	970	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	890	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1100	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	740	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1700	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	2000	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1100	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1500	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1300	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1300	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1200	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1800	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown16	640	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown16	370	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	SVOCs TICs	Unknown16	610	BJ	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	VOCs TICs	Total VOC TICs	180	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	VOCs TICs	Unknown alkane1	26	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	VOCs TICs	Unknown siloxane	42	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	VOCs TICs	Unknown1	17	J	ug/kg
Sediment	SD-123	FTD72-SD-123(041612)	SE	4/16/2012	VOCs TICs	Unknown1	100	J	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Mesityl Oxide	6500	JAB	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Total SVOC TICs	24000	JAB	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown alkane1	1800	BJ	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown alkane1	310	BJ	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	5100	J	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	320	J	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	300	J	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	490	J	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	380	J	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	450	J	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	2000	J	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	450	J	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	350	J	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	820	J	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	730	BJ	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	570	J	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	560	J	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	520	J	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1000	J	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown16	280	J	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown16	290	J	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown16	280	J	ug/kg

Table A.7.5.4-9
Round 1 Tentatively Identified Compounds
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Sampling Area	Location ID	Sample Name	Matrix	Date Collected	Parameter Group	Analyte	Result Value	Result Qualifiers	Result Units
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown16	250	J	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	SVOCs TICs	Unknown16	290	J	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	VOCs TICs	Total VOC TICs	71	J	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	VOCs TICs	Unknown siloxane	32	J	ug/kg
Sediment	SD-124	FTD72-SD-124(041612)	SE	4/16/2012	VOCs TICs	Unknown1	39	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Diacetone Alcohol	870	JA	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Mesityl Oxide	1800	JAB	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Total SVOC TICs	42000	JAB	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown alkane1	960	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown alkane1	690	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown alkane1	330	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	900	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	520	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	540	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	3500	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	560	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	2500	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	490	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1200	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	720	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	680	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	670	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	570	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	20000	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	590	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	2100	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown16	400	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown16	410	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown16	400	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown16	370	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	SVOCs TICs	Unknown16	450	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	VOCs TICs	Total VOC TICs	140	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	VOCs TICs	Unknown siloxane	14	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	VOCs TICs	Unknown1	93	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	VOCs TICs	Unknown1	11	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	VOCs TICs	Unknown1	10	J	ug/kg
Sediment	SD-125	FTD72-SD-125(041612)	SE	4/16/2012	VOCs TICs	Unknown1	7	J	ug/kg
Sediment	SD-126	FTD72-SD-126(041612)	SE	4/16/2012	SVOCs TICs	Diacetone Alcohol	1800	JA	ug/kg
Sediment	SD-126	FTD72-SD-126(041612)	SE	4/16/2012	SVOCs TICs	Mesityl Oxide	5500	JAB	ug/kg
Sediment	SD-126	FTD72-SD-126(041612)	SE	4/16/2012	SVOCs TICs	Total SVOC TICs	17000	JAB	ug/kg
Sediment	SD-126	FTD72-SD-126(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	660	J	ug/kg
Sediment	SD-126	FTD72-SD-126(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	240	J	ug/kg
Sediment	SD-126	FTD72-SD-126(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	220	J	ug/kg
Sediment	SD-126	FTD72-SD-126(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	5400	J	ug/kg
Sediment	SD-126	FTD72-SD-126(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1100	J	ug/kg
Sediment	SD-126	FTD72-SD-126(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	660	J	ug/kg
Sediment	SD-126	FTD72-SD-126(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	450	J	ug/kg
Sediment	SD-126	FTD72-SD-126(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	380	J	ug/kg
Sediment	SD-126	FTD72-SD-126(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	360	J	ug/kg
Sediment	SD-126	FTD72-SD-126(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	300	J	ug/kg
Sediment	SD-126	FTD72-SD-126(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	400	J	ug/kg
Sediment	SD-126	FTD72-SD-126(041612)	SE	4/16/2012	VOCs TICs	Total VOC TICs	120	J	ug/kg
Sediment	SD-126	FTD72-SD-126(041612)	SE	4/16/2012	VOCs TICs	Unknown siloxane	39	J	ug/kg
Sediment	SD-126	FTD72-SD-126(041612)	SE	4/16/2012	VOCs TICs	Unknown1	11	J	ug/kg
Sediment	SD-126	FTD72-SD-126(041612)	SE	4/16/2012	VOCs TICs	Unknown1	8	J	ug/kg
Sediment	SD-126	FTD72-SD-126(041612)	SE	4/16/2012	VOCs TICs	Unknown1	14	J	ug/kg
Sediment	SD-126	FTD72-SD-126(041612)	SE	4/16/2012	VOCs TICs	Unknown1	47	J	ug/kg
Sediment	SD-127	FTD72-SD-127(041612)	SE	4/16/2012	SVOCs TICs	Diacetone Alcohol	1200	JA	ug/kg
Sediment	SD-127	FTD72-SD-127(041612)	SE	4/16/2012	SVOCs TICs	Mesityl Oxide	5300	JAB	ug/kg
Sediment	SD-127	FTD72-SD-127(041612)	SE	4/16/2012	SVOCs TICs	Squalene	290	J	ug/kg
Sediment	SD-127	FTD72-SD-127(041612)	SE	4/16/2012	SVOCs TICs	Total SVOC TICs	17000	JAB	ug/kg
Sediment	SD-127	FTD72-SD-127(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	930	J	ug/kg
Sediment	SD-127	FTD72-SD-127(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1600	J	ug/kg
Sediment	SD-127	FTD72-SD-127(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	250	J	ug/kg
Sediment	SD-127	FTD72-SD-127(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	5600	J	ug/kg
Sediment	SD-127	FTD72-SD-127(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	220	J	ug/kg
Sediment	SD-127	FTD72-SD-127(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	260	J	ug/kg
Sediment	SD-127	FTD72-SD-127(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	900	J	ug/kg
Sediment	SD-127	FTD72-SD-127(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	190	J	ug/kg
Sediment	SD-127	FTD72-SD-127(041612)	SE	4/16/2012	VOCs TICs	Total VOC TICs	92	J	ug/kg
Sediment	SD-127	FTD72-SD-127(041612)	SE	4/16/2012	VOCs TICs	Unknown siloxane	28	J	ug/kg
Sediment	SD-127	FTD72-SD-127(041612)	SE	4/16/2012	VOCs TICs	Unknown1	11	J	ug/kg
Sediment	SD-127	FTD72-SD-127(041612)	SE	4/16/2012	VOCs TICs	Unknown1	52	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Diacetone Alcohol	1400	JA	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Mesityl Oxide	4400	JAB	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Total SVOC TICs	20000	JAB	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown alkane1	220	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown alkane1	940	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown alkane1	880	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	900	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	310	J	ug/kg

Table A.7.5.4-9
Round 1 Tentatively Identified Compounds
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Sampling Area	Location ID	Sample Name	Matrix	Date Collected	Parameter Group	Analyte	Result Value	Result Qualifiers	Result Units
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	590	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	620	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	750	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1200	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	660	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	330	BJ	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	550	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	300	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1600	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	320	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	320	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1100	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	2000	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown16	240	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown16	270	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown16	280	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	SVOCs TICs	Unknown16	240	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	VOCs TICs	Total VOC TICs	35	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	VOCs TICs	Unknown siloxane	24	J	ug/kg
Sediment	STR5SD-30	FTD72-STR5SD-30(041612)	SE	4/16/2012	VOCs TICs	Unknown1	11	J	ug/kg
Sediment	STR5SD-31	FTD72-STR5SD-31(041612)	SE	4/16/2012	SVOCs TICs	Diacetone Alcohol	1200	JA	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Diacetone Alcohol	2200	JA	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Mesityl Oxide	4200	JAB	ug/kg
Sediment	STR5SD-31	FTD72-STR5SD-31(041612)	SE	4/16/2012	SVOCs TICs	Mesityl Oxide	4200	JAB	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Total SVOC TICs	16000	JAB	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Total SVOC TICs	14	J	ug/l
Sediment	STR5SD-31	FTD72-STR5SD-31(041612)	SE	4/16/2012	SVOCs TICs	Total SVOC TICs	14000	JAB	ug/kg
Sediment	STR5SD-31	FTD72-STR5SD-31(041612)	SE	4/16/2012	SVOCs TICs	Unknown Alcohol	1000	J	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Unknown alkane1	5	J	ug/l
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Unknown alkane1	290	J	ug/kg
Sediment	STR5SD-31	FTD72-STR5SD-31(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	270	J	ug/kg
Sediment	STR5SD-31	FTD72-STR5SD-31(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1100	J	ug/kg
Sediment	STR5SD-31	FTD72-STR5SD-31(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1200	J	ug/kg
Sediment	STR5SD-31	FTD72-STR5SD-31(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	220	J	ug/kg
Sediment	STR5SD-31	FTD72-STR5SD-31(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	220	J	ug/kg
Sediment	STR5SD-31	FTD72-STR5SD-31(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	220	J	ug/kg
Sediment	STR5SD-31	FTD72-STR5SD-31(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	370	BJ	ug/kg
Sediment	STR5SD-31	FTD72-STR5SD-31(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	370	J	ug/kg
Sediment	STR5SD-31	FTD72-STR5SD-31(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	330	J	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Unknown1	240	J	ug/kg
Sediment	STR5SD-31	FTD72-STR5SD-31(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	280	J	ug/kg
Sediment	STR5SD-31	FTD72-STR5SD-31(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	220	J	ug/kg
Sediment	STR5SD-31	FTD72-STR5SD-31(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	1700	J	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Unknown1	9	J	ug/l
Sediment	STR5SD-31	FTD72-STR5SD-31(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	320	J	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Unknown1	550	J	ug/kg
Sediment	STR5SD-31	FTD72-STR5SD-31(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	890	J	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Unknown1	210	J	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Unknown1	280	J	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Unknown1	210	J	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Unknown1	220	J	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Unknown1	220	J	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Unknown1	210	J	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Unknown1	190	J	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Unknown1	930	J	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Unknown1	880	J	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Unknown1	530	J	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Unknown1	530	J	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Unknown1	350	J	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	SVOCs TICs	Unknown1	3800	J	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	VOCs TICs	Total VOC TICs	0		ug/l
Sediment	STR5SD-31	FTD72-STR5SD-31(041612)	SE	4/16/2012	VOCs TICs	Total VOC TICs	49	J	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	VOCs TICs	Total VOC TICs	39	J	ug/kg
Sediment	STR5SD-31	FTD72-STR5SD-31(041612)	SE	4/16/2012	VOCs TICs	Unknown siloxane	39	J	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	VOCs TICs	Unknown siloxane	28	J	ug/kg
Sediment	STR5SD-31	FTD72-STR5SD-31(041612)	SE	4/16/2012	VOCs TICs	Unknown1	10	J	ug/kg
Sediment	STR5SD-31	FTD72-DUP-001(041612)FD	SE	4/16/2012	VOCs TICs	Unknown1	12	J	ug/kg
Sediment	STR5SD-53	FTD72-STR5SD-53(041612)	SE	4/16/2012	SVOCs TICs	Diacetone Alcohol	980	JA	ug/kg
Sediment	STR5SD-53	FTD72-STR5SD-53(041612)	SE	4/16/2012	SVOCs TICs	Mesityl Oxide	2700	JAB	ug/kg
Sediment	STR5SD-53	FTD72-STR5SD-53(041612)	SE	4/16/2012	SVOCs TICs	Total SVOC TICs	6400	JAB	ug/kg
Sediment	STR5SD-53	FTD72-STR5SD-53(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	300	J	ug/kg
Sediment	STR5SD-53	FTD72-STR5SD-53(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	280	J	ug/kg
Sediment	STR5SD-53	FTD72-STR5SD-53(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	340	J	ug/kg
Sediment	STR5SD-53	FTD72-STR5SD-53(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	380	J	ug/kg
Sediment	STR5SD-53	FTD72-STR5SD-53(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	410	J	ug/kg
Sediment	STR5SD-53	FTD72-STR5SD-53(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	490	J	ug/kg
Sediment	STR5SD-53	FTD72-STR5SD-53(041612)	SE	4/16/2012	SVOCs TICs	Unknown1	590	J	ug/kg
Sediment	STR5SD-53	FTD72-STR5SD-53(041612)	SE	4/16/2012	VOCs TICs	Total VOC TICs	39	J	ug/kg
Sediment	STR5SD-53	FTD72-STR5SD-53(041612)	SE	4/16/2012	VOCs TICs	Unknown siloxane	27	J	ug/kg
Sediment	STR5SD-53	FTD72-STR5SD-53(041612)	SE	4/16/2012	VOCs TICs	Unknown1	12	J	ug/kg
Sediment	UnnamedBoils	FTD72-UNNAMEDBOILS(041712) GRAB SEDIMEN	SE	4/17/2012	SVOCs TICs	Diacetone Alcohol	2200	JA	ug/kg

Table A.7.5.4-9
Round 1 Tentatively Identified Compounds
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Sampling Area	Location ID	Sample Name	Matrix	Date Collected	Parameter Group	Analyte	Result Value	Result Qualifiers	Result Units
Sediment	UnnamedBoils	FTD72-UNNAMEDBOILS(041712) GRAB SEDIMEN	SE	4/17/2012	SVOCs TICs	Mesityl Oxide	5600	JAB	ug/kg
Sediment	UnnamedBoils	FTD72-UNNAMEDBOILS(041712)	WG	4/17/2012	SVOCs TICs	Total SVOC TICs	80	J	ug/l
Sediment	UnnamedBoils	FTD72-UNNAMEDBOILS(041712) GRAB SEDIMEN	SE	4/17/2012	SVOCs TICs	Total SVOC TICs	17000	JAB	ug/kg
Sediment	UnnamedBoils	FTD72-UNNAMEDBOILS(041712)	WG	4/17/2012	SVOCs TICs	Unknown alkane1	5	J	ug/l
Sediment	UnnamedBoils	FTD72-UNNAMEDBOILS(041712) GRAB SEDIMEN	SE	4/17/2012	SVOCs TICs	Unknown1	410	J	ug/kg
Sediment	UnnamedBoils	FTD72-UNNAMEDBOILS(041712) GRAB SEDIMEN	SE	4/17/2012	SVOCs TICs	Unknown1	300	J	ug/kg
Sediment	UnnamedBoils	FTD72-UNNAMEDBOILS(041712) GRAB SEDIMEN	SE	4/17/2012	SVOCs TICs	Unknown1	310	J	ug/kg
Sediment	UnnamedBoils	FTD72-UNNAMEDBOILS(041712) GRAB SEDIMEN	SE	4/17/2012	SVOCs TICs	Unknown1	320	J	ug/kg
Sediment	UnnamedBoils	FTD72-UNNAMEDBOILS(041712) GRAB SEDIMEN	SE	4/17/2012	SVOCs TICs	Unknown1	400	J	ug/kg
Sediment	UnnamedBoils	FTD72-UNNAMEDBOILS(041712) GRAB SEDIMEN	SE	4/17/2012	SVOCs TICs	Unknown1	480	J	ug/kg
Sediment	UnnamedBoils	FTD72-UNNAMEDBOILS(041712) GRAB SEDIMEN	SE	4/17/2012	SVOCs TICs	Unknown1	540	J	ug/kg
Sediment	UnnamedBoils	FTD72-UNNAMEDBOILS(041712) GRAB SEDIMEN	SE	4/17/2012	SVOCs TICs	Unknown1	930	J	ug/kg
Sediment	UnnamedBoils	FTD72-UNNAMEDBOILS(041712)	WG	4/17/2012	SVOCs TICs	Unknown1	6	J	ug/l
Sediment	UnnamedBoils	FTD72-UNNAMEDBOILS(041712) GRAB SEDIMEN	SE	4/17/2012	SVOCs TICs	Unknown1	4600	J	ug/kg
Sediment	UnnamedBoils	FTD72-UNNAMEDBOILS(041712)	WG	4/17/2012	SVOCs TICs	Unknown1	69	J	ug/l
Sediment	UnnamedBoils	FTD72-UNNAMEDBOILS(041712) GRAB SEDIMEN	SE	4/17/2012	SVOCs TICs	Unknown1	870	J	ug/kg
Sediment	UnnamedBoils	FTD72-UNNAMEDBOILS(041712) GRAB SEDIMEN	SE	4/17/2012	VOCs TICs	Total VOC TICs	67	J	ug/kg
Sediment	UnnamedBoils	FTD72-UNNAMEDBOILS(041712)	WG	4/17/2012	VOCs TICs	Total VOC TICs	0		ug/l
Sediment	UnnamedBoils	FTD72-UNNAMEDBOILS(041712) GRAB SEDIMEN	SE	4/17/2012	VOCs TICs	Unknown siloxane	52	J	ug/kg
Sediment	UnnamedBoils	FTD72-UNNAMEDBOILS(041712) GRAB SEDIMEN	SE	4/17/2012	VOCs TICs	Unknown1	15	J	ug/kg
Sewerline Spring	CC006	FTD72-CC006(041912)	WG	4/19/2012	SVOCs TICs	Total SVOC TICs	18	J	ug/l
Sewerline Spring	CC006	FTD72-CC006(041912)	WG	4/19/2012	SVOCs TICs	Unknown1	18	J	ug/l
Sewerline Spring	CC006	FTD72-CC006(041912)	WG	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
South Armory Spring	STR5SW-31	FTD72-STR5SW-31(041612)	WG	4/16/2012	SVOCs TICs	Total SVOC TICs	4600	JB	ug/l
South Armory Spring	STR5SW-31	FTD72-STR5SW-31(041612)	WG	4/16/2012	SVOCs TICs	Unknown alkane1	510	J	ug/l
South Armory Spring	STR5SW-31	FTD72-STR5SW-31(041612)	WG	4/16/2012	SVOCs TICs	Unknown alkane1	380	J	ug/l
South Armory Spring	STR5SW-31	FTD72-STR5SW-31(041612)	WG	4/16/2012	SVOCs TICs	Unknown alkane1	290	J	ug/l
South Armory Spring	STR5SW-31	FTD72-STR5SW-31(041612)	WG	4/16/2012	SVOCs TICs	Unknown alkane1	240	J	ug/l
South Armory Spring	STR5SW-31	FTD72-STR5SW-31(041612)	WG	4/16/2012	SVOCs TICs	Unknown alkane1	5	B	ug/l
South Armory Spring	STR5SW-31	FTD72-STR5SW-31(041612)	WG	4/16/2012	SVOCs TICs	Unknown alkane1	5	J	ug/l
South Armory Spring	STR5SW-31	FTD72-STR5SW-31(041612)	WG	4/16/2012	SVOCs TICs	Unknown1	5	J	ug/l
South Armory Spring	STR5SW-31	FTD72-STR5SW-31(041612)	WG	4/16/2012	SVOCs TICs	Unknown1	6	J	ug/l
South Armory Spring	STR5SW-31	FTD72-STR5SW-31(041612)	WG	4/16/2012	SVOCs TICs	Unknown1	8	J	ug/l
South Armory Spring	STR5SW-31	FTD72-STR5SW-31(041612)	WG	4/16/2012	SVOCs TICs	Unknown1	10	J	ug/l
South Armory Spring	STR5SW-31	FTD72-STR5SW-31(041612)	WG	4/16/2012	SVOCs TICs	Unknown1	10	J	ug/l
South Armory Spring	STR5SW-31	FTD72-STR5SW-31(041612)	WG	4/16/2012	SVOCs TICs	Unknown1	12	J	ug/l
South Armory Spring	STR5SW-31	FTD72-STR5SW-31(041612)	WG	4/16/2012	SVOCs TICs	Unknown1	130	J	ug/l
South Armory Spring	STR5SW-31	FTD72-STR5SW-31(041612)	WG	4/16/2012	SVOCs TICs	Unknown1	130	J	ug/l
South Armory Spring	STR5SW-31	FTD72-STR5SW-31(041612)	WG	4/16/2012	SVOCs TICs	Unknown1	4	J	ug/l
South Armory Spring	STR5SW-31	FTD72-STR5SW-31(041612)	WG	4/16/2012	SVOCs TICs	Unknown1	5	J	ug/l
South Armory Spring	STR5SW-31	FTD72-STR5SW-31(041612)	WG	4/16/2012	SVOCs TICs	Unknown1	1700	J	ug/l
South Armory Spring	STR5SW-31	FTD72-STR5SW-31(041612)	WG	4/16/2012	SVOCs TICs	Unknown1	1100	J	ug/l
South Armory Spring	STR5SW-31	FTD72-STR5SW-31(041612)	WG	4/16/2012	VOCs TICs	Total VOC TICs	0		ug/l
Spearmint Spring A	CC008	FTD72-CC008(041912)	WG	4/19/2012	SVOCs TICs	Total SVOC TICs	100	BJ	ug/l
Spearmint Spring A	CC008	FTD72-CC008(041912)	WG	4/19/2012	SVOCs TICs	Unknown alkane1	6	BJ	ug/l
Spearmint Spring A	CC008	FTD72-CC008(041912)	WG	4/19/2012	SVOCs TICs	Unknown1	80	J	ug/l
Spearmint Spring A	CC008	FTD72-CC008(041912)	WG	4/19/2012	SVOCs TICs	Unknown1	17	J	ug/l
Spearmint Spring A	CC008	FTD72-CC008(041912)	WG	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
Spearmint Spring B	CC008A	FTD72-CC008A(041912)	WG	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
Springs/Seeps Identified During Stream Survey	CC001	FTD72-CC001(041912)	WG	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
Springs/Seeps Identified During Stream Survey	CC002	FTD72-CC002(041912)	WG	4/19/2012	SVOCs TICs	Total SVOC TICs	12	J	ug/l
Springs/Seeps Identified During Stream Survey	CC002	FTD72-CC002(041912)	WG	4/19/2012	SVOCs TICs	Unknown1	6	J	ug/l
Springs/Seeps Identified During Stream Survey	CC002	FTD72-CC002(041912)	WG	4/19/2012	SVOCs TICs	Unknown1	6	J	ug/l
Springs/Seeps Identified During Stream Survey	CC002	FTD72-CC002(041912)	WG	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
Springs/Seeps Identified During Stream Survey	CC003A	FTD72-CC003A(042012)	WG	4/20/2012	SVOCs TICs	Total SVOC TICs	6	J	ug/l
Springs/Seeps Identified During Stream Survey	CC003A	FTD72-CC003A(042012)	WG	4/20/2012	SVOCs TICs	Unknown alkane1	6	J	ug/l
Springs/Seeps Identified During Stream Survey	CC003A	FTD72-CC003A(042012)	WG	4/20/2012	VOCs TICs	Total VOC TICs	0		ug/l
Springs/Seeps Identified During Stream Survey	CC003B	FTD72-CC003B(042012)	WG	4/20/2012	VOCs TICs	Total VOC TICs	0		ug/l
Springs/Seeps Identified During Stream Survey	CC003C	FTD72-CC003C(042012)	WG	4/20/2012	VOCs TICs	Total VOC TICs	0		ug/l
Springs/Seeps Identified During Stream Survey	CC004	FTD72-CC004(042012)	WG	4/20/2012	SVOCs TICs	Total SVOC TICs	5	J	ug/l
Springs/Seeps Identified During Stream Survey	CC004	FTD72-CC004(042012)	WG	4/20/2012	SVOCs TICs	Unknown1	5	J	ug/l
Springs/Seeps Identified During Stream Survey	CC004	FTD72-CC004(042012)	WG	4/20/2012	VOCs TICs	Total VOC TICs	0		ug/l
Springs/Seeps Identified During Stream Survey	CC009	FTD72-CC009(041912)	WG	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
Springs/Seeps Identified During Stream Survey	CC010	FTD72-CC010(041912)	WG	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
Springs/Seeps Identified During Stream Survey	CC011	FTD72-CC011(042012)	WG	4/20/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Springs/Seeps Identified During Stream Survey	CC011	FTD72-CC011(042012)	WG	4/20/2012	VOCs TICs	Total VOC TICs	0		ug/l
Springs/Seeps Identified During Stream Survey	CC013	FTD72-CC013(042012)	WG	4/20/2012	VOCs TICs	Total VOC TICs	0		ug/l
Springs/Seeps Identified During Stream Survey	CC015	FTD72-CC015(042012)	WG	4/20/2012	VOCs TICs	Total VOC TICs	0		ug/l
Springs/Seeps Identified During Stream Survey	CC018	FTD72-CC018(042012)	WG	4/20/2012	SVOCs TICs	Total SVOC TICs	440	J	ug/l
Springs/Seeps Identified During Stream Survey	CC018	FTD72-CC018(042012)	WG	4/20/2012	SVOCs TICs	Unknown1	11	J	ug/l
Springs/Seeps Identified During Stream Survey	CC018	FTD72-CC018(042012)	WG	4/20/2012	SVOCs TICs	Unknown1	11	J	ug/l
Springs/Seeps Identified During Stream Survey	CC018	FTD72-CC018(042012)	WG	4/20/2012	SVOCs TICs	Unknown1	11	J	ug/l
Springs/Seeps Identified During Stream Survey	CC018	FTD72-CC018(042012)	WG	4/20/2012	SVOCs TICs	Unknown1	12	J	ug/l
Springs/Seeps Identified During Stream Survey	CC018	FTD72-CC018(042012)	WG	4/20/2012	SVOCs TICs	Unknown1	14	J	ug/l
Springs/Seeps Identified During Stream Survey	CC018	FTD72-CC018(042012)	WG	4/20/2012	SVOCs TICs	Unknown1	14	J	ug/l
Springs/Seeps Identified During Stream Survey	CC018	FTD72-CC018(042012)	WG	4/20/2012	SVOCs TICs	Unknown1	17	J	ug/l
Springs/Seeps Identified During Stream Survey	CC018	FTD72-CC018(042012)	WG	4/20/2012	SVOCs TICs	Unknown1	68	J	ug/l
Springs/Seeps Identified During Stream Survey	CC018	FTD72-CC018(042012)	WG	4/20/2012	SVOCs TICs	Unknown1	250	J	ug/l
Springs/Seeps Identified During Stream Survey	CC018	FTD72-CC018(042012)	WG	4/20/2012	SVOCs TICs	Unknown1	26	J	ug/l
Springs/Seeps Identified During Stream Survey	CC018	FTD72-CC018(042012)	WG	4/20/2012	VOCs TICs	Total VOC TICs	0		ug/l
Springs/Seeps Identified During Stream Survey	CC019	FTD72-CC019(042012)	WG	4/20/2012	VOCs TICs	Total VOC TICs	0		ug/l

Table A.7.5.4-9
Round 1 Tentatively Identified Compounds
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Sampling Area	Location ID	Sample Name	Matrix	Date Collected	Parameter Group	Analyte	Result Value	Result Qualifiers	Result Units
Springs/Seeps Identified During Stream Survey	CC020	FTD72-CC020(042012)	WG	4/20/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Springs/Seeps Identified During Stream Survey	CC020	FTD72-CC020(042012)	WG	4/20/2012	VOCs TICs	Total VOC TICs	0		ug/l
Springs/Seeps Identified During Stream Survey	CC021	FTD72-CC021(041912)	WG	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
Springs/Seeps Identified During Stream Survey	CC022	FTD72-CC022(042012)	WG	4/20/2012	SVOCs TICs	Total SVOC TICs	8	J	ug/l
Springs/Seeps Identified During Stream Survey	CC022	FTD72-CC022(042012)	WG	4/20/2012	SVOCs TICs	Unknown alkane1	4	J	ug/l
Springs/Seeps Identified During Stream Survey	CC022	FTD72-CC022(042012)	WG	4/20/2012	SVOCs TICs	Unknown1	4	J	ug/l
Springs/Seeps Identified During Stream Survey	CC022	FTD72-CC022(042012)	WG	4/20/2012	VOCs TICs	Total VOC TICs	0		ug/l
Springs/Seeps Identified During Stream Survey	CC023	FTD72-CC023(042012)	WG	4/20/2012	VOCs TICs	Total VOC TICs	0		ug/l
Springs/Seeps Identified During Stream Survey	CC024	FTD72-CC024(042012)	WG	4/20/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	S2-001	FTD72-S2-001(041912)	WG	4/19/2012	SVOCs TICs	2-Cyclohexen-1-ol	25	J	ug/l
Surface Water Samples	S2-001	FTD72-DUP-003(041912)FD	WG	4/19/2012	SVOCs TICs	Total SVOC TICs	42	J	ug/l
Surface Water Samples	S2-001	FTD72-S2-001(041912)	WG	4/19/2012	SVOCs TICs	Total SVOC TICs	46	J	ug/l
Surface Water Samples	S2-001	FTD72-DUP-003(041912)FD	WG	4/19/2012	SVOCs TICs	Unknown alkane1	6	J	ug/l
Surface Water Samples	S2-001	FTD72-S2-001(041912)	WG	4/19/2012	SVOCs TICs	Unknown alkane1	6	BJ	ug/l
Surface Water Samples	S2-001	FTD72-DUP-003(041912)FD	WG	4/19/2012	SVOCs TICs	Unknown1	14	J	ug/l
Surface Water Samples	S2-001	FTD72-DUP-003(041912)FD	WG	4/19/2012	SVOCs TICs	Unknown1	18	J	ug/l
Surface Water Samples	S2-001	FTD72-S2-001(041912)	WG	4/19/2012	SVOCs TICs	Unknown1	15	J	ug/l
Surface Water Samples	S2-001	FTD72-DUP-003(041912)FD	WG	4/19/2012	SVOCs TICs	Unknown1	5	J	ug/l
Surface Water Samples	S2-001	FTD72-DUP-003(041912)FD	WG	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	S2-001	FTD72-S2-001(041912)	WG	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	S2-002	FTD72-S2-002(041912)	WG	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	S2-003	FTD72-S2-003(042012)	WG	4/20/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	S2-004	FTD72-S2-004(042012)	WG	4/20/2012	SVOCs TICs	Total SVOC TICs	23	J	ug/l
Surface Water Samples	S2-004	FTD72-S2-004(042012)	WG	4/20/2012	SVOCs TICs	Unknown1	23	J	ug/l
Surface Water Samples	S2-004	FTD72-S2-004(042012)	WG	4/20/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-101	FTD72-SW-101(041912)	WS	4/19/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Surface Water Samples	SW-101	FTD72-SW-101(041912)	WS	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-102	FTD72-SW-102(041912)	WS	4/19/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Surface Water Samples	SW-102	FTD72-SW-102(041912)	WS	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-103	FTD72-SW-103(041912)	WS	4/19/2012	SVOCs TICs	Total SVOC TICs	14	J	ug/l
Surface Water Samples	SW-103	FTD72-SW-103(041912)	WS	4/19/2012	SVOCs TICs	Unknown1	9	J	ug/l
Surface Water Samples	SW-103	FTD72-SW-103(041912)	WS	4/19/2012	SVOCs TICs	Unknown1	6	J	ug/l
Surface Water Samples	SW-103	FTD72-SW-103(041912)	WS	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-104	FTD72-SW-104(041912)	WS	4/19/2012	SVOCs TICs	Total SVOC TICs	10	J	ug/l
Surface Water Samples	SW-104	FTD72-SW-104(041912)	WS	4/19/2012	SVOCs TICs	Unknown alkane1	5	J	ug/l
Surface Water Samples	SW-104	FTD72-SW-104(041912)	WS	4/19/2012	SVOCs TICs	Unknown1	5	J	ug/l
Surface Water Samples	SW-104	FTD72-SW-104(041912)	WS	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-105	FTD72-SW-105(041912)	WS	4/19/2012	SVOCs TICs	Total SVOC TICs	5	J	ug/l
Surface Water Samples	SW-105	FTD72-SW-105(041912)	WS	4/19/2012	SVOCs TICs	Unknown alkane1	5	J	ug/l
Surface Water Samples	SW-105	FTD72-SW-105(041912)	WS	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-106	FTD72-SW-106(041812)	WS	4/18/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Surface Water Samples	SW-106	FTD72-SW-106(041812)	WS	4/18/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-107	FTD72-SW-107(041812)	WS	4/18/2012	SVOCs TICs	Mesityl Oxide	9	B	ug/l
Surface Water Samples	SW-107	FTD72-SW-107(041812)	WS	4/18/2012	SVOCs TICs	Total SVOC TICs	50	BJ	ug/l
Surface Water Samples	SW-107	FTD72-SW-107(041812)	WS	4/18/2012	SVOCs TICs	Unknown alkane1	4	J	ug/l
Surface Water Samples	SW-107	FTD72-SW-107(041812)	WS	4/18/2012	SVOCs TICs	Unknown1	29	J	ug/l
Surface Water Samples	SW-107	FTD72-SW-107(041812)	WS	4/18/2012	SVOCs TICs	Unknown1	4	J	ug/l
Surface Water Samples	SW-107	FTD72-SW-107(041812)	WS	4/18/2012	SVOCs TICs	Unknown1	4	J	ug/l
Surface Water Samples	SW-107	FTD72-SW-107(041812)	WS	4/18/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-108	FTD72-SW-108(041712)	WS	4/17/2012	SVOCs TICs	Diacetone Alcohol	6	J	ug/l
Surface Water Samples	SW-108	FTD72-SW-108(041712)	WS	4/17/2012	SVOCs TICs	Mesityl Oxide	11	B	ug/l
Surface Water Samples	SW-108	FTD72-SW-108(041712)	WS	4/17/2012	SVOCs TICs	Total SVOC TICs	24	BJ	ug/l
Surface Water Samples	SW-108	FTD72-SW-108(041712)	WS	4/17/2012	SVOCs TICs	Unknown alkane1	4	J	ug/l
Surface Water Samples	SW-108	FTD72-SW-108(041712)	WS	4/17/2012	SVOCs TICs	Unknown1	4	J	ug/l
Surface Water Samples	SW-108	FTD72-SW-108(041712)	WS	4/17/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-109	FTD72-SW-109(041612)	WS	4/16/2012	SVOCs TICs	Total SVOC TICs	27	JB	ug/l
Surface Water Samples	SW-109	FTD72-SW-109(041612)	WS	4/16/2012	SVOCs TICs	Unknown alkane1	5	B	ug/l
Surface Water Samples	SW-109	FTD72-SW-109(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	11	J	ug/l
Surface Water Samples	SW-109	FTD72-SW-109(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	7	J	ug/l
Surface Water Samples	SW-109	FTD72-SW-109(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	4	J	ug/l
Surface Water Samples	SW-109	FTD72-SW-109(041612)	WS	4/16/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-110	FTD72-SW-110(041612)	WS	4/16/2012	SVOCs TICs	Total SVOC TICs	28	J	ug/l
Surface Water Samples	SW-110	FTD72-SW-110(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	8	J	ug/l
Surface Water Samples	SW-110	FTD72-SW-110(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	5	J	ug/l
Surface Water Samples	SW-110	FTD72-SW-110(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	5	J	ug/l
Surface Water Samples	SW-110	FTD72-SW-110(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	4	J	ug/l
Surface Water Samples	SW-110	FTD72-SW-110(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	5	J	ug/l
Surface Water Samples	SW-110	FTD72-SW-110(041612)	WS	4/16/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-111	FTD72-SW-111(041612)	WS	4/16/2012	SVOCs TICs	Total SVOC TICs	220	J	ug/l
Surface Water Samples	SW-111	FTD72-SW-111(041612)	WS	4/16/2012	SVOCs TICs	Unknown alkane1	5	J	ug/l
Surface Water Samples	SW-111	FTD72-SW-111(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	24	J	ug/l
Surface Water Samples	SW-111	FTD72-SW-111(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	15	J	ug/l
Surface Water Samples	SW-111	FTD72-SW-111(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	4	J	ug/l
Surface Water Samples	SW-111	FTD72-SW-111(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	10	J	ug/l
Surface Water Samples	SW-111	FTD72-SW-111(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	14	J	ug/l
Surface Water Samples	SW-111	FTD72-SW-111(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	19	J	ug/l
Surface Water Samples	SW-111	FTD72-SW-111(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	20	J	ug/l
Surface Water Samples	SW-111	FTD72-SW-111(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	29	J	ug/l
Surface Water Samples	SW-111	FTD72-SW-111(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	6	J	ug/l
Surface Water Samples	SW-111	FTD72-SW-111(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	6	J	ug/l
Surface Water Samples	SW-111	FTD72-SW-111(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	6	J	ug/l

Table A.7.5.4-9
Round 1 Tentatively Identified Compounds
Area B Groundwater (FTD-72)
Fort Detrick, Maryland

Sampling Area	Location ID	Sample Name	Matrix	Date Collected	Parameter Group	Analyte	Result Value	Result Qualifiers	Result Units
Surface Water Samples	SW-111	FTD72-SW-111(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	8	J	ug/l
Surface Water Samples	SW-111	FTD72-SW-111(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	9	J	ug/l
Surface Water Samples	SW-111	FTD72-SW-111(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	31	J	ug/l
Surface Water Samples	SW-111	FTD72-SW-111(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	10	J	ug/l
Surface Water Samples	SW-111	FTD72-SW-111(041612)	WS	4/16/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-112	FTD72-SW-112(041812)	WS	4/18/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Surface Water Samples	SW-112	FTD72-SW-112(041812)	WS	4/18/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-113	FTD72-SW-113(041712)	WS	4/17/2012	SVOCs TICs	Mesityl Oxide	5	B	ug/l
Surface Water Samples	SW-113	FTD72-SW-113(041712)	WS	4/17/2012	SVOCs TICs	Total SVOC TICs	5	BJ	ug/l
Surface Water Samples	SW-113	FTD72-SW-113(041712)	WS	4/17/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-114	FTD72-SW-114(041712)	WS	4/17/2012	SVOCs TICs	Mesityl Oxide	8	B	ug/l
Surface Water Samples	SW-114	FTD72-SW-114(041712)	WS	4/17/2012	SVOCs TICs	Total SVOC TICs	16	BJ	ug/l
Surface Water Samples	SW-114	FTD72-SW-114(041712)	WS	4/17/2012	SVOCs TICs	Unknown alkane1	5	J	ug/l
Surface Water Samples	SW-114	FTD72-SW-114(041712)	WS	4/17/2012	SVOCs TICs	Unknown1	4	J	ug/l
Surface Water Samples	SW-114	FTD72-SW-114(041712)	WS	4/17/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-115	FTD72-SW-115(041712)	WS	4/17/2012	SVOCs TICs	Mesityl Oxide	6	B	ug/l
Surface Water Samples	SW-115	FTD72-SW-115(041712)	WS	4/17/2012	SVOCs TICs	Total SVOC TICs	6	BJ	ug/l
Surface Water Samples	SW-115	FTD72-SW-115(041712)	WS	4/17/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-116	FTD72-SW-116(041712)	WS	4/17/2012	SVOCs TICs	Mesityl Oxide	9	B	ug/l
Surface Water Samples	SW-116	FTD72-SW-116(041712)	WS	4/17/2012	SVOCs TICs	Total SVOC TICs	18	BJ	ug/l
Surface Water Samples	SW-116	FTD72-SW-116(041712)	WS	4/17/2012	SVOCs TICs	Unknown alkane1	5	J	ug/l
Surface Water Samples	SW-116	FTD72-SW-116(041712)	WS	4/17/2012	SVOCs TICs	Unknown alkane1	5	J	ug/l
Surface Water Samples	SW-116	FTD72-SW-116(041712)	WS	4/17/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-118	FTD72-SW-118(041712)	WS	4/17/2012	SVOCs TICs	Total SVOC TICs	6000	J	ug/l
Surface Water Samples	SW-118	FTD72-SW-118(041712)	WS	4/17/2012	SVOCs TICs	Unknown alkane1	400	J	ug/l
Surface Water Samples	SW-118	FTD72-SW-118(041712)	WS	4/17/2012	SVOCs TICs	Unknown alkane1	510	J	ug/l
Surface Water Samples	SW-118	FTD72-SW-118(041712)	WS	4/17/2012	SVOCs TICs	Unknown alkane1	850	J	ug/l
Surface Water Samples	SW-118	FTD72-SW-118(041712)	WS	4/17/2012	SVOCs TICs	Unknown alkane1	4	J	ug/l
Surface Water Samples	SW-118	FTD72-SW-118(041712)	WS	4/17/2012	SVOCs TICs	Unknown1	2400	J	ug/l
Surface Water Samples	SW-118	FTD72-SW-118(041712)	WS	4/17/2012	SVOCs TICs	Unknown1	1500	J	ug/l
Surface Water Samples	SW-118	FTD72-SW-118(041712)	WS	4/17/2012	SVOCs TICs	Unknown1	290	J	ug/l
Surface Water Samples	SW-118	FTD72-SW-118(041712)	WS	4/17/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-119	FTD72-SW-119(041712)	WS	4/17/2012	SVOCs TICs	Total SVOC TICs	11	J	ug/l
Surface Water Samples	SW-119	FTD72-SW-119(041712)	WS	4/17/2012	SVOCs TICs	Unknown1	5	J	ug/l
Surface Water Samples	SW-119	FTD72-SW-119(041712)	WS	4/17/2012	SVOCs TICs	Unknown1	6	J	ug/l
Surface Water Samples	SW-119	FTD72-SW-119(041712)	WS	4/17/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-120	FTD72-SW-120(041612)	WS	4/16/2012	SVOCs TICs	Total SVOC TICs	14	J	ug/l
Surface Water Samples	SW-120	FTD72-SW-120(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	8	J	ug/l
Surface Water Samples	SW-120	FTD72-SW-120(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	6	J	ug/l
Surface Water Samples	SW-120	FTD72-SW-120(041612)	WS	4/16/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-121	FTD72-SW-121(041712)	WS	4/17/2012	SVOCs TICs	Total SVOC TICs	0		ug/l
Surface Water Samples	SW-121	FTD72-SW-121(041712)	WS	4/17/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-122	FTD72-SW-122(041712)	WS	4/17/2012	SVOCs TICs	Total SVOC TICs	28	JB	ug/l
Surface Water Samples	SW-122	FTD72-SW-122(041712)	WS	4/17/2012	SVOCs TICs	Unknown alkane1	5	B	ug/l
Surface Water Samples	SW-122	FTD72-SW-122(041712)	WS	4/17/2012	SVOCs TICs	Unknown1	6	J	ug/l
Surface Water Samples	SW-122	FTD72-SW-122(041712)	WS	4/17/2012	SVOCs TICs	Unknown1	6	J	ug/l
Surface Water Samples	SW-122	FTD72-SW-122(041712)	WS	4/17/2012	SVOCs TICs	Unknown1	11	J	ug/l
Surface Water Samples	SW-122	FTD72-SW-122(041712)	WS	4/17/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-123	FTD72-SW-123(041612)	WS	4/16/2012	SVOCs TICs	Total SVOC TICs	29	J	ug/l
Surface Water Samples	SW-123	FTD72-SW-123(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	18	J	ug/l
Surface Water Samples	SW-123	FTD72-SW-123(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	7	J	ug/l
Surface Water Samples	SW-123	FTD72-SW-123(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	4	J	ug/l
Surface Water Samples	SW-123	FTD72-SW-123(041612)	WS	4/16/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-124	FTD72-SW-124(041612)	WS	4/16/2012	SVOCs TICs	Total SVOC TICs	22	J	ug/l
Surface Water Samples	SW-124	FTD72-SW-124(041612)	WS	4/16/2012	SVOCs TICs	Unknown alkane1	5	J	ug/l
Surface Water Samples	SW-124	FTD72-SW-124(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	8	J	ug/l
Surface Water Samples	SW-124	FTD72-SW-124(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	9	J	ug/l
Surface Water Samples	SW-124	FTD72-SW-124(041612)	WS	4/16/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-126	FTD72-SW-126(041612)	WS	4/16/2012	SVOCs TICs	Total SVOC TICs	85	J	ug/l
Surface Water Samples	SW-126	FTD72-SW-126(041612)	WS	4/16/2012	SVOCs TICs	Unknown alkane1	80	J	ug/l
Surface Water Samples	SW-126	FTD72-SW-126(041612)	WS	4/16/2012	SVOCs TICs	Unknown alkane1	5	J	ug/l
Surface Water Samples	SW-126	FTD72-SW-126(041612)	WS	4/16/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-127	FTD72-SW-127(041612)	WS	4/16/2012	SVOCs TICs	Total SVOC TICs	31	J	ug/l
Surface Water Samples	SW-127	FTD72-SW-127(041612)	WS	4/16/2012	SVOCs TICs	Unknown alkane1	5	J	ug/l
Surface Water Samples	SW-127	FTD72-SW-127(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	16	J	ug/l
Surface Water Samples	SW-127	FTD72-SW-127(041612)	WS	4/16/2012	SVOCs TICs	Unknown1	10	J	ug/l
Surface Water Samples	SW-127	FTD72-SW-127(041612)	WS	4/16/2012	VOCs TICs	Total VOC TICs	0		ug/l
Surface Water Samples	SW-128	FTD72-SW-128(041912)	WS	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
Upsurgent Spring	CC007	FTD72-CC007(041912)	WG	4/19/2012	SVOCs TICs	Total SVOC TICs	4	BJ	ug/l
Upsurgent Spring	CC007	FTD72-CC007(041912)	WG	4/19/2012	SVOCs TICs	Unknown alkane1	4	BJ	ug/l
Upsurgent Spring	CC007	FTD72-CC007(041912)	WG	4/19/2012	VOCs TICs	Total VOC TICs	0		ug/l
USACE Ft Dietrick	BMW67Background	BMW67BACKGROUND(12042011)	AA	12/4/2011	VOCs TICs	Unknown aromatic	320	J	ppbv
USACE Ft Dietrick	BMW67Background	BMW67BACKGROUND(12042011)	AA	12/4/2011	VOCs TICs	Unknown aromatic	6	J	ppbv
USACE Ft Dietrick	BMW67Background	BMW67BACKGROUND(12042011)	AA	12/4/2011	VOCs TICs	Unknown aromatic	4	J	ppbv
USACE Ft Dietrick	BMW67Background	BMW67BACKGROUND(12042011)	AA	12/4/2011	VOCs TICs	Unknown aromatic	1	J	ppbv

ARCADIS MALCOLM PIRNIE

Attachment 7.5.4
Figures

Legend

- Fort Detrick Boundary
- Area B Monitoring Well
- Residential Well
- Stream
- Water Body

Notes:

1) Aerial imagery accessed on 05/29/2012 through BING Maps Aerial via ArcGIS Online Layer Packages by ESRI (12/1/2010) ((c) 2010 Microsoft Corporation and its data suppliers).

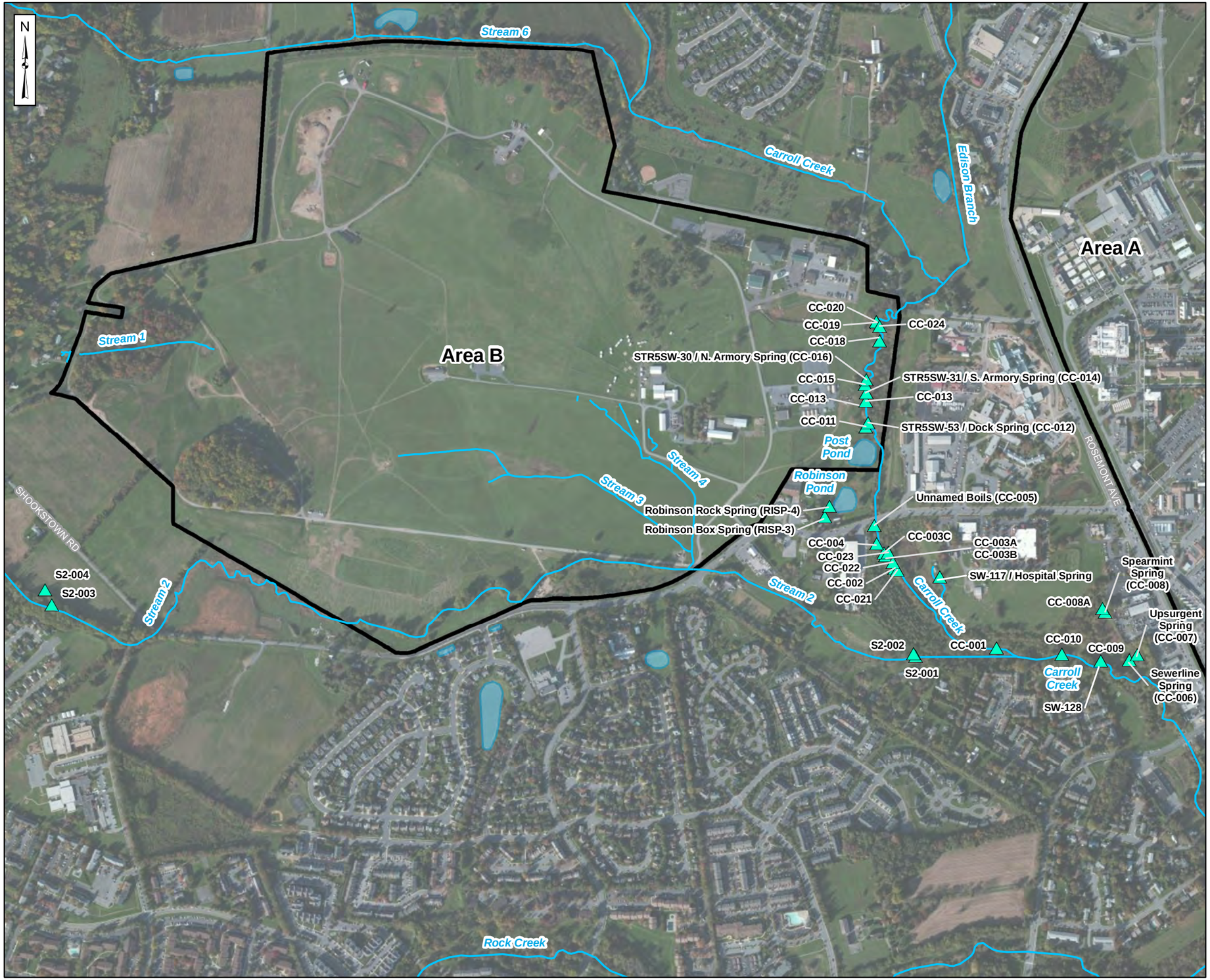
0 500 1,000
Feet

ARCADIS MALCOLM PIRNIE
Infrastructure · Water · Environment · Buildings

CSM
FIGURE A.7.5.4-1

Groundwater Sample Locations
March/April 2012

Area B Groundwater Investigation
Fort Detrick
Frederick, MD



Legend

- Fort Detrick Boundary
- Spring Sample Location
- Stream
- Water Body

Notes:
1) Aerial imagery accessed on 05/29/2012 through BING Maps Aerial via ArcGIS Online Layer Packages by ESRI (12/1/2010) ((c) 2010 Microsoft Corporation and its data suppliers).

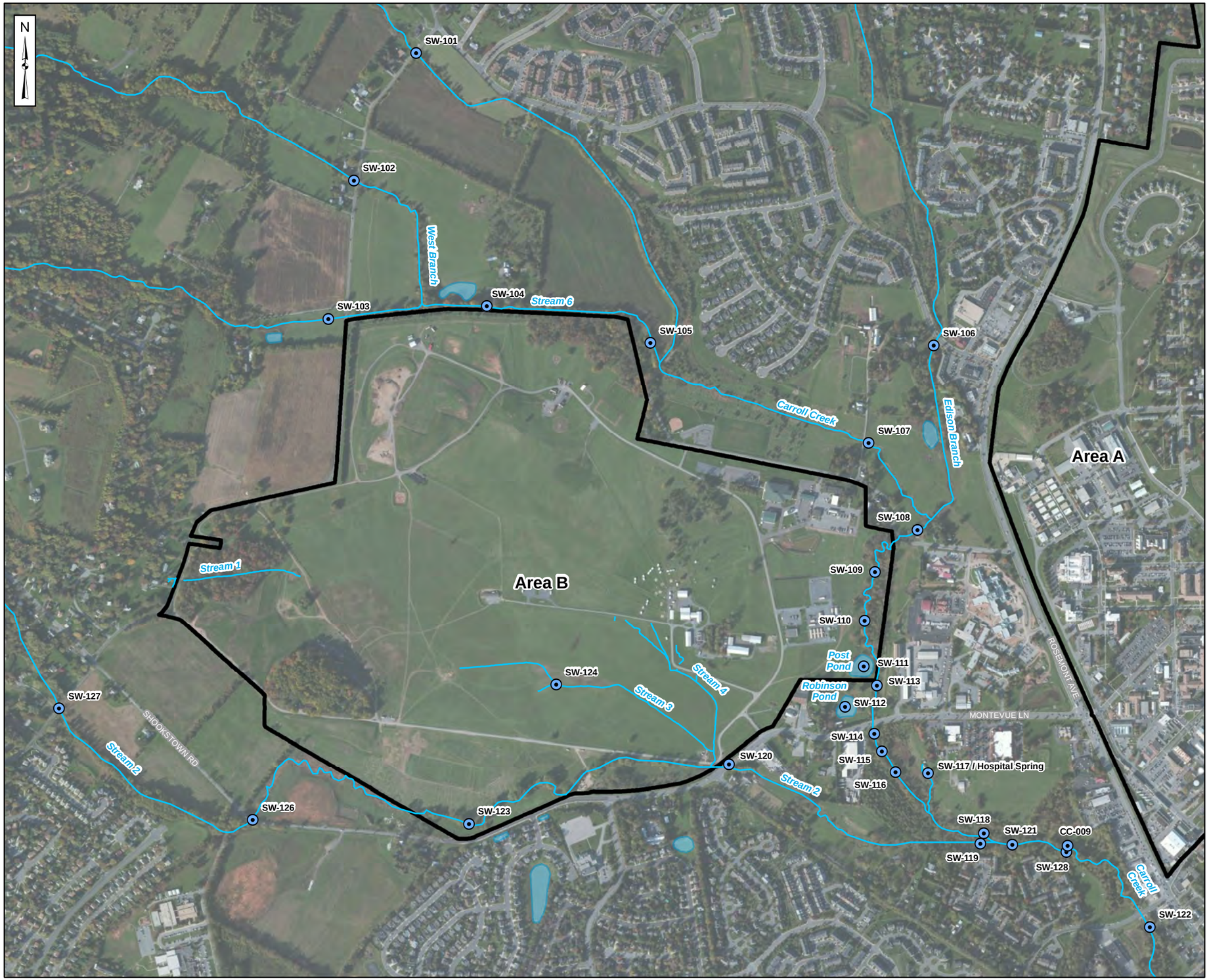
0 500 1,000 1,500
Feet

ARCADIS MALCOLM PIRNIE
Infrastructure · Water · Environment · Buildings

CSM
FIGURE A.7.5.4-2

Spring Sample Locations
March/April 2012

Area B Groundwater Investigation
Fort Detrick
Frederick, MD



Legend

- Fort Detrick Boundary
- Surface Water Sample Location
- Stream
- Water Body

Notes:
1) Aerial imagery accessed on 05/29/2012 through BING Maps Aerial via ArcGIS Online Layer Packages by ESRI (12/1/2010) ((c) 2010 Microsoft Corporation and its data suppliers).

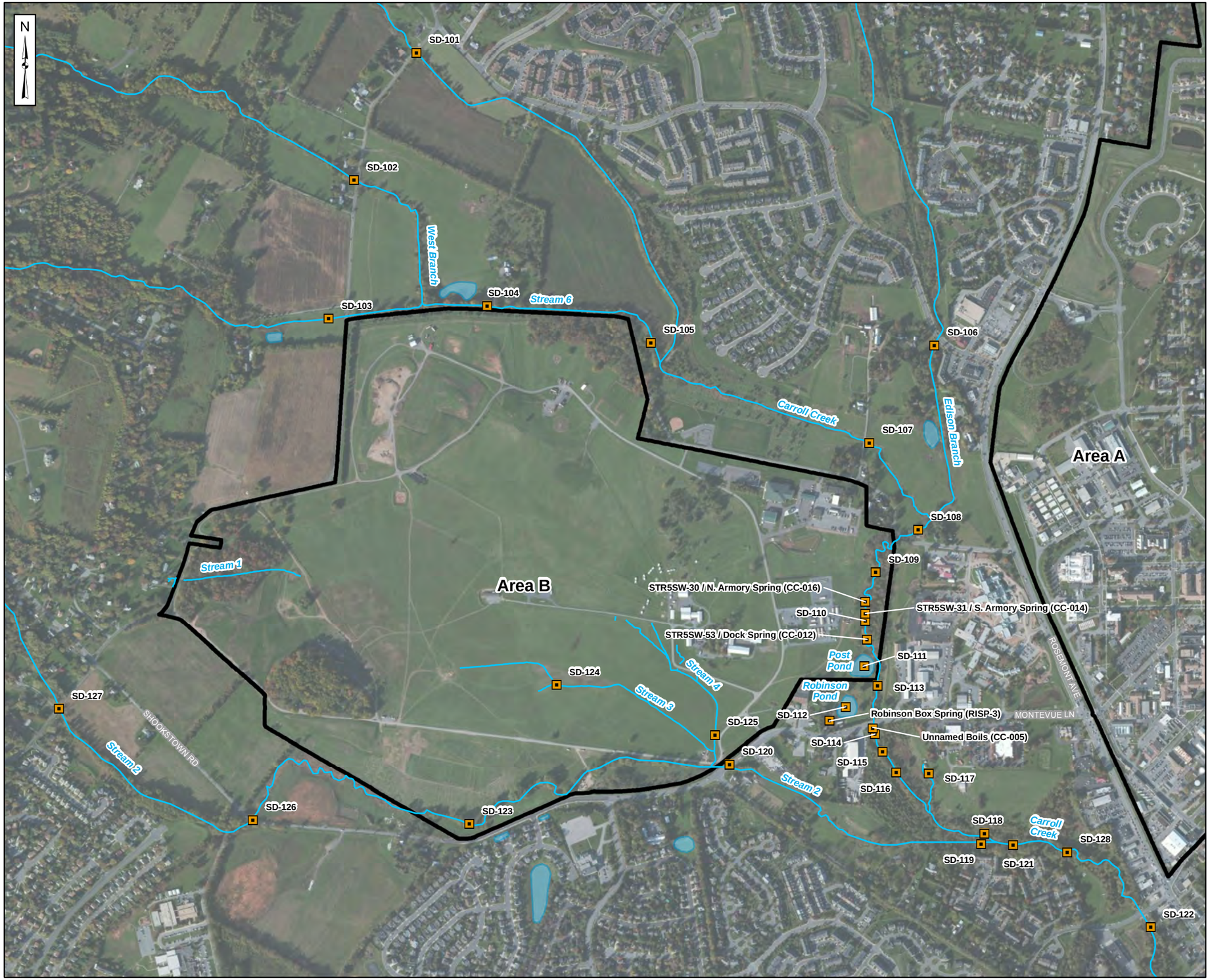
0 500 1,000 1,500
Feet

ARCADIS MALCOLM PIRNIE
Infrastructure · Water · Environment · Buildings

CSM
FIGURE A.7.5.4-3

Surface Water Sample Locations
March/April 2012

Area B Groundwater Investigation
Fort Detrick
Frederick, MD



Legend

- Fort Detrick Boundary
- Sediment Sample Location
- Stream
- Water Body

Notes:

1) Aerial imagery accessed on 05/29/2012 through BING Maps Aerial via ArcGIS Online Layer Packages by ESRI (12/1/2010) ((c) 2010 Microsoft Corporation and its data suppliers).

0 500 1,000 1,500
Feet

ARCADIS MALCOLM PIRNIE
Infrastructure · Water · Environment · Buildings

CSM
FIGURE A.7.5.4-4

Sediment Sample Locations
March/April 2012

Area B Groundwater Investigation
Fort Detrick
Frederick, MD

Attachment 7.6
Off-Post Well Investigation
(PIKA International, Inc./ARCADIS, 2015)

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Attachment 7.6
Tables

Table A.7.6-1
Drinking Water Well Survey / Public Outreach Activities Summary

Task	Tasks Summary
Initial Public Outreach	Prepared and sent an initial mailing to residents within the study area (introduced project and provided general fact sheets) Established and maintained a telephone information line throughout the duration of the project Conducted a public information session introducing the project
Private Well Survey	Prepared and sent a series of mailings (where applicable) to residents within the study area (specific to private drinking water well vs. city supply water) General fact sheets and forms requested to be completed (drinking water well survey and ROE were included in the mailings Conducted door-to-door canvassing of residents/properties to complete drinking water well survey and ROE
Final Public Outreach	Prepared and sent mailing to residents with sampling results Conducted public information session summarizing drinking water well sampling results as part of the August 2014 RAB Meeting
RAB Meetings	Participated and/or conducted quarterly Fort Detrick RAB meetings throughout the period of work performance

Table A.7.6-2
Survey Results

Responses	# of Surveys
Survey Counts By Result	
Complete - private drinking water well	109
Complete - city water	3
Complete - no water source	1[1]
Complete - vacant properties	8
Undeveloped - Not Applicable	4
Total Number of Surveys Completed	*125 (89% completed)*
Incomplete - residents could not be contacted	12
Incomplete – residents refused to complete survey with drinking water well	4
ROE Signed	91 (65% participation)
Total number of Properties	**141**

[1] Building was determined to be a warehouse with no utilities running to it.

Table A.7.6-3
Drinking Water Well Sampling Analytical Results

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-DWELL315(112612)			FTD72-DWELL602(112612)			FTD72-DWELL603(112612)			FTD72-DWELL604(112612)			FTD72-DWSRD-BOND(112612)			FTD72-DWELL543(112612)			FTD72-DWELL605(112612)		
			Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromodichloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	ug/l	0.05	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	ug/l	600	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	ug/l	75	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,2-Dichloroethene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,2-Dichloroethene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	ug/l		N.D.			**0.4**	**J**		**0.1**	**J**		**0.2**	**J**		N.D.			N.D.			N.D.		
4-Methyl-2-Pentanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Toluene	ug/l	1000	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	ug/l	200	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2-Trichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichlorofluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Vinyl Chloride	ug/l	2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		

Table A.7.6-3
Drinking Water Well Sampling Analytical Results

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-DWELL601(112612)			FTD72-DUP(112612)			FTD72-DWELL606(112712)			FTD72-DWSRD-16(112712)			FTD72-DWGRAN-31(112712)			FTD72-DWELL607(112712)			FTD72-DWELL608(112712)		
			Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromodichloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	ug/l	0.05	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	ug/l	600	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	ug/l	75	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,2-Dichloroethene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,2-Dichloroethene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
4-Methyl-2-Pentanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Toluene	ug/l	1000	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	ug/l	200	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2-Trichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichlorofluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Vinyl Chloride	ug/l	2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		

Table A.7.6-3
Drinking Water Well Sampling Analytical Results

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-DWELL609(112712)			FTD72-DWELL610(112712)			FTD72-DWELL611(112712)			FTD72-DWELL612(112712)			FTD72-DUP(112712)			FTD72-DWELL312(112812)			FTD72-DWGRAN27-2(112812)		
			Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromodichloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	ug/l	80	**0.2**	J		**0.2**	**J**	**J**	**0.3**	**J**		N.D.			**0.1**	**J**	**J**	N.D.			N.D.		
Chloromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	ug/l	0.05	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	ug/l	600	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	ug/l	75	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,2-Dichloroethene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,2-Dichloroethene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
4-Methyl-2-Pentanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Toluene	ug/l	1000	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	ug/l	200	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2-Trichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichlorofluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Vinyl Chloride	ug/l	2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		

Table A.7.6-3
Drinking Water Well Sampling Analytical Results

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-DWGRAN27-1(112812)			FTD72-DWGRAN28-1(112812)			FTD72-DWELL613(112812)			FTD72-DWELL614(112812)			FTD72-DWELL615(112812)			FTD72-DWELL616(112812)			FTD72-DWGRAN-28-2(113012)		
			Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromodichloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	ug/l	0.05	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	ug/l	600	N.D.			N.D.			N.D.			N.D.			N.D.			**0.9**			N.D.		
1,3-Dichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	ug/l	75	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,2-Dichloroethene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,2-Dichloroethene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
4-Methyl-2-Pentanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	ug/l	100	**0.4**	**J**		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Toluene	ug/l	1000	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	ug/l	200	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2-Trichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichlorofluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Vinyl Chloride	ug/l	2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		

Table A.7.6-3
Drinking Water Well Sampling Analytical Results

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-DWELL-617(113012)			FTD72-DWELL-618(113012)			FTD72-DWELL-619(113012)			FTD72-DWELL-620(113012)			FTD72-DWELL-621(113012)			FTD72-DWELL-622(113012)			FTD72-DUP(113012)		
			Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromodichloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	ug/l	0.05	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	ug/l	600	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	ug/l	75	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,2-Dichloroethene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,2-Dichloroethene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
4-Methyl-2-Pentanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Toluene	ug/l	1000	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	ug/l	200	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2-Trichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichlorofluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Vinyl Chloride	ug/l	2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		

Table A.7.6-3
Drinking Water Well Sampling Analytical Results

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-DWELL623(120312)			FTD72-DWELL624(120312)			FTD72-DWELL625(120312)			FTD72-DWELL626(120312)			FTD72-DWELL627(120312)			FTD72-DUP(120312)			FTD72-DWELL628(120312)		
			Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromodichloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	ug/l	0.05	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	ug/l	600	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	ug/l	75	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,2-Dichloroethene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,2-Dichloroethene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	ug/l		N.D.			N.D.			**0.2**	**J**		**0.1**	**J**		N.D.			N.D.			**0.1**	**J**	
4-Methyl-2-Pentanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Toluene	ug/l	1000	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	ug/l	200	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2-Trichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	ug/l	5	N.D.			N.D.			**0.2**	**J**		N.D.			N.D.			N.D.			N.D.		
Trichlorofluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Vinyl Chloride	ug/l	2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		

Table A.7.6-3
Drinking Water Well Sampling Analytical Results

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-DWELL629(120312)			FTD72-DWELL630(120312)			FTD72-DWELL631(120512)			FTD72-DWELL632(120512)			FTD72-DWELL633(120512)			FTD72-DWELL634(120512)			FTD72-DUP(120512)		
			Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromodichloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	ug/l	80	N.D.			N.D.			N.D.			N.D.			**0.2**	**J**		N.D.			N.D.		
Chloromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	ug/l	0.05	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	ug/l	600	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	ug/l	75	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,2-Dichloroethene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,2-Dichloroethene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
4-Methyl-2-Pentanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Toluene	ug/l	1000	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	ug/l	200	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2-Trichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichlorofluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Vinyl Chloride	ug/l	2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		

Table A.7.6-3
Drinking Water Well Sampling Analytical Results

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-DWELL635(120512)			FTD72-DWELL636(120512)			FTD72-DWELL637(120512)			FTD72-DWELL99(120512)			FTD72-DWGRAN34(120512)			FTD72-DWELL638(120512)			FTD72-DWELL639(120612)		
			Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromodichloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	ug/l	0.05	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	ug/l	600	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	ug/l	75	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,2-Dichloroethene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,2-Dichloroethene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			**0.3**	**J**		N.D.		
4-Methyl-2-Pentanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Toluene	ug/l	1000	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	ug/l	200	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2-Trichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichlorofluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Vinyl Chloride	ug/l	2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		

Table A.7.6-3
Drinking Water Well Sampling Analytical Results

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-DWELL640(120612)			FTD72-DWELL641(120612)			FTD72-DWELL642(120612)			FTD72-DWELL643(120612)			FTD72-DWELL644(120612)			FTD72-DUP(120612)			FTD72-DWELL645(120612)		
			Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromodichloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	ug/l	0.05	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	ug/l	600	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	ug/l	75	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,2-Dichloroethene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,2-Dichloroethene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	ug/l		N.D.			**0.2**	**J**		**0.3**	**J**		N.D.			**0.1**	**J**		**0.1**	**J**		N.D.		
4-Methyl-2-Pentanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Toluene	ug/l	1000	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	ug/l	200	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2-Trichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichlorofluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Vinyl Chloride	ug/l	2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		

Table A.7.6-3
Drinking Water Well Sampling Analytical Results

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-DWELL646(120612)			FTD72-DWELL647(120612)			FTD72-DWELL648(120612)			FTD72-DWELL649(120612)			FTD72-DWELL700(120712)			FTD72-DWSRD300(120712)			FTD72-DWELL701(120712)		
			Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromodichloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			0.2	J		N.D.		
Chloromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	ug/l	0.05	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	ug/l	600	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	ug/l	75	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,2-Dichloroethene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,2-Dichloroethene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	ug/l		N.D.			0.2	J		N.D.			N.D.			N.D.			N.D.			N.D.		
4-Methyl-2-Pentanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Toluene	ug/l	1000	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	ug/l	200	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2-Trichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichlorofluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Vinyl Chloride	ug/l	2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		

Table A.7.6-3
Drinking Water Well Sampling Analytical Results

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-DWGRAN32(120712)			FTD72-DWELL702(120712)			FTD72-DWELL703(120712)			FTD72-DUP(120712)			FTD72-DWELL516(120712)			FTD72-DWELL704(120712)			FTD72-DWELL705(120712)			FTD72-DWELL706(120712)		
			Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromodichloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	ug/l		2.7	J		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			0.1	J	
Chloromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	ug/l	0.05	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	ug/l	600	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	ug/l	75	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,2-Dichloroethene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,2-Dichloroethene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	ug/l		N.D.			N.D.			0.3	J		0.3	J		N.D.			N.D.			N.D.			N.D.		
4-Methyl-2-Pentanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Toluene	ug/l	1000	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	ug/l	200	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2-Trichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichlorofluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Vinyl Chloride	ug/l	2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		

Table A.7.6-3
Drinking Water Well Sampling Analytical Results

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-DWELL304(121212)			FTD72-DWELL557(121212)			FTD72-DWELL662(121212)			FTD72-DWELL663(121212)			FTD72-DWELL664(121212)			FTD72-DWELL655(121212)		
			Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	ug/l	5	N.D.			N.D.			N.D.			N.D.			**0.3**	**J**		N.D.		
Bromodichloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	ug/l	80	N.D.			N.D.			**0.1**	**J**		N.D.			N.D.			N.D.		
Chloromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	ug/l	0.05	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	ug/l	600	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	ug/l	75	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,2-Dichloroethene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,2-Dichloroethene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
4-Methyl-2-Pentanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Toluene	ug/l	1000	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	ug/l	200	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2-Trichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichlorofluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Vinyl Chloride	ug/l	2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		

Table A.7.6-3
Drinking Water Well Sampling Analytical Results

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-DWELL656(121212)			FTD72-DWELL657(121212)			FTD72-DWELL334(121212)			FTD72-DWELL659(121212)			FTD72-DWELL660(121212)			FTD72-DWELL661(121212)			FTD72-DUP(121212)-1		
			Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromodichloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	ug/l	0.05	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	ug/l	600	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	ug/l	75	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,2-Dichloroethene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,2-Dichloroethene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	ug/l		N.D.			**0.2**	**J**		N.D.			N.D.			N.D.			N.D.			**0.2**	**J**	
4-Methyl-2-Pentanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Toluene	ug/l	1000	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	ug/l	200	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2-Trichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichlorofluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Vinyl Chloride	ug/l	2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		

Table A.7.6-3
Drinking Water Well Sampling Analytical Results

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-DWELL665(121312)			FTD72-DWELL88(121312)			FTD72-DWELL658(121312)			FTD72-DWELL666(121912)			FTD72-DUP(121912)			FTD72-DWELL625(012913)			FTD72-DWELL667(012913)		
			Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromodichloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	ug/l	80	**0.1**	**J**		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	ug/l	0.05	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	ug/l	600	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	ug/l	75	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,2-Dichloroethene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,2-Dichloroethene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	ug/l		N.D.			N.D.			N.D.			**0.1**	**J**		**0.1**	**J**		**0.2**	**J**		N.D.		
4-Methyl-2-Pentanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			**0.1**	**J**	
Toluene	ug/l	1000	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	ug/l	200	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2-Trichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			**0.1**	**J**		N.D.		
Trichlorofluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Vinyl Chloride	ug/l	2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		

Table A.7.6-3
Drinking Water Well Sampling Analytical Results

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-DWELL668(012913)			FTD72-DWSRD200(012913)			FTD72-DUP(012913)			FTD72-DWELL669(022113)			FTD72-DWELL670(022113)			FTD72-DWELL671(022113)			DUP(022113)		
			Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromodichloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	ug/l	0.05	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	ug/l	600	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	ug/l	75	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,2-Dichloroethene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,2-Dichloroethene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
4-Methyl-2-Pentanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Toluene	ug/l	1000	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	ug/l	200	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2-Trichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichlorofluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Vinyl Chloride	ug/l	2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		

Table A.7.6-3
Drinking Water Well Sampling Analytical Results

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-DWELL-669(022113)			FTD72-DWELL-670(022113)			DUP(022113)			FTD72-DWELL667(050313)			FTD72-DUP(050313)		
			Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.		
Bromodichloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.		
Chloromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.2	N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	ug/l	0.05	N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	ug/l	600	N.D.			N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	ug/l	75	N.D.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,2-Dichloroethene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,2-Dichloroethene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
4-Methyl-2-Pentanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.		
Toluene	ug/l	1000	N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	ug/l	200	N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2-Trichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.		
Trichlorofluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Vinyl Chloride	ug/l	2	N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		

Table A.7.6-3
Drinking Water Well Sampling Analytical Results

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-DWELL304(121212)			FTD72-DWELL557(121212)			FTD72-DWELL662(121212)			FTD72-DWELL663(121212)			FTD72-DWELL664(121212)			FTD72-DWELL655(121212)		
			Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	ug/l	5	N.D.			N.D.			N.D.			N.D.			**0.3**	**J**		N.D.		
Bromodichloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	ug/l	80	N.D.			N.D.			**0.1**	**J**		N.D.			N.D.			N.D.		
Chloromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	ug/l	0.05	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	ug/l	600	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	ug/l	75	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,2-Dichloroethene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,2-Dichloroethene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
4-Methyl-2-Pentanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Toluene	ug/l	1000	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	ug/l	200	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2-Trichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichlorofluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Vinyl Chloride	ug/l	2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		

Table A.7.6-3
Drinking Water Well Sampling Analytical Results

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-DWELL656(121212)			FTD72-DWELL657(121212)			FTD72-DWELL334(121212)			FTD72-DWELL659(121212)			FTD72-DWELL660(121212)			FTD72-DWELL661(121212)			FTD72-DUP(121212)-1		
			Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromodichloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	ug/l	0.05	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	ug/l	600	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	ug/l	75	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,2-Dichloroethene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,2-Dichloroethene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	ug/l		N.D.			**0.2**	**J**		N.D.			N.D.			N.D.			N.D.			**0.2**	**J**	
4-Methyl-2-Pentanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Toluene	ug/l	1000	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	ug/l	200	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2-Trichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichlorofluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Vinyl Chloride	ug/l	2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		

Table A.7.6-3
Drinking Water Well Sampling Analytical Results

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-DWELL665(121312)			FTD72-DWELL88(121312)			FTD72-DWELL658(121312)			FTD72-DWELL666(121912)			FTD72-DUP(121912)			FTD72-DWELL625(012913)			FTD72-DWELL667(012913)		
			Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromodichloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	ug/l	80	**0.1**	**J**		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	ug/l	0.05	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	ug/l	600	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	ug/l	75	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,2-Dichloroethene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,2-Dichloroethene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	ug/l		N.D.			N.D.			N.D.			**0.1**	**J**		**0.1**	**J**		**0.2**	**J**		N.D.		
4-Methyl-2-Pentanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			**0.1**	**J**	
Toluene	ug/l	1000	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	ug/l	200	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2-Trichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			**0.1**	**J**		N.D.		
Trichlorofluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Vinyl Chloride	ug/l	2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		

Table A.7.6-3
Drinking Water Well Sampling Analytical Results

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-DWELL668(012913)			FTD72-DWSRD200(012913)			FTD72-DUP(012913)			FTD72-DWELL669(022113)			FTD72-DWELL670(022113)			FTD72-DWELL671(022113)			DUP(022113)		
			Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromodichloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Chloromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	ug/l	0.05	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	ug/l	600	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	ug/l	75	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,2-Dichloroethene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,2-Dichloroethene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
4-Methyl-2-Pentanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Toluene	ug/l	1000	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	ug/l	200	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2-Trichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Trichlorofluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
Vinyl Chloride	ug/l	2	N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.			N.D.			N.D.		

Table A.7.6-3
Drinking Water Well Sampling Analytical Results

Analysis Name	Units	Maximum Contaminant Levels (MCLs)	FTD72-DWELL-669(022113)			FTD72-DWELL-670(022113)			DUP(022113)			FTD72-DWELL667(050313)			FTD72-DUP(050313)		
			Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier	Result	Lab Qualifier	Val Qualifier
Acetone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Benzene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.		
Bromodichloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.		
Bromoform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.		
Bromomethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
2-Butanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Disulfide	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Carbon Tetrachloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.		
Chlorobenzene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Chloroform	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.		
Chloromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Cyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromo-3-chloropropane	ug/l	0.2	N.D.			N.D.			N.D.			N.D.			N.D.		
Dibromochloromethane	ug/l	80	N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dibromoethane	ug/l	0.05	N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichlorobenzene	ug/l	600	N.D.			N.D.			N.D.			N.D.			N.D.		
1,3-Dichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
1,4-Dichlorobenzene	ug/l	75	N.D.			N.D.			N.D.			N.D.			N.D.		
Dichlorodifluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.		
1,1-Dichloroethene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,2-Dichloroethene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,2-Dichloroethene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.		
1,2-Dichloropropane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.		
cis-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
trans-1,3-Dichloropropene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Ethylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Freon 113	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
2-Hexanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Isopropylbenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Acetate	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Methyl Tertiary Butyl Ether	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
4-Methyl-2-Pentanone	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Methylcyclohexane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Methylene Chloride	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.		
Styrene	ug/l	100	N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2,2-Tetrachloroethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Tetrachloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.		
Toluene	ug/l	1000	N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,3-Trichlorobenzene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
1,2,4-Trichlorobenzene	ug/l	70	N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,1-Trichloroethane	ug/l	200	N.D.			N.D.			N.D.			N.D.			N.D.		
1,1,2-Trichloroethane	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.		
Trichloroethene	ug/l	5	N.D.			N.D.			N.D.			N.D.			N.D.		
Trichlorofluoromethane	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
Vinyl Chloride	ug/l	2	N.D.			N.D.			N.D.			N.D.			N.D.		
m+p-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		
o-Xylene	ug/l		N.D.			N.D.			N.D.			N.D.			N.D.		

Attachment 7.6
Figures

Note: Base map data was obtained from ESRI StreetMap USA 2005.

N

Pennsylvania

Maryland

West Virginia

Virginia

District of Columbia

New Jersey

Delaware

Philadelphia Metro Area

Baltimore Metro Area

Washington Metro Area

Reading

Trenton

Levittown

Camden

Richmond

Monongahela NF

Area A

Area B

Area C

Frederick

Fort Detrick
Off-Post Well Investigation

Fort Detrick
Frederick, MD

PIKA INTERNATIONAL, INC. ARCADIS

Figure A.7.6-1
General Location

Legend

Fort Detrick Boundary

Coordinate System: Maryland State Plane
Datum: NAD 1983
Units: Feet

\\arcadis-us.com\officedata\WhitePlains-NY\WHI_GIS\GIS_data\Projects\ARMY\Installations\Fort_Detrick\Off_Post_Well_Investigation\MXDs\Final_Report\Figure_1-1_General_Location.mxd

Note: Aerial imagery (2011) accessed via ArcGIS Online World Imagery.

Area A

Area B

Carroll Creek

Rock Creek

Fort Detrick
Off-Post Well Investigation

Fort Detrick
Frederick, MD

PIKA INTERNATIONAL, INC.

ARCADIS

Figure A.7.6-2
Study Area

Legend

- Fort Detrick Boundary
- Investigation Area Boundary
- Stream
- Water Body

Coordinate System: Maryland State Plane
Datum: NAD 1983
Units: Feet

\\arcadis-us.com\office\data\WhitePlains-NY\WHI_GIS\GIS_data\Projects\ARMY\Installations\Fort_Detrick\Off_Post_Well_Investigation\MXDs\Final_Report\Figure_1-2_Study_Area.mxd

Note: Aerial imagery (2011) accessed via ArcGIS Online World Imagery.

Fort Detrick
Off-Post Well Investigation

Fort Detrick
Frederick, MD

PIKA INTERNATIONAL, INC. ARCADIS

Figure A.7.6-3
Upper Carroll Creek Drainage Basin

Legend

- Fort Detrick Boundary
- Investigation Area Boundary
- Drainage Basin (4,620 Acres)
- Stream
- Water Body
- Surface Water Flow Direction
- 20 Ft Elevation Contour

Coordinate System: Maryland State Plane
Datum: NAD 1983
Units: Feet

\\arcadis-us.com\office\data\WhitePlains-NYWHI_GIS\GIS_data\Projects\ARMY\Installations\Fort_Detrick\Off_Post_Well_Investigation\MXDs\Final_Report\Figure_2-1_Drainage_Basin.mxd

N

Note: Aerial imagery (2011) accessed via ArcGIS Online World Imagery.

Area B

Fort Detrick
Off-Post Well Investigation

Fort Detrick
Frederick, MD

PIKA INTERNATIONAL, INC. ARCADIS

Figure A.7.6-4
General Location of Drinking Water Wells in Study Area

Legend

- Installation Boundary
- Investigation Area Boundary
- Frederick City Boundary
- Stream
- Water Body
- Private Well Sampling Location

Coordinate System: Maryland State Plane
Datum: NAD 1983
Units: Feet

\\arcadis-us.com\office\data\WhitePlains-NYWHI_GIS\GIS_data\Projects\ARMY\Installations\Fort_Detrick\Off_Post_Well_Investigation\MXDs\Final_Report\Figure_3-1_Well_Locations.mxd

Note: Aerial imagery (2011) accessed via ArcGIS Online World Imagery.

Quadrant 1:
9 wells
3 detections of chloroform
6 no detections

Quadrant 2:
28 wells
3 detections of MTBE
1 detection of chloroform
1 detection of styrene
1 detection of 2-Butanone
22 no detections

Quadrant 3:
35 wells
10 detections of MTBE
2 detections of chloroform
1 detection of PCE
1 detection of TCE
23 no detections

Quadrant 4:
21 wells
1 detection of MTBE
2 detections of chloroform
1 detection of 1,2-dichlorobenzene
1 detection of benzene
16 no detections

Area B

AREA B-11

Stream 1

Stream 2

Stream 3

Stream 4

Stream 6

West Branch

Carroll Creek

Rock Creek

Fort Detrick
Off-Post Well Investigation

Fort Detrick
Frederick, MD

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Figure A.7.6-5
Results of Drinking Water Sampling and Analysis

Legend

- Installation Boundary
- Investigation Area Boundary
- Disposal Area
- Frederick City Boundary
- Stream
- Sampling Location
- Quadrant 1
- Quadrant 2
- Quadrant 3
- Quadrant 4

Coordinate System: Maryland State Plane
Datum: NAD 1983
Units: Feet

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Note: Aerial imagery (2011) accessed via ArcGIS Online World Imagery.

Quadrant 1:
9 wells
3 detections of chloroform
6 no detections

Quadrant 2:
28 wells
3 detections of MTBE
1 detection of chloroform
1 detection of styrene
1 detection of 2-Butanone
22 no detections

Quadrant 3:
35 wells
10 detections of MTBE
2 detections of chloroform
1 detection of PCE
1 detection of TCE
23 no detections

Quadrant 4:
21 wells
1 detection of MTBE
2 detections of chloroform
1 detection of 1,2-dichlorobenzene
1 detection of benzene
16 no detections

Area A
Area B
AREA B-11

Carroll Creek
Stream 1
Stream 2
Stream 3
Stream 4
Stream 6
West Branch
Edison Branch
Rock Creek

360
340
330
320
310
350

Fort Detrick
Off-Post Well Investigation

Fort Detrick
Frederick, MD

PIKA INTERNATIONAL, INC. ARCADIS

Figure A.7.6-6
Off-Post vs. On-Post Concentrations

Legend

- Installation Boundary
- Investigation Area Boundary
- Disposal Area
- Frederick City Boundary
- Stream
- Groundwater Elevation Contour (dashed where inferred)
- Sampling Location
- Quadrant 1
- Quadrant 2
- Quadrant 3
- Quadrant 4

Contours in Area A are based on shallow bedrock water levels (typically <100 ft total depth).

Coordinate System: Maryland State Plane
Datum: NAD 1983
Units: Feet

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Attachment 7.7
Area B Landfill Inspections

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Attachment 7.7
Tables

Table A.7.7-1
Area B Soil Cap Inspections
Fort Detrick, Maryland

Inspection by: David Moore **Date:** 5/25/2016 **Weather:** Sunny, 80's

INSPECTION ITEM	B-2	B-3 East	B-3 West	B-6	B10-1	B10-2	B-11	B-18	WDA	NOTES
Erosion Controls										
Silt fencing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Earthen dikes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Swales and channels	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Sediment trap(s)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Sediment trap outfalls	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Standing water / ponding	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	
Erosion mat	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Straw tubes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Vegetative Cover (%)										
Thin (<50%)	100%, some weeds	100%, some weeds	100%, some weeds	100%, some weeds	Thin, lots of weeds	Thin, lots of weeds	100%, some weeds	Mostly covered in weeds	100%, some weeds	B-18 has almost no grass. When we spray with herbicide, there will be no cover.
Bare (<25%)										
Cap Surface/Perimeter										
Rills, gullies, erosion	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	
Eroded sediment ("fan/delta")	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	
Cracks (length, width, depth, orientation to slope	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	
Sloughing of surface soil	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	
Holes in ground surface due to erosion/ "piping", animals	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	
Vehicle tire/track rutting	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	
Exposed geosynthetics?	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	

Table A.7.7-1
Area B Soil Cap Inspections
Fort Detrick, Maryland

INSPECTION ITEM	B-2	B-3 East	B-3 West	B-6	B10-1	B10-2	B-11	B-18	WDA	NOTES
Gas Vents & Bumpers										
Corrugated pipe bumpers	Good	Good	Good	Good	Good	Good	Good	Good	Good	
PVC pipe condition	Good	Good	Good	Good	Good	Good	Good	Good	Good	
Animal/insect nesting	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	
Concrete cap condition	Good	Good	Good	Good	Good	Good	Good	Good	Good	
Perimeter Cap Signage										
Intact? Plumb?	Only 2 signs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Signs at all landfills. Joe Gortva mentioned some were missing and they would need replaced.
Damage to post or sign	Yes	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	
Missing sign or hardware	1 post seen without sign	?	?	?	?	?	?	?	?	Don't know how many signs are supposed to be at LF's. All LF's had signs, but not many.
Excessive corrosion	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Modified Monitoring Wells										
Bollards plumb and intact	Good	Good	Good	Good	Good	Good	Good	Good	Good	
Concrete pad condition	Good	Good	Good	Good	Good	Good	Good	Good	Good	
Casing protector	Good	Good	Good	Good	Good	Good	Good	Good	Good	
Other										

Table A.7.7-2
Area B Soil Cap Inspections
Fort Detrick, Maryland

Inspection by: Mike Greene				Date: 11/15/16			Weather:	Sunny, 40s	
INSPECTION ITEM	**B-2**	**B-3 East**	**B-3 West**	**B-6**	**B10-1**	**B10-2**	**B-11**	**WDA**	**NOTES**
Erosion Controls									
Silt fencing	na	na	na	na	na	na	na	na	
Earthen dikes	na	na	na	na	na	na	na	na	
Swales and channels	na	na	na	na	na	na	na	na	
Sediment trap(s)	na	na	na	na	na	na	na	na	
Sediment trap outfalls	na	na	na	na	na	na	na	na	
Standing water / ponding	no	no	no	no	no	no	no	no	
Erosion mat	na	na	na	na	na	na	na	na	
Straw tubes	na	na	na	na	na	na	na	na	
Vegetative Cover (%)									
Veg,%	95%	95%	95%	95%	95%	95%	95%	95%	
Bare (<25%)	na	na	na	na	na	na	na	na	
Cap Surface/Perimeter									
Rills, gullies, erosion	no	no	no	no	no	no	no	no	
Eroded sediment ("fan/delta")	no	no	no	no	no	no	no	no	
Cracks (length, width, depth, orientation to slope	no	no	no	no	no	no	no	no	
Sloughing of surface soil	no	no	no	no	no	no	no	no	
Holes in ground surface due to erosion/ "piping", animals	animal holes (1)	animal holes (3)	no	no	no	no	no	animal holes (3)	
Vehicle tire/track rutting	no	no	no	no	no	no	no	no	
Exposed geosynthetics?	no	no	no	no	no	no	no	no	

Table A.7.7-2
Area B Soil Cap Inspections
Fort Detrick, Maryland

INSPECTION ITEM	B-2	B-3 East	B-3 West	B-6	B10-1	B10-2	B-11	WDA	NOTES
Gas Vents & Bumpers									
Corrugated pipe bumpers	good	good	good	good	good	good	good	good	
PVC pipe condition	good	good	good	good	good	good	good	good	
Animal/insect nesting	no	no	no	no	no	no	no	no	
Concrete cap condition	good	good	good	good	good	good	good	good	
Perimeter Cap Signage									
Intact? Plumb?	yes	yes	yes	yes	yes	yes	yes	yes	
Damage to post or sign	no	no	no	no	no	no	no	no	
Missing sign or hardware	no	no	no	no	no	no	no	no	
Excessive corrosion	no	no	no	no	no	no	no	no	

Notes: Bombed 7 groundhog holes and backfilled the holes.

Watermark ECC LLC

Table A.7.7-3
Area B Soil Cap Inspections
Fort Detrick, Maryland

Inspection by: Mike Greene **Date:** 4/3/2017 **Weather:** Sunny, 50's

INSPECTION ITEM	B-2	B-3 East	B-3 West	B-6	B10-1	B10-2	B-11	B-18	WDA	NOTES
Erosion Controls										
Silt fencing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Earthen dikes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Swales and channels	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Sediment trap(s)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Sediment trap outfalls	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Standing water / ponding	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	
Erosion mat	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Straw tubes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Vegetative Cover (%)										
Thin (<50%)	95%	95%	95%	95%	95%	95%	95%	95%	95%	
Bare (<25%)										
Cap Surface/Perimeter										
Rills, gullies, erosion	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	
Eroded sediment ("fan/delta")	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	
Cracks (length, width, depth, orientation to slope	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	
Sloughing of surface soil	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	
Holes in ground surface due to erosion/ "piping", animals	(1) animal hole	None observed	None observed	None observed	None observed	None observed	None observed	None observed	(1) animal hole	
Vehicle tire/track rutting	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	
Exposed geosynthetics?	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	

Table A.7.7-3
Area B Soil Cap Inspections
Fort Detrick, Maryland

INSPECTION ITEM	B-2	B-3 East	B-3 West	B-6	B10-1	B10-2	B-11	B-18	WDA	NOTES
Gas Vents & Bumpers										
Corrugated pipe bumpers	Good	Good	Good	Good	Good	Good	Good	Good	Good	
PVC pipe condition	Good	Good	Good	Good	Good	Good	Good	Good	Good	
Animal/insect nesting	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	
Concrete cap condition	Good	Good	Good	Good	Good	Good	Good	Good	Good	
Perimeter Cap Signage										
Intact? Plumb?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Damage to post or sign	None observed	(1) bent sign	None observed	(1) bent sign	None observed	(1) bent sign	None observed	None observed	None observed	Signs to be invetoried and replaced/added as needed.
Missing sign or hardware	(1) sign missing	None observed	None observed	None observed	None observed	None observed	None observed	(1) sign missing	None observed	Signs to be invetoried and replaced/added as needed.
Excessive corrosion	No	No	No	No	No	No	No	No	No	
Modified Monitoring Wells										
Bollards plumb and intact	Good	Good	Good	Good	Good	Good	Good	Good	Damage at BMW19 & BMW52D	
Concrete pad condition	Good	Good	Good	Good	Good	Good	Good	Good	Good	
Casing protector	Good	Good	Good	Good	Good	Good	Good	Good	Good	
Other										

Attachment 7.7
Figures

Figure A.7.7-1
Area B Soil Cap Inspections
Fort Detrick, Maryland

Photo 1

Photo 2

Photo 3

Photo 4

Figure A.7.7-1
Area B Soil Cap Inspections
Fort Detrick, Maryland

Photo 5

Photo 6

Photo 7

Photo 8

Figure A.7.7-1
Area B Soil Cap Inspections
Fort Detrick, Maryland

Photo 9

Photo 10

Photo 11

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Attachment 7.8
Vapor Intrusion Data

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ARCADIS

Mr. John Buck
Janaury 28, 2015

Attachment 7.8
Tables

Table A.7.8-1
Vapor Intrusion Analytical Summary

Location ID: Date Collected: Sample Location	Units	Montevue A-1 01/31/13 Sub-Slab	Montevue A-1 08/30/13 Sub-Slab	Montevue A-2 01/31/13 Sub-Slab	Montevue A-2 08/30/13 Sub-Slab	Montevue A-3 01/31/13 Sub-Slab	Montevue A-3 08/30/13 Sub-Slab
Volatile Organic Compounds							
1,1,1,2-Tetrachloroethane	µg/m^3	6.9 U	6.9 U	6.9 U [6.9 U]	6.9 U [6.9 U]	6.9 U	6.9 U
1,1,1-Trichloroethane	µg/m^3	5.5 U	5.5 U	5.5 U [5.5 U]	5.5 U [5.5 U]	5.5 U	5.5 U
1,1,2,2-Tetrachloroethane	µg/m^3	6.9 U	6.9 U	6.9 U [6.9 U]	6.9 U [6.9 U]	6.9 U	6.9 U
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/m^3	15 U	15 U	15 U [15 U]	15 U [15 U]	15 U	15 U
1,1,2-Trichloroethane	µg/m^3	5.5 U	5.5 U	5.5 U [5.5 U]	5.5 U [5.5 U]	5.5 U	5.5 U
1,1-Dichloroethane	µg/m^3	4 U	4 U	4 U [4 U]	4 U [4 U]	4 U	4 U
1,1-Dichloroethene	µg/m^3	4 U	4 U	4 U [4 U]	4 U [4 U]	4 U	4 U
1,2,3-Trichloropropane	µg/m^3	6 U	6 U	6 U [6 U]	6 U [6 U]	6 U	6 U
1,2,4-Trichlorobenzene	µg/m^3	15 U	15 U	15 U [15 U]	15 U [15 U]	15 U	15 U
1,2,4-Trimethylbenzene	µg/m^3	4.9 U	2.3 J	4.9 U [4.9 U]	4.9 U [4.9 U]	4.9 U	2.8 J
1,2-Dibromoethane	µg/m^3	7.7 U	7.7 U	7.7 U [7.7 U]	7.7 U [7.7 U]	7.7 U	7.7 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	µg/m^3	7 U	7 U	7 U [7 U]	7 U [7 U]	7 U	7 U
1,2-Dichlorobenzene	µg/m^3	6 U	1.6 J	6 U [6 U]	6 U [6 U]	6 U	1.4 J
1,2-Dichloroethane	µg/m^3	4 U	4 U	4 U [4 U]	4 U [4 U]	4 U	4 U
1,2-Dichloropropane	µg/m^3	4.6 U	4.6 U	4.6 U [4.6 U]	4.6 U [4.6 U]	4.6 U	4.6 U
1,3,5-Trimethylbenzene	µg/m^3	4.9 U	4.9 U	4.9 U [4.9 U]	4.9 U [4.9 U]	4.9 U	4.9 U
1,3-Butadiene	µg/m^3	4.4 U	4.4 U	4.4 U [4.4 U]	4.4 U [4.4 U]	4.4 U	4.4 U
1,3-Dichlorobenzene	µg/m^3	6 U	6 U	6 U [6 U]	6 U [6 U]	6 U	6 U
1,4-Dichlorobenzene	µg/m^3	6 U	6 U	6 U [6 U]	6 U [6 U]	6 U	1.8 J
1,4-Dioxane	µg/m^3	1.8 J	3.6 U	3.6 U [3.6 U]	3.6 U [3.6 U]	3.6 U	3.6 U
2,2,4-Trimethylpentane	µg/m^3	4.7 U	4.7 U	4.7 U [4.7 U]	4.7 U [4.7 U]	4.7 U	4.7 U
2-Butanone	µg/m^3	5.9 U	2.4 J	4.8 J [1.5 J]	2.8 J [3.5 J]	2.5 J	4.1 J
2-Hexanone	µg/m^3	8.2 U	8.2 U	8.2 U [8.2 U]	8.2 U [8.2 U]	8.2 U	8.2 U
3-Chloropropene	µg/m^3	3.1 U	3.1 U	3.1 U [3.1 U]	3.1 U [3.1 U]	3.1 U	3.1 U
4-Ethyltoluene	µg/m^3	4.9 U	4.9 U	4.9 U [4.9 U]	4.9 U [4.9 U]	4.9 U	4.9 U
4-Methyl-2-pentanone	µg/m^3	8.2 U	8.2 U	8.2 U [8.2 U]	8.2 U [8.2 U]	8.2 U	8.2 U
Acetone	µg/m^3	35	19	19 J [10 J]	29 [35]	590	190
Acetonitrile	µg/m^3	3.4 U	3.4 U	3.4 U [3.4 U]	3.4 U [3.4 U]	3.4 U	6.9
Acrolein	µg/m^3	4.6 U	1.2 J	4.6 U [4.6 U]	1.7 J [5.2 J]	4.6 U	2.9 J
Acrylonitrile	µg/m^3	4.3 U	4.3 U	4.3 U [4.3 U]	4.3 U [4.3 U]	4.3 U	4.3 U
Benzene	µg/m^3	3.2 U	3.2 U	3.2 U [3.2 U]	3.2 U [3.2 U]	3.2 U	0.91 J
Bromobenzene	µg/m^3	6.4 U	6.4 U	6.4 U [6.4 U]	6.4 U [6.4 U]	6.4 U	6.4 U
Bromodichloromethane	µg/m^3	6.7 U	6.7 U	6.7 U [6.7 U]	6.7 U [6.7 U]	6.7 U	6.7 U
Bromoform	µg/m^3	10 U	10 U	10 U [10 U]	10 U [10 U]	10 U	10 U
Bromomethane	µg/m^3	3.9 U	3.9 U	3.9 U [3.9 U]	3.9 U [3.9 U]	3.9 U	3.9 U
Carbon Disulfide	µg/m^3	3.1 U	3.4	17 J [3.1 UJ]	2.1 J [29 J]	1.7 J	10
Carbon Tetrachloride	µg/m^3	6.3 U	6.3 U	6.3 U [6.3 U]	6.3 U [6.3 U]	6.3 U	6.3 U
Chlorobenzene	µg/m^3	4.6 U	4.6 U	4.6 U [4.6 U]	4.6 U [4.6 U]	4.6 U	4.6 U
Chlorodifluoromethane	µg/m^3	1.2 J	89	1.6 J [1.5 J]	43 [44]	2 J	46
Chloroethane	µg/m^3	2.6 U	2.6 U	2.6 U [2.6 U]	2.6 U [2.6 U]	2.6 U	2.6 U
Chloroform	µg/m^3	4.9 U	4.9 U	4.9 U [4.9 U]	4.9 U [4.9 U]	4.9 U	1.8 J
Chloromethane	µg/m^3	2.1 U	2.1 U	2.1 U [2.1 U]	2.1 UJ [1.1 J]	2.1 U	2.1 U
cis-1,2-Dichloroethene	µg/m^3	4 U	4 U	4 U [4 U]	4 U [4 U]	4 U	4 U
cis-1,3-Dichloropropene (c)	µg/m^3	4.5 U	4.5 U	4.5 U [4.5 U]	4.5 U [4.5 U]	4.5 U	4.5 U
Dibromochloromethane	µg/m^3	8.5 U	8.5 U	8.5 U [8.5 U]	8.5 U [8.5 U]	8.5 U	8.5 U
Dibromomethane	µg/m^3	7.1 U	7.1 U	7.1 U [7.1 U]	7.1 U [7.1 U]	7.1 U	7.1 U
Dichlorodifluoromethane	µg/m^3	2.1 J	3.4 J	2.6 J [4.9 U]	2.7 J [2.9 J]	3 J	3 J
Dichloromonofluoromethane	µg/m^3	4.2 U	4.2 U	4.2 UJ [4.2 UJ]	4.2 U [4.2 U]	4.2 U	4.2 U
Ethyl acetate	µg/m^3	3.6 U	3.6 U	3.6 U [3.6 U]	3.6 U [3.6 U]	3.6 U	3.6 U
Ethyl Acrylate	µg/m^3	4.1 U	4.1 U	4.1 U [4.1 U]	4.1 U [4.1 U]	4.1 U	4.1 U
Ethyl Methacrylate	µg/m^3	4.7 U	4.7 UJ	4.7 U [4.7 U]	4.7 UJ [4.7 UJ]	4.7 U	4.7 UJ
Ethylbenzene	µg/m^3	4.3 U	4.3 U	4.3 U [4.3 U]	4.3 U [4.3 U]	4.3 U	1.1 J
Hexachlorobutadiene	µg/m^3	21 U	21 U	21 U [21 U]	21 U [21 U]	21 U	21 U
Hexachloroethane	µg/m^3	9.7 U	9.7 U	9.7 U [9.7 U]	9.7 U [9.7 U]	9.7 U	9.7 U
Iodomethane	µg/m^3	5.8 U	5.8 U	5.8 U [5.8 U]	5.8 U [5.8 U]	5.8 U	5.8 U
Isopropylbenzene	µg/m^3	4.9 U	4.9 U	4.9 U [4.9 U]	4.9 U [4.9 U]	4.9 U	4.9 U
m&p-Xylene (d)	µg/m^3	0.99 J	1.5 J	0.88 J [4.3 U]	4.3 U [4.3 U]	4.3 U	3.5 J
Methyl Acrylate	µg/m^3	3.5 U	3.5 U	3.5 U [3.5 U]	3.5 U [3.5 U]	3.5 U	3.5 U
Methyl Methacrylate	µg/m^3	4.1 U	4.1 U	4.1 U [4.1 U]	4.1 U [4.1 U]	4.1 U	4.1 U
Methyl tert-butyl ether	µg/m^3	3.6 U	3.6 U	3.6 U [3.6 U]	3.6 U [3.6 U]	3.6 U	3.6 U
Methylene Chloride	µg/m^3	3.5 U	0.74 J	3.5 U [3.5 U]	3.5 U [0.75 J]	0.91 J	61
Methylstyrene, Alpha-	µg/m^3	4.8 U	4.8 UJ	4.8 U [4.8 U]	4.8 UJ [4.8 UJ]	4.8 U	4.8 UJ
Naphthalene	µg/m^3	10 U	2.6 J	10 U [10 U]	10 U [10 U]	10 U	10 U
N-Heptane	µg/m^3	4.1 U	4.1 U	4.1 U [4.1 U]	4.1 U [4.1 U]	4.1 U	4.1 U
n-Hexane	µg/m^3	3.5 U	3.5 U	3.5 U [3.5 U]	3.5 U [0.91 J]	1.1 J	3.7
n-Octane	µg/m^3	4.7 U	4.7 U	4.7 U [4.7 U]	4.7 U [4.7 U]	4.7 U	4.7 U
o-Xylene	µg/m^3	4.3 U	4.3 U	4.3 U [4.3 U]	4.3 U [4.3 U]	4.3 U	1.7 J
Pentane, n-	µg/m^3	3 U	3 U	3 U [3 U]	3 U [3 U]	3 U	3.4
Propylene	µg/m^3	1.7 U	0.93 J	1.7 U [1.7 U]	0.72 J [0.72 J]	2.3	10
Styrene	µg/m^3	4.3 U	4.3 U	4.3 U [4.3 U]	4.3 U [4.3 U]	4.3 U	4.3 U
Tertiary butyl alcohol	µg/m^3	3 U	2.7 J	3 U [3 U]	3 U [3 U]	3 U	3 U
Tetrachloroethene	µg/m^3	6.8 U	6.8 U	6.8 U [6.8 U]	6.8 U [6.8 U]	2 J	6.8 U
Toluene	µg/m^3	3.8 U	2.1 J	3.8 U [3.8 U]	1 J [1.1 J]	3.8 U	4.1
trans-1,2-Dichloroethene	µg/m^3	4 U	4 U	4 U [4 U]	4 U [4 U]	4 U	4 U
trans-1,3-Dichloropropene (c)	µg/m^3	4.5 U	4.5 U	4.5 U [4.5 U]	4.5 U [4.5 U]	4.5 U	4.5 U
Trichloroethene	µg/m^3	5.4 U	5.4 U	5.4 U [5.4 U]	5.4 U [5.4 U]	5.4 U	5.4 U
Trichlorofluoromethane	µg/m^3	1.5 J	2.6 J	1.7 J [1.7 J]	3.3 J [3.4 J]	33	5.4 J
Vinyl Acetate	µg/m^3	3.5 U	3.5 U	3.5 U [3.5 U]	3.5 U [3.5 U]	3.5 U	3.5 U
Vinyl Chloride	µg/m^3	2.6 U	2.6 U	2.6 U [2.6 U]	2.6 U [2.6 U]	2.6 U	2.6 U

Notes

(c) 1,3-Dichloropropene was used as a surrogate for cis- and trans-1,3-dichloropropene.

(d) m-Xylene was used as a surrogate for m&p-xyelene.

J = Concentration is qualified as estimated.

U = Concentration is qualified as not detected. Reporting limit displayed.

µg/m^3 = Microgram per cubic meter.

Table A.7.8-1
Vapor Intrusion Analytical Summary

Location ID: Date Collected: Sample Location	Units	Montevue A-Sump 01/31/13 Sump	Montevue A-Sump 08/30/13 Sump	Montevue A-A1 01/31/13 Ambient Air	Montevue A-A 08/30/13 Ambient Air	Montevue B-1 01/30/13 Sub-Slab	Montevue B-1 08/30/13 Sub-Slab	Montevue B-2 01/30/13 Sub-Slab
Volatile Organic Compounds								
1,1,1,2-Tetrachloroethane	µg/m^3	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U
1,1,1-Trichloroethane	µg/m^3	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U
1,1,2,2-Tetrachloroethane	µg/m^3	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/m^3	15 U	15 U	15 U	15 U	15 U	15 U	15 U
1,1,2-Trichloroethane	µg/m^3	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U
1,1-Dichloroethane	µg/m^3	4 U	4 U	4 U	4 U	4 U	4 U	4 U
1,1-Dichloroethene	µg/m^3	4 U	4 U	4 U	4 U	4 U	4 U	4 U
1,2,3-Trichloropropane	µg/m^3	6 U	6 U	6 U	6 U	6 U	6 U	6 U
1,2,4-Trichlorobenzene	µg/m^3	15 U	15 U	15 U	15 U	15 U	15	15 U
1,2,4-Trimethylbenzene	µg/m^3	1.7 J	2 J	1.5 J	2.8 J	4.9 U	15	4.9 U
1,2-Dibromoethane	µg/m^3	7.7 U	7.7 U	7.7 U	7.7 U	7.7 U	7.7 U	7.7 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	µg/m^3	7 U	7 U	7 U	7 U	7 U	7 U	7 U
1,2-Dichlorobenzene	µg/m^3	1.9 J	6 U	1.9 J	6 U	6 U	6.5	6 U
1,2-Dichloroethane	µg/m^3	4 U	4 U	4 U	4 U	4 U	4 U	4 U
1,2-Dichloropropane	µg/m^3	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U
1,3,5-Trimethylbenzene	µg/m^3	1.2 J	4.9 U	1.1 J	4.9 U	4.9 U	4.6 J	4.9 U
1,3-Butadiene	µg/m^3	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U
1,3-Dichlorobenzene	µg/m^3	1.9 J	6 U	2 J	6 U	6 U	4.4 J	6 U
1,4-Dichlorobenzene	µg/m^3	2.3 J	2.9 J	3.6 J	4.1 J	6 U	5.8 J	6 U
1,4-Dioxane	µg/m^3	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
2,2,4-Trimethylpentane	µg/m^3	4.7 U	2.6 J	4.7 U	3 J	4.7 U	4.7 U	4.7 U
2-Butanone	µg/m^3	6	2.6 J	3.5 J	2 J	1.7 J	8.9	8.9
2-Hexanone	µg/m^3	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U
3-Chloropropene	µg/m^3	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U
4-Ethyltoluene	µg/m^3	1 J	4.9 U	4.9 U	4.9 U	4.9 U	4.4 J	4.9 U
4-Methyl-2-pentanone	µg/m^3	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U
Acetone	µg/m^3	12	29	22	30	16	76	26
Acetonitrile	µg/m^3	2.4 J	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	37
Acrolein	µg/m^3	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U
Acrylonitrile	µg/m^3	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U
Benzene	µg/m^3	3.2 U	1.8 J	3.2 U	2.8 J	3.2 U	1.7 J	3.2 U
Bromobenzene	µg/m^3	6.4 U	6.4 U	6.4 U	6.4 U	6.4 U	6.4 U	6.4 U
Bromodichloromethane	µg/m^3	6.7 U	6.7 U	6.7 U	6.7 U	16	6.7 U	6.7 U
Bromoform	µg/m^3	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromomethane	µg/m^3	3.9 U	3.9 U	3.9 U	3.9 U	3.9 U	3.9 U	3.9 U
Carbon Disulfide	µg/m^3	3.9	19	9.8	7.7	3.1 U	8.9	3.1 U
Carbon Tetrachloride	µg/m^3	6.3 U	6.3 U	6.3 U	6.3 U	1.4 J	6.3 U	6.3 U
Chlorobenzene	µg/m^3	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U
Chlorodifluoromethane	µg/m^3	7.5	56	30	82	3 J	4.9	4.9
Chloroethane	µg/m^3	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U
Chloroform	µg/m^3	1.6 J	1.4 J	4.9 U	4.9 U	620	25	7.7
Chloromethane	µg/m^3	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	1.4 J	2.1 U
cis-1,2-Dichloroethene	µg/m^3	4 U	4 U	4 U	4 U	4 U	4 U	4 U
cis-1,3-Dichloropropene (c)	µg/m^3	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U
Dibromochloromethane	µg/m^3	8.5 U	8.5 U	8.5 U	8.5 U	8.5 U	8.5 U	8.5 U
Dibromomethane	µg/m^3	7.1 U	7.1 U	7.1 U	7.1 U	7.1 U	7.1 U	7.1 U
Dichlorodifluoromethane	µg/m^3	2.6 J	3 J	4.9 U	3.3 J	2.7 J	2.2 J	2.7 J
Dichloromonofluoromethane	µg/m^3	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U
Ethyl acetate	µg/m^3	2.4 J	3.3 J	3.6 U	3.6 U	3.6 U	2 J	2.5 J
Ethyl Acrylate	µg/m^3	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U
Ethyl Methacrylate	µg/m^3	4.7 U	4.7 UJ	4.7 U	4.7 UJ	4.7 U	4.7 UJ	4.7 U
Ethylbenzene	µg/m^3	2.2 J	1.6 J	2.5 J	2.3 J	4.3 U	2.5 J	4.3 U
Hexachlorobutadiene	µg/m^3	21 U	21 U	21 U	21 U	21 U	14 J	21 U
Hexachloroethane	µg/m^3	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	3 J	9.7 U
Iodomethane	µg/m^3	5.8 U	5.8 U	5.8 U	5.8 U	5.8 U	5.8 U	5.8 U
Isopropylbenzene	µg/m^3	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U
m&p-Xylene (d)	µg/m^3	6.5	6.8	7.3	11	4.3 U	8.4	1.9 J
Methyl Acrylate	µg/m^3	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
Methyl Methacrylate	µg/m^3	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U
Methyl tert-butyl ether	µg/m^3	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
Methylene Chloride	µg/m^3	0.74 J	3.1 J	0.85 J	2.5 J	0.73 J	1.1 J	3.5 U
Methylstyrene, Alpha-	µg/m^3	4.8 U	4.8 UJ	4.8 U	4.8 UJ	4.8 U	3.5 UJ	4.8 U
Naphthalene	µg/m^3	10 U	10 U	10 U	10 U	10 U	26	10 U
N-Heptane	µg/m^3	2.7 J	1.7 J	4.1 U	2.4 J	4.1 U	1 J	1.1 J
n-Hexane	µg/m^3	3.5 U	4.9	3.5 U	7.8	3.5 U	3.5 U	3.5 U
n-Octane	µg/m^3	1.3 J	4.7 U	4.7 U	4.7 U	4.7 U	1.5 J	4.7 U
o-Xylene	µg/m^3	3.7 J	2 J	4.4	3.2 J	4.3 U	6.4	1.1 J
Pentane, n-	µg/m^3	0.82 J	11	0.83 J	17	3 U	1.4 J	3 U
Propylene	µg/m^3	1.7 J	35	1.5 J	21	1.7 U	1.9	1.7 U
Styrene	µg/m^3	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	1.9 J	4.3 U
Tertiary butyl alcohol	µg/m^3	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Tetrachloroethene	µg/m^3	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	1.6 J	6.8 U
Toluene	µg/m^3	1.4 J	11	1.6 J	16	3.8 U	11	3.8 U
trans-1,2-Dichloroethene	µg/m^3	4 U	4 U	4 U	4 U	4 U	4 U	4 U
trans-1,3-Dichloropropene (c)	µg/m^3	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U
Trichloroethene	µg/m^3	2.9 J	5.4 U	5.4 U	5.4 U	1.9 J	5.4 U	5.4 U
Trichlorofluoromethane	µg/m^3	2.1 J	1.8 J	1.4 J	1.6 J	2.2 J	12	1.9 J
Vinyl Acetate	µg/m^3	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
Vinyl Chloride	µg/m^3	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U

Notes

(c) 1,3-Dichloropropene was used as a surrogate for cis- and trans-1,3-dichloropropene.

(d) m-Xylene was used as a surrogate for m&p-xyelene.

J = Concentration is qualified as estimated.

U = Concentration is qualified as not detected. Reporting limit displayed.

µg/m^3 = Microgram per cubic meter.

Table A.7.8-1
Vapor Intrusion Analytical Summary

Location ID: Date Collected: Sample Location	Units	Montevue B-2 08/30/13 Sub-Slab	Montevue B-3 01/30/13 Sub-Slab	Montevue B-3 08/30/13 Sub-Slab	Montevue C-1 01/30/13 Sub-Slab	Montevue C-1 08/29/13 Sub-Slab	Montevue C-2 01/30/13 Sub-Slab	Montevue C-2 08/29/13 Sub-Slab
Volatile Organic Compounds								
1,1,1,2-Tetrachloroethane	µg/m^3	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U
1,1,1-Trichloroethane	µg/m^3	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U
1,1,2,2-Tetrachloroethane	µg/m^3	6.9 U	6.9 U	6.9 U	2.1 J	6.9 U	2.2 J	6.9 U
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/m^3	15 U	15 U	15 U	15 U	15 U	15 U	15 U
1,1,2-Trichloroethane	µg/m^3	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U
1,1-Dichloroethane	µg/m^3	4 U	4 U	4 U	4 U	4 U	4 U	4 U
1,1-Dichloroethene	µg/m^3	4 U	4 U	4 U	4 U	4 U	4 U	4 U
1,2,3-Trichloropropane	µg/m^3	6 U	6 U	6 U	6 U	6 U	6 U	6 U
1,2,4-Trichlorobenzene	µg/m^3	15 U	15 U	15 U	4.3 J	15 UJ	4.4 J	15 UJ
1,2,4-Trimethylbenzene	µg/m^3	3.4 J	4.9 U	4.9 U	5.3	31	6.2	2 J
1,2-Dibromoethane	µg/m^3	7.7 U	7.7 U	7.7 U	7.7 U	7.7 U	7.7 U	7.7 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	µg/m^3	7 U	7 U	7 U	7 U	7 U	7 U	7 U
1,2-Dichlorobenzene	µg/m^3	1.3 J	6 U	1.5 J	5.8 J	1.5 J	6.2	6 U
1,2-Dichloroethane	µg/m^3	1.4 J	4 U	4 U	4 U	4 U	4 U	4 U
1,2-Dichloropropane	µg/m^3	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U
1,3,5-Trimethylbenzene	µg/m^3	1.3 J	4.9 U	4.9 U	3.6 J	7.3	4 J	4.9 U
1,3-Butadiene	µg/m^3	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U
1,3-Dichlorobenzene	µg/m^3	6 U	6 U	1.3 J	5.7 J	1.3 J	5.9 J	6 U
1,4-Dichlorobenzene	µg/m^3	1.5 J	6 U	1.6 J	5.7 J	1.8 J	6 J	6 U
1,4-Dioxane	µg/m^3	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
2,2,4-Trimethylpentane	µg/m^3	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U
2-Butanone	µg/m^3	4.3 J	1.8 J	4.6 J	1.7 J	8.6	1.9 J	8.6
2-Hexanone	µg/m^3	8.2 U	8.2 U	8.2 U	8.2 U	8.2 UJ	8.2 U	8.2 UJ
3-Chloropropene	µg/m^3	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U
4-Ethyltoluene	µg/m^3	4.9 U	4.9 U	4.9 U	3.2 J	6.7	3.8 J	4.9 U
4-Methyl-2-pentanone	µg/m^3	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U
Acetone	µg/m^3	87	12	70	10	83	16	150 J
Acetonitrile	µg/m^3	3.4 U	2.1 J	3.4 U	3.9	3.4 U	3.2 J	0.86 J
Acrolein	µg/m^3	7.3	4.6 U	3.8 J	4.6 U	4.6 U	4.6 U	3.9 J
Acrylonitrile	µg/m^3	4.3 U	4.3 U	1.2 J	4.3 U	4.3 U	4.3 U	4.3 U
Benzene	µg/m^3	3.2 U	3.2 U	2.8 J	3.2 U	0.94 J	3.2 U	2 J
Bromobenzene	µg/m^3	6.4 U	6.4 U	6.4 U	1.7 J	6.4 U	1.7 J	6.4 U
Bromodichloromethane	µg/m^3	6.7 U	6.7 U	6.7 U	6.7 U	6.7 U	6.7 U	6.7 U
Bromoform	µg/m^3	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromomethane	µg/m^3	3.9 U	3.9 U	3.9 U	3.9 U	3.9 U	3.9 U	3.9 U
Carbon Disulfide	µg/m^3	3.1 U	3.1 U	9.5	3.1 U	7.7	3.1 U	6.4
Carbon Tetrachloride	µg/m^3	6.3 U	6.3 U	6.3 U	6.3 U	6.3 U	6.3 U	6.3 U
Chlorobenzene	µg/m^3	4.6 U	4.6 U	4.6 U	1.1 J	4.6 U	1.1 J	4.6 U
Chlorodifluoromethane	µg/m^3	8.1	2.7 J	5.6	1.6 J	4.5	1.2 J	1.9 J
Chloroethane	µg/m^3	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U
Chloroform	µg/m^3	4.9 U	27	4.9 U	1.5 J	2.7 J	2 J	2.3 J
Chloromethane	µg/m^3	1.2 J	2.1 U	0.67 J	2.1 U	1.1 J	2.1 U	0.72 J
cis-1,2-Dichloroethene	µg/m^3	4 U	4 U	4 U	4 U	4 U	4 U	4 U
cis-1,3-Dichloropropene (c)	µg/m^3	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U
Dibromochloromethane	µg/m^3	8.5 U	8.5 U	8.5 U	8.5 U	8.5 U	8.5 U	8.5 U
Dibromomethane	µg/m^3	7.1 U	7.1 U	7.1 U	7.1 U	7.1 U	7.1 U	7.1 U
Dichlorodifluoromethane	µg/m^3	2.4 J	2.7 J	2.2 J	2.6 J	2.6 J	2.6 J	2.9 J
Dichloromonofluoromethane	µg/m^3	0.84 J	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U
Ethyl acetate	µg/m^3	3.6 U	3.6 U	2.3 J	3.6 U	3.6 U	3.6 U	3.6 U
Ethyl Acrylate	µg/m^3	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U
Ethyl Methacrylate	µg/m^3	4.7 UJ	4.7 U	4.7 UJ	4.7 U	4.7 U	4.7 U	4.7 U
Ethylbenzene	µg/m^3	0.94 J	4.3 U	1.3 J	6.1	3.9 J	7	4.3 U
Hexachlorobutadiene	µg/m^3	21 U	21 U	21 U	21 U	21 UJ	21 U	21 UJ
Hexachloroethane	µg/m^3	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U
Iodomethane	µg/m^3	5.8 U	5.8 U	5.8 U	5.8 U	5.8 U	5.8 U	5.8 U
Isopropylbenzene	µg/m^3	4.9 U	4.9 U	4.9 U	4.9 U	1 J	4.9 U	4.9 U
m&p-Xylene (d)	µg/m^3	2.4 J	4.3 U	3.7 J	17	20	20	1.6 J
Methyl Acrylate	µg/m^3	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
Methyl Methacrylate	µg/m^3	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U
Methyl tert-butyl ether	µg/m^3	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
Methylene Chloride	µg/m^3	1.1 J	3.5 U	1.3 J	3.5 U	2.1 J	3.5 U	1.1 J
Methylstyrene, Alpha-	µg/m^3	4.8 UJ	4.8 U	1.3 UJ	4.8 U	1.1 UB	4.8 U	4.8 U
Naphthalene	µg/m^3	10 U	10 U	10 U	3.7 J	11 J	3.6 J	10 UJ
N-Heptane	µg/m^3	0.85 J	4.1 U	0.92 J	4.8	4.1 U	4.9	4.1 U
n-Hexane	µg/m^3	3.5 U	3.5 U	1 J	3.5 U	0.77 J	3.5 U	3.5 U
n-Octane	µg/m^3	4.7 U	4.7 U	4.7 U	2.2 J	1.6 J	1.9 J	4.7 U
o-Xylene	µg/m^3	1.5 J	4.3 U	1.9 J	11	10	13	4.3 U
Pentane, n-	µg/m^3	2.2 J	3 U	1.1 J	3 U	1.8 J	3 U	3 U
Propylene	µg/m^3	1.7 J	1.7 U	1.8	1.7 U	2.3	1.7 U	3.2
Styrene	µg/m^3	4.3 U	4.3 U	0.95 J	1.5 J	1.3 J	2 J	4.3 U
Tertiary butyl alcohol	µg/m^3	3 U	3 U	3 U	3 U	11	3 U	6
Tetrachloroethene	µg/m^3	6.8 U	6.8 U	6.8 U	3.9 J	5.9 J	2.9 J	2.9 J
Toluene	µg/m^3	5.2	3.8 U	9.2	1.7 J	14	1.8 J	2.6 J
trans-1,2-Dichloroethene	µg/m^3	4 U	4 U	4 U	4 U	4 U	4 U	4 U
trans-1,3-Dichloropropene (c)	µg/m^3	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U
Trichloroethene	µg/m^3	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U
Trichlorofluoromethane	µg/m^3	14	1.8 J	11	1.3 J	1.7 J	1.6 J	2 J
Vinyl Acetate	µg/m^3	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
Vinyl Chloride	µg/m^3	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U

Notes

(c) 1,3-Dichloropropene was used as a surrogate for cis- and trans-1,3-dichloropropene.

(d) m-Xylene was used as a surrogate for m&p-xyelene.

J = Concentration is qualified as estimated.

U = Concentration is qualified as not detected. Reporting limit displayed.

µg/m^3 = Microgram per cubic meter.

Table A.7.8-1
Vapor Intrusion Analytical Summary

Location ID: Date Collected: Sample Location	Units	Montevue C-3 01/30/13 Sub-Slab	Montevue C-3 08/29/13 Sub-Slab	Montevue D-1 01/30/13 Sub-Slab	Montevue D-1 08/29/13 Sub-Slab	Montevue D-2 01/30/13 Sub-Slab	Montevue D-2 08/29/13 Sub-Slab	Montevue D-3 01/30/13 Sub-Slab
Volatile Organic Compounds								
1,1,1,2-Tetrachloroethane	µg/m^3	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U
1,1,1-Trichloroethane	µg/m^3	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U
1,1,2,2-Tetrachloroethane	µg/m^3	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/m^3	15 U	15 U	15 U	15 U	15 U	15 U	15 U
1,1,2-Trichloroethane	µg/m^3	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U
1,1-Dichloroethane	µg/m^3	4 U	4 U	4 U	4 U	4 U	4 U	4 U
1,1-Dichloroethene	µg/m^3	4 U	4 U	4 U	4 U	4 U	4 U	4 U
1,2,3-Trichloropropane	µg/m^3	6 U	6 U	6 U	6 U	6 U	6 U	6 U
1,2,4-Trichlorobenzene	µg/m^3	15 U	15 UJ	15 U	15 UJ	15 U	15 UJ	15 U
1,2,4-Trimethylbenzene	µg/m^3	4.9 U	1.6 J	4.9 U	1.2 J	4.9 U	4.9 U	4.9 U
1,2-Dibromoethane	µg/m^3	7.7 U	7.7 U	7.7 U	7.7 U	7.7 U	7.7 U	7.7 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	µg/m^3	7 U	7 U	7 U	7 U	7 U	7 U	7 U
1,2-Dichlorobenzene	µg/m^3	6 U	6 U	6 U	6 U	6 U	6 U	6 U
1,2-Dichloroethane	µg/m^3	4 U	4 U	4 U	4 U	4 U	4 U	4 U
1,2-Dichloropropane	µg/m^3	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U
1,3,5-Trimethylbenzene	µg/m^3	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U
1,3-Butadiene	µg/m^3	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U
1,3-Dichlorobenzene	µg/m^3	6 U	6 U	6 U	6 U	6 U	6 U	6 U
1,4-Dichlorobenzene	µg/m^3	6 U	6 U	6 U	6 U	6 U	1.6 J	6 U
1,4-Dioxane	µg/m^3	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
2,2,4-Trimethylpentane	µg/m^3	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U
2-Butanone	µg/m^3	3.1 J	18	2.6 J	3.9 J	5.9 U	5.6 J	3 J
2-Hexanone	µg/m^3	8.2 U	8.2 UJ	8.2 U	8.2 UJ	8.2 U	8.2 UJ	8.2 U
3-Chloropropene	µg/m^3	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U
4-Ethyltoluene	µg/m^3	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U
4-Methyl-2-pentanone	µg/m^3	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U
Acetone	µg/m^3	24	160	29	66	67	62	8.4
Acetonitrile	µg/m^3	1.9 J	3.4 U	9.9	3.4 U	3 J	3.4 U	3.4 U
Acrolein	µg/m^3	5.2	3.7 J	4.6 U	2.8 J	4.6 U	4.6 U	4.6 U
Acrylonitrile	µg/m^3	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U
Benzene	µg/m^3	3.2 U	4.6	3.2 U	3.2 U	3.2 U	0.83 J	3.2 U
Bromobenzene	µg/m^3	6.4 U	6.4 U	6.4 U	6.4 U	6.4 U	6.4 U	6.4 U
Bromodichloromethane	µg/m^3	6.7 U	6.7 U	6.7 U	6.7 U	6.7 U	6.7 U	6.7 U
Bromoform	µg/m^3	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromomethane	µg/m^3	3.9 U	3.9 U	3.9 U	3.9 U	3.9 U	3.9 U	3.9 U
Carbon Disulfide	µg/m^3	3.1 U	5.8	3.1 U	4.7	3.1 U	3.9	3.1 U
Carbon Tetrachloride	µg/m^3	6.3 U	6.3 U	6.3 U	6.3 U	6.3 U	6.3 U	6.3 U
Chlorobenzene	µg/m^3	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U
Chlorodifluoromethane	µg/m^3	1.5 J	3.5 U	1.5 J	3 J	3.5 U	3.5 U	0.95 J
Chloroethane	µg/m^3	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U
Chloroform	µg/m^3	4.9 U	2.3 J	1.2 J	4.9 U	4.9 U	4.9 U	2.5 J
Chloromethane	µg/m^3	2.1 U	0.66 J	2.1 U	2.1 U	2.1 U	0.48 J	2.1 U
cis-1,2-Dichloroethene	µg/m^3	4 U	4 U	4 U	4 U	4 U	4 U	4 U
cis-1,3-Dichloropropene (c)	µg/m^3	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U
Dibromochloromethane	µg/m^3	8.5 U	8.5 U	8.5 U	8.5 U	8.5 U	8.5 U	8.5 U
Dibromomethane	µg/m^3	7.1 U	7.1 U	7.1 U	7.1 U	7.1 U	7.1 U	7.1 U
Dichlorodifluoromethane	µg/m^3	2.6 J	2.7 J	2.6 J	2.9 J	2.7 J	2.7 J	2.5 J
Dichloromonofluoromethane	µg/m^3	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U
Ethyl acetate	µg/m^3	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
Ethyl Acrylate	µg/m^3	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U
Ethyl Methacrylate	µg/m^3	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U
Ethylbenzene	µg/m^3	4.3 U	4.3 U	4.3 U	1.1 J	4.3 U	0.95 J	4.3 U
Hexachlorobutadiene	µg/m^3	21 U	21 U	21 U	21 U	21 U	21 U	21 U
Hexachloroethane	µg/m^3	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U
Iodomethane	µg/m^3	5.8 U	5.8 U	5.8 U	5.8 U	5.8 U	5.8 U	5.8 U
Isopropylbenzene	µg/m^3	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U
m&p-Xylene (d)	µg/m^3	1.3 J	1.7 J	1.1 J	2.8 J	1.7 J	2.6 J	1.3 J
Methyl Acrylate	µg/m^3	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
Methyl Methacrylate	µg/m^3	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U
Methyl tert-butyl ether	µg/m^3	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
Methylene Chloride	µg/m^3	3.5 U	1.2 J	5.3	1.5 J	2.2 J	1 J	7000
Methylstyrene, Alpha-	µg/m^3	4.8 U	4.8 UJ	4.8 U	2.2 UJ	4.8 U	4.8 UJ	4.8 U
Naphthalene	µg/m^3	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-Heptane	µg/m^3	0.9 J	4.1 U	1.1 J	4.1 U	4.1 U	4.1 U	4.1 U
n-Hexane	µg/m^3	3.5 U	0.74 J	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
n-Octane	µg/m^3	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U
o-Xylene	µg/m^3	4.3 U	0.98 J	4.3 U	1.7 J	0.95 J	1.9 J	4.3 U
Pentane, n-	µg/m^3	3 U	0.92 J	3 U	3 U	3 U	3 U	3 U
Propylene	µg/m^3	1.7 U	2.4	1.7 U	0.55 J	1.7 U	0.86 J	1.7 U
Styrene	µg/m^3	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U
Tertiary butyl alcohol	µg/m^3	3 U	4.2	3 U	2.1 J	3 U	13	3 U
Tetrachloroethene	µg/m^3	6.8 U	2 J	6.8 U	45	6.8 U	3 J	180
Toluene	µg/m^3	3.8 U	3.5 J	3.8 U	1.8 J	3.8 U	3.2 J	5.1
trans-1,2-Dichloroethene	µg/m^3	4 U	4 U	4 U	4 U	4 U	4 U	4 U
trans-1,3-Dichloropropene (c)	µg/m^3	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U
Trichloroethene	µg/m^3	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U	13
Trichlorofluoromethane	µg/m^3	1.3 J	2.3 J	6.8	3.2 J	7.4	25	1.7 J
Vinyl Acetate	µg/m^3	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
Vinyl Chloride	µg/m^3	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U

Notes

(c) 1,3-Dichloropropene was used as a surrogate for cis- and trans-1,3-dichloropropene.

(d) m-Xylene was used as a surrogate for m&p-xyelene.

J = Concentration is qualified as estimated.

U = Concentration is qualified as not detected. Reporting limit displayed.

µg/m^3 = Microgram per cubic meter.

Table A.7.8-1
Vapor Intrusion Analytical Summary

Location ID: Date Collected: Sample Location	Units	Montevue D-3 08/29/13 Sub-Slab	Montevue E-1 01/31/13 Sub-Slab	Montevue E-1 08/30/13 Sub-Slab	Montevue E-2 01/31/13 Sub-Slab	Montevue E-2 08/30/13 Sub-Slab	Montevue E-3 01/31/13 Sub-Slab	Montevue E-3 08/30/13 Sub-Slab
Volatile Organic Compounds								
1,1,1,2-Tetrachloroethane	µg/m^3	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U
1,1,1-Trichloroethane	µg/m^3	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U
1,1,2,2-Tetrachloroethane	µg/m^3	6.9 U	6.9 U	6.9 U	6.9 U	2.5 J	6.9 U	6.9 U
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/m^3	15 U	15 U	15 U	15 U	15 U	15 U	15 U
1,1,2-Trichloroethane	µg/m^3	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U
1,1-Dichloroethane	µg/m^3	4 U	4 U	4 U	4 U	4 U	4 U	4 U
1,1-Dichloroethene	µg/m^3	4 U	4 U	4 U	4 U	4 U	4 U	4 U
1,2,3-Trichloropropane	µg/m^3	6 U	6 U	6 U	6 U	2 J	6 U	6 U
1,2,4-Trichlorobenzene	µg/m^3	15 U	15 U	15 U	15 U	49	15 U	15 U
1,2,4-Trimethylbenzene	µg/m^3	1.2 J	1.1 J	1.1 J	4.9 U	14	1 J	4.9 U
1,2-Dibromoethane	µg/m^3	7.7 U	7.7 U	7.7 U	7.7 U	7.7 U	7.7 U	7.7 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	µg/m^3	7 U	7 U	7 U	7 U	7 U	7 U	7 U
1,2-Dichlorobenzene	µg/m^3	6 U	1.6 J	6 U	6 U	21	1.8 J	6 U
1,2-Dichloroethane	µg/m^3	4 U	4 U	4 U	4 U	4 U	4 U	4 U
1,2-Dichloropropane	µg/m^3	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U
1,3,5-Trimethylbenzene	µg/m^3	4.9 U	4.9 U	4.9 U	4.9 U	4.3 J	4.9 U	4.9 U
1,3-Butadiene	µg/m^3	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U
1,3-Dichlorobenzene	µg/m^3	6 U	1.6 J	6 U	6 U	18	1.6 J	6 U
1,4-Dichlorobenzene	µg/m^3	6 U	1.6 J	6 U	6 U	25	1.7 J	6 U
1,4-Dioxane	µg/m^3	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
2,2,4-Trimethylpentane	µg/m^3	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U
2-Butanone	µg/m^3	5.9 U	5.9 U	1.6 J	5.9 U	6	5.9 U	3.1 J
2-Hexanone	µg/m^3	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U
3-Chloropropene	µg/m^3	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U
4-Ethyltoluene	µg/m^3	4.9 U	4.9 U	4.9 U	4.9 U	5.2	4.9 U	4.9 U
4-Methyl-2-pentanone	µg/m^3	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U
Acetone	µg/m^3	29	6.6	33	8.6	44	13	24
Acetonitrile	µg/m^3	3.4 U	7.7	3.4 U	6.9	3.4 U	2.4 J	3.4 U
Acrolein	µg/m^3	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	1.5 J
Acrylonitrile	µg/m^3	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U
Benzene	µg/m^3	20	3.2 U	0.94 J	3.2 U	3.2 U	3.2 U	3.2 U
Bromobenzene	µg/m^3	6.4 U	6.4 U	6.4 U	6.4 U	3.4 J	6.4 U	6.4 U
Bromodichloromethane	µg/m^3	6.7 U	6.7 U	6.7 U	6.7 U	6.7 U	6.7 U	6.7 U
Bromoform	µg/m^3	10 U	10 U	10 U	10 U	2.3 J	10 U	10 U
Bromomethane	µg/m^3	3.9 U	3.9 U	3.9 U	3.9 U	3.9 U	3.9 U	3.9 U
Carbon Disulfide	µg/m^3	3.1 U	3.1 U	2.5 J	3.1 U	5.4	3.1 U	1.9 J
Carbon Tetrachloride	µg/m^3	6.3 U	6.3 U	6.3 U	6.3 U	6.3 U	6.3 U	6.3 U
Chlorobenzene	µg/m^3	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U
Chlorodifluoromethane	µg/m^3	3.4 J	0.95 J	5.8	0.77 J	3 J	3.5 U	1.3 J
Chloroethane	µg/m^3	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U
Chloroform	µg/m^3	1.1 J	4.9 U	4.9 U	12	25	2.9 J	4.9 U
Chloromethane	µg/m^3	0.44 J	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	1.1 J
cis-1,2-Dichloroethene	µg/m^3	4 U	4 U	4 U	4 U	4 U	4 U	4 U
cis-1,3-Dichloropropene (c)	µg/m^3	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U
Dibromochloromethane	µg/m^3	8.5 U	8.5 U	8.5 U	8.5 U	8.5 U	8.5 U	8.5 U
Dibromomethane	µg/m^3	7.1 U	7.1 U	7.1 U	7.1 U	7.1 U	7.1 U	7.1 U
Dichlorodifluoromethane	µg/m^3	2.4 J	1.9 J	2.4 J	2.5 J	2.3 J	4.9 U	2.5 J
Dichloromonofluoromethane	µg/m^3	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U
Ethyl acetate	µg/m^3	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
Ethyl Acrylate	µg/m^3	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U
Ethyl Methacrylate	µg/m^3	4.7 UJ	4.7 U	5.3 UJ	4.7 U	4.7 UJ	4.7 U	4.7 UJ
Ethylbenzene	µg/m^3	4.3 U	1.6 J	4.3 U	4.3 U	3.6 J	1.6 J	4.3 U
Hexachlorobutadiene	µg/m^3	21 U	21 U	21 U	21 U	21 J	21 U	21 U
Hexachloroethane	µg/m^3	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U
Iodomethane	µg/m^3	5.8 U	5.8 U	5.8 U	5.8 U	5.8 U	5.8 U	5.8 U
Isopropylbenzene	µg/m^3	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U
m&p-Xylene (d)	µg/m^3	1.5 J	4.5	1.9 J	1.1 J	12	4.6	1 J
Methyl Acrylate	µg/m^3	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
Methyl Methacrylate	µg/m^3	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U
Methyl tert-butyl ether	µg/m^3	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
Methylene Chloride	µg/m^3	4.2	1.1 J	0.91 J	1.4 J	2.6 J	3.5 U	1.1 J
Methylstyrene, Alpha-	µg/m^3	4.8 UJ	4.8 U	4.8 UJ	4.8 U	4.5 UJ	4.8 U	4.8 UJ
Naphthalene	µg/m^3	10 U	10 U	10 U	10 U	55	10 U	10 U
N-Heptane	µg/m^3	4.1 U	1.5 J	4.1 U	4.1 U	0.86 J	2 J	4.1 U
n-Hexane	µg/m^3	3.5 U	3.5 U	1.8 J	3.5 U	2.2 J	3.5 U	3.5 U
n-Octane	µg/m^3	4.7 U	4.7 U	4.7 U	4.7 U	1.2 J	4.7 U	4.7 U
o-Xylene	µg/m^3	1.3 J	2.7 J	0.9 J	4.3 U	6.6	3.1 J	4.3 U
Pentane, n-	µg/m^3	3 U	3 U	3 U	3 U	1.2 J	3 U	3 U
Propylene	µg/m^3	0.89 J	1.7 U	0.79 J	1.7 U	1.7	1.7 U	0.91 J
Styrene	µg/m^3	4.3 U	4.3 U	4.3 U	4.3 U	2.6 J	4.3 U	4.3 U
Tertiary butyl alcohol	µg/m^3	3 U	3 U	5.4	3 U	3 U	3 U	3 U
Tetrachloroethene	µg/m^3	14	6.8 U	6.8 U	6.8 U	1.4 J	6.8 U	6.8 U
Toluene	µg/m^3	2.9 J	3.8 U	3.9	3.8 U	1.5 J	3.8 U	3.8 U
trans-1,2-Dichloroethene	µg/m^3	4 U	4 U	4 U	4 U	4 U	4 U	4 U
trans-1,3-Dichloropropene (c)	µg/m^3	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U
Trichloroethene	µg/m^3	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U
Trichlorofluoromethane	µg/m^3	3.1 J	110	22	1.3 J	2 J	51	1.6 J
Vinyl Acetate	µg/m^3	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
Vinyl Chloride	µg/m^3	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U

Notes

(c) 1,3-Dichloropropene was used as a surrogate for cis- and trans-1,3-dichloropropene.

(d) m-Xylene was used as a surrogate for m&p-xyelene.

J = Concentration is qualified as estimated.

U = Concentration is qualified as not detected. Reporting limit displayed.

µg/m^3 = Microgram per cubic meter.

Attachment 7.8
Figures

NOTE: SOME MAP FEATURES REMOVED TO COMPLY WITH OPERATIONAL SECURITY REQUIREMENTS FOR PUBLIC DISTRIBUTION

N

Legend

- Area B Boundary
- Vapor Intrusion Investigation Area
- Stream
- BMW69A Monitoring Point
- DWSRD-1 Residential Well
- DWSRD-5 Abandoned Residential Well

Notes:
1) Streams were obtained from Frederick County MD Geographic Information Systems (GIS) digital data online (2001).
2) Aerial imagery (2011) accessed via ArcGIS Online World Imagery.

ARCADIS

Figure A.7.8-1

Vapor Intrusion Investigation Locations

Area B Groundwater Investigation
Fort Detrick
Frederick, MD

Attachment 7.8
ADDITIONAL TABLES
(excel table files are included on CD)

Table A.7.8-2
Detected Chemicals List in Groundwater
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemicals Detected in Shallow Overburden			
1,1,1-Trichloroethane	1,1,2-trichloro-1,2,2-trifluoroethane	1,1-Dichloroethane	1,1-Dichloroethene
1,2,3-Trichlorobenzene	1,2,3-Trichloropropene	1,2,4-Trichlorobenzene	1,2-Dichloroethane
1,2-Dichloropropane	2-Butanone	Acetone	Benzene
Bromodichloromethane	Carbon disulfide	Chloroethane	Chlroform
cis-1,2-Dichloroethene	Dibromofluoromethane	m&p-Xylene	Methyl tert-butyl ether
Methylene chloride	o-Xylene	Tetrachloroethene	Toluene
trans-1,2-Dichloroethene	Trichloroethene	Trichlorofluoromethane	Vinyl chloride

Additional Chemicals Detected in Shallow Bedrock			
1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene
1,4-Dichlorobenzene	Bromoform	Carbon tetrachlroide	Chlorobenzene
Chloromethane	Cyclohexene	Dibromofluoromethane	Ethylbenzene
Isopropylbenzene			

Table A.7.8-3
Summary of Chemicals of Potential Concern
Draft HHRA
Fort Detrick, Frederick, Maryland

	285 Montevue	286 Montevue	292 Montevue	1699 Shookstown	FTD 1261
Volatile Organic Compounds					
1,2-Dichloroethane	X				X
1,4-Dichlorobenzene	X				
Benzene	X	X	X	X	X
Bromodichloromethane		X			
Carbon Tetrachloride	X	X		X	X
Chloroform	X	X		X	X
Ethylbenzene	X				
Methylene Chloride			X		
Trichloroethene	X				

Note:

COPC - Chemical of Potential Concern

COPCs for 292 Montevue Lane were based on sub-slab analytical results due to limited indoor air data.

Table A.7.8-4
Noncancer Toxicity Information
for Chemicals of Potential Concern
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Inhalation RfC (mg/m^3)	Source	Toxic Effect of Concern
Volatile Organic Compounds			
1,2-Dichloroethane	0.007	PPRTV	--
1,4-Dichlorobenzene	0.8	IRIS	Increased liver weight
Benzene	0.03	IRIS	Decreased lymphocyte count
Bromodichloromethane	--	IRIS	--
Carbon Tetrachloride	0.1	IRIS	Fatty changes in the liver
Chloroform	0.098	ATSDR	Heptic effects
Ethylbenzene	1	IRIS	Developmental toxicity
Methylene Chloride	0.6	IRIS	Heptic Vacuolation
Trichloroethene	0.002	IRIS	Increased thymus weight in females, increased fetal cardiac malformations

Notes:
ATSDR - Agency for Toxic Substance & Disease Registry
IRIS - Integrated Risk Information System (USEPA, 2016)
PPRTV - Provisional Peer Reviewed Toxicity Values for Superfund
RfC - Reference Concentration
mg/m^3 - milligrams per cubic meter

Table A.7.8-5
Cancer Toxicity Information
for Chemicals of Potential Concern
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Source	Inhalation Unit Risk 1/(mg/m^3)	Source	Site of Tumor
Volatile Organic Compounds				
1,2-Dichloroethane	IRIS	0.026	IRIS	Other
1,4-Dichlorobenzene	--	0.011	OEHHA	--
Benzene	IRIS	0.0078	IRIS	Hematologic
Bromodichlormoethane	IRIS	0.037	OEHHA	Kidney
Carbon Tetrachloride	IRIS	0.006	IRIS	Endocrine
Chloroform	IRIS	0.023	IRIS	Hepatic
Ethylbenzene	IRIS	0.0025	OEHHA	--
Methylene Chloride*	IRIS	0.00001	IRIS	Hepatic, Respirtory
Trichloroethene*	IRIS	0.0041	IRIS	Hematologic, Heptic, Urinary

Notes:
1 - Weight of evidence classifications obtained from IRIS.
A - Carcinogenic to humans
B2 - Probable human carcinogen - based on sufficient evidence of carcinogenicity in animals.
C - Possoible human carcinogen - based on limited evidence of carcinogenicity in animals.
D - In adequet human and animal evidence of carcinogenicity.
IRIS - Integrated Risk Information System (USEPA, 2016)
OEHHA - California Office of Environmental Health Hazard Assessment
mg/m^3 - milligrams per cubic meter
-- - Informantion not available
* - Mutagenic mode of action

Table A.7.8-6
Formula for Inhalation of Vapor Phase Chemicals*
Draft HHRA
Fort Detrick, Fredrick, Maryland

Equation:
$IN = CA \times ET \times EF \times ED / AT$

Cancer effects for Residents:
$IN = CA \times ET \times EF \times INHadj / AT$

where:

$INHadj = (EDc + EDa)$

Mutagenic mode of action for Residents:
$IN = CA \times DFSMadj / AT$

where:

$$DFSMadj = (ET_{0\text{-}2} \times EF_{0\text{-}2} \times ED_{0\text{-}2} \times 10) + (ET_{2\text{-}6} \times EF_{2\text{-}6} \times ED_{2\text{-}6} \times 3) + (ET_{6\text{-}16} \times EF_{6\text{-}16} \times ED_{6\text{-}16} \times 3) + (ET_{16\text{-}26} \times EF_{16\text{-}26} \times ED_{16\text{-}26} \times 1)$$

Where:

IN	=	Intake (milligrams per cubic meter [mg/m^3])
CA	=	Chemical concentrations in air (mg/m^3)
ET	=	Exposure time (hours/day)
$ET_{0\text{-}2}$	=	Exposure time (ages 0-2) (hours/day)
$ET_{2\text{-}6}$	=	Exposure time (ages 2-6) (hours/day)
$ET_{6\text{-}16}$	=	Exposure time (ages 6-16) (hours/day)
$ET_{16\text{-}26}$	=	Exposure time (ages 16-26) (hours/day)
EF	=	Exposure frequency (days/year)
$EF_{0\text{-}2}$	=	Exposure frequency (ages 0-2) (days/year)
$EF_{2\text{-}6}$	=	Exposure frequency (ages 2-6) (days/year)
$EF_{6\text{-}16}$	=	Exposure frequency (ages 6-16) (days/year)
$EF_{16\text{-}26}$	=	Exposure frequency (ages 16-26) (days/year)
ED	=	Exposure duration (years)
EDc	=	Child exposure duration (years)
EDa	=	Adult exposure duration (years)
$ED_{0\text{-}2}$	=	Exposure duration (ages 0-2) (years)
$ED_{2\text{-}6}$	=	Exposure duration (ages 2-6) (years)
$ED_{6\text{-}16}$	=	Exposure duration (ages 6-16) (years)
$ED_{16\text{-}26}$	=	Exposure duration (ages 16-26) (years)
AT	=	Averaging time (hours)
INHadj	=	Ade-adjusted inhalation factor (years)
DFSMadj	=	Age-adjusted inhalation factor (mutagenic) (hours)

Current/Future Indoor Worker Variable Values:

CA	=	Modeled from soil concentrations (See Tables 5-3, 5-5, and 5-6)
ET	=	8 hrs/day (Standard working day)
EF	=	250 days/year (USEPA, 1991)
ED	=	25 years (USEPA, 1991)
AT	=	219,000 hours for noncancer effects [25 years (ED) x 365 days/year x 24 hours/day] (USEPA, 2009) 613,200 hours for cancer effects [70 years (Lifetime) x 365 days/year x 24 hours/day] (USEPA, 2009)

Table A.7.8-6 (continued)
Formula for Inhalation of Vapor Phase Chemicals*
Draft HHRA
Fort Detrick, Fredrick, Maryland

Future/Current Child Resident Variable Values:

CA = Modeled from soil concentrations (See Tables 5-3, 5-5, and 5-6)
ET = 24 hrs/day
EF = 350 days/year (USEPA, 1991)
ED = 6 years (USEPA, 1991)
AT = 52,560 hours for noncancer effects [6 years (ED) x 365 days/year x 24 hours/day] (USEPA, 2009)

Future/Current Adult Resident Variable Values:

CA = Modeled from soil concentrations (See Table 5-3, 5-5, and 5-6)
ET = 24 hrs/day
EF = 350 days/year (USEPA, 1991)
ED = 20 years (USEPA, 1991)
AT = 175,200 hours for noncancer effects [20 years (ED) x 365 days/year x 24 hours/day] (USEPA, 2009)

Future Floodplain Child Resident Variable Values:

CA = Modeled from soil concentrations (See Tables 5-2 and 5-4)
ET = 24 hrs/day (Assumed worst case scenario)
ET_{0-2} = 24 hrs/day (Assumed worst case scenario)
ET_{2-6} = 24 hrs/day (Assumed worst case scenario)
EF = 350 days/year (USEPA, 1991)
EF_{0-2} = 350 days/year (USEPA, 1991)
EF_{2-6} = 350 days/year (USEPA, 1991)
EDc = 6 years (USEPA, 2014)
ED_{0-2} = 2 years (USEPA, 2014)
ED_{2-6} = 4 years (USEPA, 2014)
AT = 52,560 hours for noncancer effects [6 years (ED) x 365 days/year x 24 hours/day] (USEPA, 1989)
613,200 hours for cancer effects [70 years (Lifetime) x 365 days/year x 24 hours/day] (USEPA, 2009)

Future Floodplain Adult Resident Variable Values:

CA = Modeled from soil concentrations (See Tables 5-2 and 5-4)
ET = 24 hrs/day (Assumed worst case scenario)
ET_{6-16} = 24 hrs/day (Assumed worst case scenario)
ET_{16-26} = 24 hrs/day (Assumed worst case scenario)
EF = 350 days/year (USEPA, 1991)
EF_{6-16} = 350 days/year (USEPA, 1991)
EF_{16-26} = 350 days/year (USEPA, 1991)
EDa = 20 years (USEPA, 2014)
ED_{6-16} = 10 years (USEPA, 2014)
ED_{16-26} = 10 years (USEPA, 2014)
AT = 175,200 hours for noncancer effects [20 years (ED) x 365 days/year x 24 hours/day] (USEPA, 1989)
613,200 hours for cancer effects [70 years (Lifetime) x 365 days/year x 24 hours/day] (USEPA, 2009)

* USEPA, 2009

Table A.7.8-7
Exposure Point Concentrations
285 Montevue Lane
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Maximum Detected Concentration (mg/m^3)	Upper Confidence Limit (mg/m^3)	Exposure Point Concentration (mg/m^3)
Volatile Organic Compounds			
1,2-Dichloroethane	0.00016	NC	0.00016
1,4-Dichlorobenzene	0.0041	0.0036	0.0036
Benzene	0.0028	0.0025	0.0025
Carbon Tetrachloride	0.00054	0.00055	0.00054
Chloroform	0.0016	0.0016	0.0016
Ethylbenzene	0.0025	0.0024	0.0024
Trichloroethene	0.00018	0.0030	0.00018

Notes:

mg/m^3 - milligrams per cubic meter

NC - Not calculated due to an insufficient number of samples.

UCL values calculated using ProUCL Version 5.0 (See Appendix B).

Exposure point concentration is lower of maximum detected concentration or upper confidence limit.

Table A.7.8-8
Exposure Point Concentrations
286 Montevue Lane
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Maximum Detected Concentration (mg/m^3)	Upper Confidence Limit (mg/m^3)	Exposure Point Concentration (mg/m^3)
Volatile Organic Compounds			
Benzene	0.00085	NC	0.0009
Bromodichloromethane	0.00022	NC	0.00022
Carbon Tetrachloride	0.00056	NC	0.00056
Chloroform	0.0047	NC	0.005

Notes:

mg/m^3 - milligrams per cubic meter

UCL values calculated using ProUCL Version 5.0 (See Appendix B).

Exposure point concentration is lower of maximum detected concentration or upper confidence limit.

NC - Not Calculated due to an insufficient number of samples.

Table A.7.8-9
Exposure Point Concentrations
292 Montevue Lane
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Maximum Detected Concentration (mg/m^3)	Upper Confidence Limit (mg/m^3)	Exposure Point Concentration (mg/m^3)
Volatile Organic Compounds			
Benzene	0.000024	0.000015	0.000015
Methylene Chloride	0.21	0.19	0.19

Notes:

mg/m^3 - milligrams per cubic meter

UCL values calculated using ProUCL Version 5.0 (See Appendix B).

Exposure point concentration is lower of maximum detected concentration or upper confidence limit.

Maximum detected concentration represents a modeled value from sub-slab to indoor air calculated by applying attenuation factor of .03.

Table A.7.8-10
Exposure Point Concentrations
1699 Shookstown Road
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Maximum Detected Concentration (mg/m^3)	Upper Confidence Limit (mg/m^3)	Exposure Point Concentration (mg/m^3)
Volatile Organic Compounds			
Benzene	0.00056	NC	0.00056
Carbon Tetrachloride	0.00053	NC	0.00053
Chloroform	0.00024	NC	0.00024

Notes:

mg/m^3 - milligrams per cubic meter

NC - Not calculated due to an insufficient number of samples.

UCL values calculated using ProUCL Version 5.0 (See Appendix B).

Exposure point concentration is lower of maximum detected concentration or upper confidence limit.

Table A.7.8-11
Exposure Point Concentrations
Fort Detrick 1261
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Maximum Detected Concentration (mg/m^3)	Upper Confidence Limit (mg/m^3)	Exposure Point Concentration (mg/m^3)
Volatile Organic Compounds			
1,2-Dichloroethane	0.00027	NC	0.00027
Benzene	0.0011	0.00088	0.00088
Carbon Tetrachloride	0.00051	0.00052	0.00051
Chloroform	0.00016	NC	0.00016

Notes:

mg/m^3 - milligrams per cubic meter

NC - Not calculated due to an insufficient number of samples.

UCL values calculated using ProUCL Version 5.0 (See Appendix B).

Exposure point concentration is lower of maximum detected concentration or upper confidence limit.

Table A.7.8-12
Hazard Index Estimates for
285 Montevue Lane Current/Future Indoor Worker Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	RfC	Hazard Quotient	Pathway Hazard Index	Total Hazard Index
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
1,2-Dichloroethane	3E-05	7E-03	4E-03		
1,4-Dichlorobenzene	8E-04	8E-01	1E-03		
Benzene	6E-04	3E-02	2E-02		
Carbon Tetrachloride	1E-04	1E-01	1E-03		
Chloroform	3E-04	1E-01	3E-03		
Ethylbenzene	5E-04	1E+00	5E-04		
Trichloroethene	4E-05	2E-03	2E-02		
				5E-02	
					5E-02

Notes:
NA - Not Applicable
RfC - Reference Concentration
Daily intakes applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-13
Excess Lifetime Cancer Risk Estimate for
285 Montevue Lane Current/Future Indoor Worker Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	IUR	Excess Cancer Risk	Pathway Cancer Risk	Total Cancer Risk
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
1,2-Dichloroethane	1E-05	3E-02	3E-07		
1,4-Dichlorobenzene	3E-04	1E-02	3E-06		
Benzene	2E-04	8E-03	2E-06		
Carbon Tetrachloride	4E-05	6E-03	2E-07		
Chloroform	1E-04	2E-02	2E-06		
Ethylbenzene	2E-04	3E-03	6E-07		
Trichloroethene	1E-05	4E-03	4E-08		
				8E-06	
					8E-06

Notes:
IUR - Inhalation Unit Risk
NA - Not Applicable
Daily intakes applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-14
Hazard Index Estimates for
285 Montevue Lane Future Child Resident Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	RfC	Hazard Quotient	Pathway Hazard Index	Total Hazard Index
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
1,2-Dichloroethane	2E-04	7E-03	3E-02		
1,4-Dichlorobenzene	4E-03	8E-01	5E-03		
Benzene	3E-03	3E-02	1E-01		
Carbon Tetrachloride	5E-04	1E-01	5E-03		
Chloroform	2E-03	1E-01	2E-02		
Ethylbenzene	2E-03	1E+00	2E-03		
Trichloroethene	2E-04	2E-03	1E-01		
				3E-01	
					3E-01

Notes:
NA - Not Applicable
RfC - Reference Concentration
Daily intakes applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-15
Hazard Index Estimates for
285 Montevue Lane Future Adult Resident Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	RfC	Hazard Quotient	Pathway Hazard Index	Total Hazard Index
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
1,2-Dichloroethane	2E-04	7E-03	3E-02		
1,4-Dichlorobenzene	4E-03	8E-01	5E-03		
Benzene	3E-03	3E-02	1E-01		
Carbon Tetrachloride	5E-04	1E-01	5E-03		
Chloroform	2E-03	1E-01	2E-02		
Ethylbenzene	2E-03	1E+00	2E-03		
Trichloroethene	2E-04	2E-03	1E-01		
				3E-01	
					3E-01

Notes:
NA - Not Applicable
RfC - Reference Concentration
Daily intakes applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-16
Excess Lifetime Cancer Risk Estimate for
285 Montevue Lane Future Age-Adjusted Resident Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	IUR	Excess Cancer Risk	Pathway Cancer Risk	Total Cancer Risk
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
1,2-Dichloroethane	6E-05	3E-02	2E-06		
1,4-Dichlorobenzene	1E-03	1E-02	1E-05		
Benzene	1E-03	8E-03	8E-06		
Carbon Tetrachloride	2E-04	6E-03	1E-06		
Chloroform	6E-04	2E-02	1E-05		
Ethylbenzene	9E-04	3E-03	3E-06		
Trichloroethene	2E-04	4E-03	8E-07		
				3E-05	
					3E-05

Notes:
NA - Not Applicable
IUR - Inhalation Unit Risk
Daily intakes and IURs applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-17
Hazard Index Estimates for
286 Montevue Lane Current/Future Indoor Worker Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	RfC	Hazard Quotient	Pathway Hazard Index	Total Hazard Index
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
Benzene	2E-04	3E-02	7E-03		
Bromodichlormoethane	4E-05	NA	NA		
Carbon Tetrachloride	1E-04	1E-01	1E-03		
Chloroform	9E-04	1E-01	9E-03		
				2E-02	
					2E-02

Notes:
RfC - Reference Concentration
Daily intakes applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-18
Excess Lifetime Cancer Risk Estimate for
286 Montevue Lane Current/Future Indoor Worker Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	IUR	Excess Cancer Risk	Pathway Cancer Risk	Total Cancer Risk
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
Benzene	7E-05	8E-03	6E-07		
Bromodichlormoethane	2E-05	4E-02	8E-07		
Carbon Tetrachloride	4E-05	6E-03	2E-07		
Chloroform	4E-04	2E-02	8E-06		
				1E-05	
					1E-05

Notes:
IUR - Inhalation Unit Risk
NA - Not Applicable
Daily intakes applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-19
Hazard Index Estimates for
286 Montevue Lane Future Child Resident Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	RfC	Hazard Quotient	Pathway Hazard Index	Total Hazard Index
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
Benzene	9E-04	3E-02	3E-02		
Bromodichloromethane	2E-04	NA	NA		
Carbon Tetrachloride	6E-04	1E-01	6E-03		
Chloroform	5E-03	1E-01	5E-02		
				9E-02	
					9E-02

Notes:
RfC - Reference Concentration
Daily intakes applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-20
Hazard Index Estimates for
286 Montevue Lane Future Adult Resident Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	RfC	Hazard Quotient	Pathway Hazard Index	Total Hazard Index
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
Benzene	9E-04	3E-02	3E-02		
Bromodichloromethane	2E-04	NA	NA		
Carbon Tetrachloride	6E-04	1E-01	6E-03		
Chloroform	5E-03	1E-01	5E-02		
				9E-02	
					9E-02

Notes:
RfC - Reference Concentration
Daily intakes applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-21
Excess Lifetime Cancer Risk Estimate for
286 Montevue Lane Future Age-Adjusted Resident Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	IUR	Excess Cancer Risk	Pathway Cancer Risk	Total Cancer Risk
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
Benzene	3.0E-04	8E-03	2E-06		
Bromodichloromethane	9.0E-05	4E-02	4E-06		
Carbon Tetrachloride	2.0E-04	6E-03	1E-06		
Chloroform	2.0E-03	2E-02	4E-05		
				5E-05	
					5E-05

Notes:
IUR - Inhalation Unit Risk
NA - Not Applicable
Daily intakes and IURs applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-22
Hazard Index Estimates for
292 Montevue Lane Current/Future Indoor Worker Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	RfC	Hazard Quotient	Pathway Hazard Index	Total Hazard Index
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
Benzene	3E-06	3E-02	1E-04		
Methylene Chloride	4E-02	6E-01	7E-02		
				7E-02	
					7E-02

Notes:
RfC - Reference Concentration
Daily intakes applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-23
Excess Lifetime Cancer Risk Estimate for
292 Montevue Lane Current/Future Indoor Worker Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	IUR	Excess Cancer Risk	Pathway Cancer Risk	Total Cancer Risk
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
Benzene	1E-06	8E-03	8E-09		
Methylene Chloride	2E-02	1E-05	2E-07		
				2E-07	
					2E-07

Notes:
IUR - Inhalation Unit Risk
NA - Not Applicable
Daily intakes applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-24
Hazard Index Estimates for
292 Montevue Lane Future Child Resident Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	RfC	Hazard Quotient	Pathway Hazard Index	Total Hazard Index
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
Benzene	2E-05	3E-02	7E-04		
Methylene Chloride	2E-01	6E-01	3E-01		
				3E-01	
					3E-01

Notes:
RfC - Reference Concentration
Daily intakes applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-25
Hazard Index Estimates for
292 Montevue Lane Future Adult Resident Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	RfC	Hazard Quotient	Pathway Hazard Index	Total Hazard Index
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
Benzene	2E-05	3E-02	7E-04		
Methylene Chloride	2E-01	6E-01	3E-01		
				3E-01	
					3E-01

Notes:
RfC - Reference Concentration
Daily intakes applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-26
Excess Lifetime Cancer Risk Estimate for
292 Montevue Lane Future Age-Adjusted Resident Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	IUR	Excess Cancer Risk	Pathway Cancer Risk	Total Cancer Risk
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
Benzene	6E-06	8E-03	5E-08		
Methylene Chloride	2E-01	1E-05	2E-06		
				2E-06	
					2E-06

Notes:
IUR - Inhalation Unit Risk
NA - Not Applicable
Daily intakes and IURs applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-27
Hazard Index Estimates for
1699 Shookstown Road Future Indoor Worker Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	RfC	Hazard Quotient	Pathway Hazard Index	Total Hazard Index
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
Benzene	1E-04	3E-02	3E-03		
Carbon Tetrachloride	1E-04	1E-01	1E-03		
Chloroform	5E-05	1E-01	5E-04		
				5E-03	
					5E-03

Notes:
RfC - Reference Concentration
Daily intakes applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-28
Excess Lifetime Cancer Risk Estimate for
1699 Shookstown Road Future Indoor Worker Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	Slope Factor/ IUR	Excess Cancer Risk	Pathway Cancer Risk	Total Cancer Risk
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
Benzene	4E-05	8E-03	3E-07		
Carbon Tetrachloride	4E-05	6E-03	2E-07		
Chloroform	2E-05	2E-02	4E-07		
				9E-07	
					9E-07

Notes:
IUR - Inhalation Unit Risk
NA - Not Applicable
Daily intakes and IURs applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-29
Hazard Index Estimates for
1699 Shookstown Road Current Child Resident Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	RfC	Hazard Quotient	Pathway Hazard Index	Total Hazard Index
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
Benzene	6E-04	3E-02	2E-02		
Carbon Tetrachloride	5E-04	1E-01	5E-03		
Chloroform	2E-04	1E-01	2E-03		
				3E-02	
					3E-02

Notes:
RfC - Reference Concentration
Daily intakes applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-30
Hazard Index Estimates for
1699 Shookstown Road Current Adult Resident Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	RfC	Hazard Quotient	Pathway Hazard Index	Total Hazard Index
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
Benzene	6E-04	3E-02	2E-02		
Carbon Tetrachloride	5E-04	1E-01	5E-03		
Chloroform	2E-04	1E-01	2E-03		
				3E-02	
					3E-02

Notes:
RfC - Reference Concentration
Daily intakes applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-31
Excess Lifetime Cancer Risk Estimates for
1699 Shookstown Road Future Age-Adjusted Resident Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	Slope Factor/ IUR	Excess Cancer Risk	Pathway Cancer Risk	Total Cancer Risk
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
Benzene	2E-04	8E-03	2E-06		
Carbon Tetrachloride	2E-04	6E-03	1E-06		
Chloroform	1E-04	2E-02	2E-06		
				5E-06	
					5E-06

Notes:
IUR - Inhalation Unit Risk
NA - Not Applicable
Daily intakes and IURs applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-32
Hazard Index Estimates for
Fort Detrick 1261 Current/Future Indoor Worker Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	RfC	Hazard Quotient	Pathway Hazard Index	Total Hazard Index
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
1,2-Dichloroethane	5E-05	7E-03	7E-03		
Benzene	2E-04	3E-02	7E-03		
Carbon Tetrachloride	1E-04	1E-01	1E-03		
Chloroform	3E-05	1E-01	3E-04		
				2E-02	
					2E-02

Notes:
NA - Not Applicable
RfC - Reference Concentration
Daily intakes applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-33
Excess Lifetime Cancer Risk Estimate for
Fort Detrick 1261 Current/Future Indoor Worker Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	IUR	Excess Cancer Risk	Pathway Cancer Risk	Total Cancer Risk
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
1,2-Dichloroethane	2E-05	3E-02	6E-07		
Benzene	7E-05	8E-03	6E-07		
Carbon Tetrachloride	4E-05	6E-03	2E-07		
Chloroform	1E-05	2E-02	2E-07		
				2E-06	
					2E-06

Notes:
IUR - Inhalation Unit Risk
NA - Not Applicable
Daily intakes applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-34
Hazard Index Estimates for
Fort Detrick 1261 Future Child Resident Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	RfC	Hazard Quotient	Pathway Hazard Index	Total Hazard Index
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
1,2-Dichloroethane	3E-04	7E-03	4E-02		
Benzene	8E-04	3E-02	3E-02		
Carbon Tetrachloride	5E-04	1E-01	5E-03		
Chloroform	2E-04	1E-01	2E-03		
				8E-02	
					8E-02

Notes:
NA - Not Applicable
RfC - Reference Concentration
Daily intakes applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-35
Hazard Index Estimates for
Fort Detrick 1261 Future Adult Resident Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	RfC	Hazard Quotient	Pathway Hazard Index	Total Hazard Index
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
1,2-Dichloroethane	3E-04	7E-03	4E-02		
Benzene	8E-04	3E-02	3E-02		
Carbon Tetrachloride	5E-04	1E-01	5E-03		
Chloroform	2E-04	1E-01	2E-03		
				8E-02	
					8E-02

Notes:
NA - Not Applicable
RfC - Reference Concentration
Daily intakes applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-36
Excess Lifetime Cancer Risk Estimate for
Fort Detrick 1261 Future Age-Adjusted Resident Scenario
Draft HHRA
Fort Detrick, Frederick, Maryland

Chemical	Daily Intake	IUR	Excess Cancer Risk	Pathway Cancer Risk	Total Cancer Risk
Exposure Pathway: Inhalation of Indoor Vapors					
Volatile Organic Compounds					
1,2-Dichloroethane	1E-04	3E-02	3E-06		
Benzene	3E-04	8E-03	2E-06		
Carbon Tetrachloride	2E-04	6E-03	1E-06		
Chloroform	6E-05	2E-02	1E-06		
				7E-06	
					7E-06

Notes:
IUR - Inhalation Unit Risk
NA - Not Applicable
Daily intakes and IURs applicable to inhalation pathways are expressed in units of mg/m^3.

Table A.7.8-37
Summary of Risk Results
Draft HHRA
Fort Detrick, Frederick, Maryland

Population	Noncancer	Cancer
285 Montevue Lane Current/Future Indoor Worker Inhalation of Indoor Vapors	5E-02	8E-06
285 Montevue Lane Future Child Resident Inhalation of Indoor Vapors	3E-01	
285 Montevue Lane Future Adult Resident Inhalation of Indoor Vapors	3E-01	
285 Montevue Lane Future Age-Adjusted Resident Inhalation of Indoor Vapors		3E-05
286 Montevue Lane Current/Future Indoor Worker Inhalation of Indoor Vapors	2E-02	1E-05
286 Montevue Lane Future Child Resident Inhalation of Indoor Vapors	9E-02	
286 Montevue Lane Future Adult Resident Inhalation of Indoor Vapors	9E-02	
286 Montevue Lane Future Age-Adjusted Resident Inhalation of Indoor Vapors		5E-05
292 Montevue Lane Current/Future Indoor Worker Inhalation of Indoor Vapors	7E-02	2E-07
292 Montevue Lane Future Child Resident Inhalation of Indoor Vapors	3E-01	
292 Montevue Lane Future Adult Resident Inhalation of Indoor Vapors	3E-01	
292 Montevue Lane Future Age-Adjusted Resident Inhalation of Indoor Vapors		2E-06
1699 Shookstown Road Future Indoor Worker Inhalation of Indoor Vapors	5E-03	9E-07
1699 Shookstown Road Current Child Resident Inhalation of Indoor Vapors	3E-02	
1699 Shookstown Road Current Adult Resident Inhalation of Indoor Vapors	3E-02	

Table A.7.8-37
Summary of Risk Results
Draft HHRA
Fort Detrick, Frederick, Maryland

Population	Noncancer	Cancer
1699 Shookstown Road Future Age-Adjusted Resident Scenario Inhalation of Indoor Vapors		5E-06
Fort Detrick 1261 Current/Future Indoor Worker Inhalation of Indoor Vapors	2E-02	2E-06
Fort Detrick 1261 Future Child Resident Inhalation of Indoor Vapors	8E-02	
Fort Detrick 1261 Future Adult Resident Inhalation of Indoor Vapors	8E-02	
Fort Detrick 1261 Future Age-Adjusted Resident Scenario Inhalation of Indoor Vapors		7E-06

Attachment 7.8
APPENDIX A
VAPOR INTRUSION INVESTIGATION LOCATIONS

Legend

- VI Building Location
- Overburden Monitoring Well
- Stream
- Area B Boundary

Notes:
1) Roads, dated 2004, and streams, dated 2001, were obtained from Frederick County MD Geographic Information Systems (GIS) digital data online.
2) Aerial photo basemap was obtained from Frederick County MD's GIS. Photo date year is 2010.

N

Scale:

0 300 600 1,200 Feet

REFERENCE/PROJECTION: Maryland State Plane, NAD 83, Feet

Watermark ECC LLC

Memorandum: 2015/2016, Area B VI Sampling Results

Date: 22 August 2016
By: J. Gatherer

FT. DETRICK
GIS File Path:
C:\GIS_Projects\Ft_Detrick\Maps\Area B VI\Figure 1 Area B VI Sample Locs_082216.mxd

FIGURE A.7.8-A1

2015/2016 Vapor Intrusion Assessment Sampling Locations

Fort Detrick
Frederick, MD

Attachment 7.8
APPENDIX B
JANUARY 2016 SAMPLING EVENT RESULTS TABLES

Table A.7.8-B1
Sampling Results 285 Montevue Lane
Fort Detrick, Fredrick, Maryland

Analyte	Units	Commercial Indoor Air Screening Level	Residential Indoor Air Screening Level	Commercial Sub-slab Screening Level	Residential Sub-slab Screening Level	B285-01A 1/28/2016 Indoor Air	B285-O1A 1/28/2016 Outdoor Air
1,1,2-Trichlorotrifluoroethane (CFC113)	µg/m^3	130000	31000	4300000	1000000	0.62	0.52
1,2,4-Trimethylbenzene	µg/m^3	31	7.3	1000	240	0.67 J	0.36 J
1,2-Dichlorobenzene	µg/m^3	880	210	8800	2100	0.16 U	0.14 U
1,2-Dichloroethane	µg/m^3	0.47	0.11	16	3.7	0.16 J	0.096 U
1,2-Dichloropropane	µg/m^3	1.2	0.28	40	9.3	0.15 J	0.13 U
1,3,5-Trimethylbenzene	µg/m^3	NA	NA	NA	NA	0.27 U	0.25 U
1,4-Dichlorobenzene	µg/m^3	1.1	0.26	37	8.7	1.5	0.12 U
2,2,4-Trimethylpentane	µg/m^3	NA	NA	NA	NA	--	--
2-Butanone (MEK)	µg/m^3	22000	5200	730000	170000	1.8 J	3.4 J
2-Hexanone	µg/m^3	130	31	4300	1000	0.27 U	0.6 J
2-Propanol (Isopropyl Alcohol)	µg/m^3	NA	NA	NA	NA	0.71 U	0.8 J
Acetone	µg/m^3	140000	32000	4700000	1100000	12	14
Acrolein	µg/m^3	0.088	0.021	2.9	0.70	0.72 J	2.4 J
alpha-Pinene	µg/m^3	NA	NA	NA	NA	4.2	0.22 U
Benzene	µg/m^3	1.6	0.36	53	12	1.2	1.1
Carbon Disulfide	µg/m^3	3100	730	100000	24000	3.7 J	0.23 U
Carbon Tetrachloride	µg/m^3	2.0	0.47	67	16	0.52	0.5
Chlorodifluoromethane	µg/m^3	220000	52000	7300000	1700000	--	--
Chloroform	µg/m^3	0.53	0.12	18	4.0	0.77	0.14 U
Chloromethane	µg/m^3	390	94	13000	3100	0.61	0.68
Cyclohexane	µg/m^3	26000	6300	870000	210000	0.76 J	0.45 U
Dichlorodifluoromethane (CFC 12)	µg/m^3	440	100	15000	3300	2.7	2.7
d-Limonene	µg/m^3	NA	NA	NA	NA	4.2	0.22 U
Ethanol	µg/m^3	NA	NA	NA	NA	220	8
Ethyl Acetate	µg/m^3	310	73	10000	2400	34	9.9
Ethylbenzene	µg/m^3	4.9	1.1	160	37	0.87	0.36 J
m,p-Xylenes	µg/m^3	440	100	15000	3300	2.4	1
Methylene Chloride	µg/m^3	1200	100	40000	3300	0.96	0.51 J
Naphthalene	µg/m^3	0.36	0.083	4	1	0.3 U	0.28 U
n-Heptane	µg/m^3	NA	NA	NA	NA	0.86	0.39 J
n-Hexane	µg/m^3	3100	730	100000	24000	1.4	0.63 J
n-Nonane	µg/m^3	88	21	2900	700	0.37 J	0.27 J
n-Octane	µg/m^3	NA	NA	NA	NA	0.82 J	0.33 J
o-Xylene	µg/m^3	440	100	15000	3300	0.96	0.41 J
Pentane, n-	µg/m^3	4400	1000	150000	33000	--	--
Propene	µg/m^3	13000	3100	430000	100000	3.1	0.22 U

Table A.7.8-B1
Sampling Results 285 Montevue Lane
Fort Detrick, Fredrick, Maryland

Analyte	Units	Commercial Indoor Air Screening Level	Residential Indoor Air Screening Level	Commercial Sub-slab Screening Level	Residential Sub-slab Screening Level	B285-01A 1/28/2016 Indoor Air	B285-O1A 1/28/2016 Outdoor Air
Styrene	µg/m^3	4480	1000	150000	33000	1	0.23 U
Tertiary butyl alcohol	µg/m^3	NA	NA	NA	NA	--	--
Tetrachloroethene	µg/m^3	47	11	1600	370	0.23	0.13 J
Tetrahydrofuran	µg/m^3	8800	2100	290000	70000	0.46 J	0.31 U
Toluene	µg/m^3	22000	5200	730000	170000	7.6	1.7
Trichloroethene	µg/m^3	3	0.48	100	16	0.18	0.14 U
Trichlorofluoromethane (CFC 11)	µg/m^3	NA	NA	NA	NA	230	1.3
Vinyl Acetate	µg/m^3	880	210	29000	7000	1.1 U	5.6 J

Notes:
NA = Not Applicable
CFC = chlorofluorocarbon
U = Data qualifier where result is non-detect. Non-detect values use the Reporting Limit.
J = Data qualifier where the result is a detection but considered an estimate.
-- - Not annalyzed

Table A.7.8-B2
Sampling Results 286 Montevue Lane
Fort Detrick, Fredrick, Maryland

Analyte	Units	Commercial Indoor Air Screening Level	Residential Indoor Air Screening Level	Commercial Sub-slab Screening Level	Residential Sub-slab Screening Level	B286-01S 1/28/2016 Sub-Slab	B286-02 (1L) 1/28/2016 Sub-Slab	B286-02 (6L)A 1/28/2016 Indoor Air	B286-03 (1L) 1/28/2016 Sub-Slab
1,1,2-Trichlorotrifluoroethane (CFC113)	µg/m^3	130000	31000	4300000	1000000	0.53	0.53	0.51	0.51
1,2,4-Trimethylbenzene	µg/m^3	31	7.3	1000	240	1.3 J	2 J	0.58 J	0.56 U
1,2-Dichlorobenzene	µg/m^3	880	210	29000	7000	0.33 J	0.82	0.17 U	0.35 U
1,2-Dichloroethane	µg/m^3	0.47	0.11	16	3.7	0.21 U	0.27 U	0.11 U	0.23 U
1,3,5-Trimethylbenzene	µg/m^3	NA	NA	NA	NA	0.54 U	0.7 U	0.29 U	0.6 U
1,3-Dichlorobenzene	µg/m^3	NA	NA	NA	NA	0.25 U	0.32 U	0.13 U	0.28 U
1,4-Dichlorobenzene	µg/m^3	1.1	0.26	37	8.7	0.26 U	0.63	0.14 U	0.28 U
2-Butanone (MEK)	µg/m^3	22000	5200	730000	170000	2 J	7.4 J	1.4 J	1.4 J
2-Propanol (Isopropyl Alcohol)	µg/m^3	NA	NA	NA	NA	70	1400	1.5 J	120
4-Ethyltoluene	µg/m^3	NA	NA	NA	NA	0.54 U	0.7 U	0.29 U	0.6 U
4-Methyl-2-pentanone	µg/m^3	13000	3100	430000	100000	22	28	0.29 U	6
Acetone	µg/m^3	140000	32000	4700000	1100000	26	38	11	26
Acetonitrile	µg/m^3	260	63	8700	2100	0.61 U	0.79 U	0.32 U	0.67 U
Acrolein	µg/m^3	0.088	0.021	2.9	0.70	2.4 J	1.8 J	1.2 J	0.66 J
Acrylonitrile	µg/m^3	0.18	0.041	6.0	1.4	0.58 U	0.74 U	0.31 U	0.63 U
alpha-Pinene	µg/m^3	NA	NA	NA	NA	6.9	7.7	2.9	2.2
Benzene	µg/m^3	1.6	0.36	53	12	2.7	9.9	0.85	1.3
Bromodichloromethane	µg/m^3	0.33	0.076	11	2.5	0.36	0.3 U	0.12 U	0.25 U
Carbon Disulfide	µg/m^3	3100	730	100000	24000	1.2 J	5.8 J	0.27 U	0.56 U
Carbon Tetrachloride	µg/m^3	2	0.47	67	16	0.53	0.98	0.36	0.53
Chlorobenzene	µg/m^3	220	52	7300	1700	0.8	1.5	0.15 U	0.31 U
Chlorodifluoromethane	µg/m^3	220000	52000	7300000	1700000	--	--	--	--
Chloroform	µg/m^3	0.53	0.12	18	4.0	24	2	0.68	1.3
Chloromethane	µg/m^3	390	94	13000	3100	0.62 J	0.61 U	0.51	1.2
Cyclohexane	µg/m^3	26280	6300	880000	210000	8.9	6.3	0.52 U	2.6 J
Dichlorodifluoromethane (CFC 12)	µg/m^3	440	100	15000	3300	2.6	2.6	2.6	2.6
Dichloromonofluoromethane	µg/m^3	NA	NA	NA	NA	--	--	--	--
d-Limonene	µg/m^3	NA	NA	NA	NA	2.1	1.6 J	1.7	1.2 J
Ethanol	µg/m^3	NA	NA	NA	NA	47	48	20	27
Ethyl Acetate	µg/m^3	310	73	10000	2400	69	98	24	39
Ethylbenzene	µg/m^3	4.9	1.1	160	37	1.5 J	2 J	0.5 J	0.6 U
Hexachlorobutadiene	µg/m^3	NA	NA	NA	NA	0.48 U	0.61 U	0.25 U	0.52 U
Hexachloroethane	µg/m^3	1.1	--	37	--	--	--	--	--
m,p-Xylenes	µg/m^3	440	100	15000	3300	3.1	4.3	1.4	1.1 U
Methylene Chloride	µg/m^3	1200	100	40000	3300	2.8	3.1	0.55 J	1.3 J
Naphthalene	µg/m^3	0.36	0.083	12	2.8	0.62 J	0.79 U	0.32 U	0.67 U
n-Butyl Acetate	µg/m^3	NA	NA	NA	NA	1.4 J	2 J	0.51 J	0.6 U
n-Heptane	µg/m^3	NA	NA	NA	NA	0.6 J	0.74 U	0.51 J	0.63 U
n-Hexane	µg/m^3	3066	730	100000	24000	0.68 J	0.66 U	0.52 J	0.56 U
n-Nonane	µg/m^3	88	21	2900	700	1.4 J	2 J	0.63 J	2.4
n-Octane	µg/m^3	NA	NA	NA	NA	1.3 J	2.2	0.51 J	0.67 U
n-Propylbenzene	µg/m^3	4400	1000	150000	33000	1 J	5.2	0.29 U	0.6 U
o-Xylene	µg/m^3	44	100	1500	3300	1.8	6.6	0.57 J	0.7 J
Pentane, n-	µg/m^3	4400	--	150000	--	--	--	--	--

Table A.7.8-B2
Sampling Results 286 Montevue Lane
Fort Detrick, Fredrick, Maryland

Analyte	Units	Commercial Indoor Air Screening Level	Residential Indoor Air Screening Level	Commercial Sub-slab Screening Level	Residential Sub-slab Screening Level	B286-01S 1/28/2016 Sub-Slab	B286-02 (1L) 1/28/2016 Sub-Slab	B286-02 (6L)A 1/28/2016 Indoor Air	B286-03 (1L) 1/28/2016 Sub-Slab
Propene	µg/m^3	13000	3100	430000	100000	16	190	2.5	15
Styrene	µg/m^3	4400	1000	150000	33000	3.3	1.1 J	0.51 J	0.56 J
Tetrachloroethene	µg/m^3	47	11	1600	370	0.31 J	0.39 J	0.17 J	0.27 U
Tetrahydrofuran	µg/m^3	8800	2100	290000	70000	0.68 U	1.3 J	0.36 U	0.75 U
Toluene	µg/m^3	22000	5200	730000	170000	6	49	2.5	5.1
Trichlorofluoromethane (CFC 11)	µg/m^3	3100	730	100000	24000	8.6	1.8	2.1	4.6
Vinyl Acetate	µg/m^3	880	210	29000	7000	2.2 U	3.4 J	1.7 J	2.4 U

Notes:
NA = Not Applicable
CFC = chlorofluorocarbon
/here result is non-detect. Non-detect values use the Reporting Limit.
ifier where the result is a detection but considered an estimate.
-- - Not annalyzed

Table A.7.8-B3
Sampling Results 292 Montevue Lane
Fort Detrick, Fredrick, Maryland

Analyte	Units	Commercial Indoor Air Screening Level	Residential Indoor Air Screening Level	Commercial Sub-slab Screening Level	Residential Sub-slab Screening Level	B292-01S 1/29/2016 Sub-Slab	B292-02S(1L) 1/29/2016 Sub-Slab	B292-03S(1L) 1/292016 Sub-Slab	B292-O2A 1/29/2016 Outdoor Air
1,1,2-Trichlorotrifluoroethane (CFC113)	µg/m^3	130000	31000	4300000	1000000	0.54	0.54	0.52	0.53
1,2,4-Trimethylbenzene	µg/m^3	31	7.3	1000	240	1.5 J	0.62 U	0.51 U	0.37 J
1,2-Dichlorobenzene	µg/m^3	880	210	29000	7000	0.53	0.38 U	0.32 U	0.16 U
1,3,5-Trimethylbenzene	µg/m^3	NA	NA	NA	NA	0.63 U	0.66 U	0.55 U	0.27 U
1,4-Dichlorobenzene	µg/m^3	1.10	0.26	37	8.7	0.32 J	0.31 U	0.26 U	0.13 U
2-Butanone (MEK)	µg/m^3	22000	5200	730000	170000	5.6 J	17 J	4.6 J	1.3 J
2-Hexanone	µg/m^3	130	31	4300	1000	0.63 U	2.2	1.1 J	0.27 U
2-Propanol (Isopropyl Alcohol)	µg/m^3	NA	NA	NA	NA	600	1800	29	0.73 J
4-Methyl-2-pentanone	µg/m^3	13000	3100	430000	100000	18	29	6.6	0.27 U
Acetone	µg/m^3	140000	32000	4700000	1100000	29	81	26	6.3 J
Acetonitrile	µg/m^3	260.00	63.00	8700	2100	0.76 J	0.74 U	0.62 U	0.31 U
Acrolein	µg/m^3	0.088	0.021	2.9	0.70	8	9.5	2.2 J	0.65 J
alpha-Pinene	µg/m^3	NA	NA	NA	NA	6.2	6.3	3	1.2
Benzene	µg/m^3	1.60	0.36	53	12	6.9	13	1.4	1
Carbon Disulfide	µg/m^3	3100	730	100000	24000	0.59 U	0.64 J	0.51 U	0.26 U
Carbon Tetrachloride	µg/m^3	2.0	0.47	67	16	0.55	0.63	0.29 U	0.44
Chlorobenzene	µg/m^3	220	52	7300	1700	1.8	2	0.28 U	0.14 U
Chlorodifluoromethane	µg/m^3	220000	--	7300000	--	--	--	--	--
Chloroform	µg/m^3	0.53	0.12	18	4.0	0.35 U	0.37 U	0.3 U	0.15 U
Chloromethane	µg/m^3	390	94	13000	3100	0.55 U	0.58 U	1.1	0.56
cis-1,2-Dichloroethene	µg/m^3	NA	NA	NA	NA	0.36 U	0.38 U	0.32 U	0.16 U
cis-1,3-Dichloropropene [(1)]	µg/m^3	3.1	0.70	100	23	0.55 U	0.58 U	0.48 U	0.24 U
Cyclohexane	µg/m^3	26000	6300	870000	210000	32	35	11	0.5 U
Dichlorodifluoromethane (CFC 12)	µg/m^3	440	100	15000	3300	2.7	2.5	2.6	2.6
d-Limonene	µg/m^3	NA	NA	NA	NA	2.9	1.1 J	2.5	0.58 J
Ethanol	µg/m^3	NA	NA	NA	NA	23	110	50	6.5 J
Ethyl Acetate	µg/m^3	310	73	10000	2400	50	180	26	13
Ethylbenzene	µg/m^3	4.9	1.10	160	37	1.8 J	2.4	0.55 U	0.38 J
m,p-Xylenes	µg/m^3	440	100	15000	3300	4.9	4.4	1.2 J	1.1
Methylene Chloride	µg/m^3	1200	100	40000	3300	2.5	2.1	0.97 J	0.57 J
n-Butyl Acetate	µg/m^3	NA	NA	NA	NA	1.9 J	2.7	0.55 U	0.27 U
n-Heptane	µg/m^3	NA	NA	NA	NA	0.67 U	0.88 J	0.64 J	0.49 J
n-Hexane	µg/m^3	3100	730	100000	24000	0.8 J	1.3 J	0.78 J	0.7 J
n-Nonane	µg/m^3	88	21	2900	700	1.9 J	2.2	0.51 U	0.26 U
n-Octane	µg/m^3	NA	NA	NA	NA	1.4 J	2.1	0.62 U	0.55 J
n-Propylbenzene	µg/m^3	4400	1000	150000	33000	3.1	2.2	0.55 U	0.27 U
o-Xylene	µg/m^3	440	100	15000	3300	4.8	3.6	0.53 J	0.43 J
Propene	µg/m^3	13000	3100	430000	100000	130	230	2.9	0.24 U
Styrene	µg/m^3	4400	1000	150000	33000	1.4 J	0.62 U	0.51 U	0.27 J
Tertiary butyl alcohol	µg/m^3	NA	NA	NA	NA	--	--	--	--

Table A.7.8-B3
Sampling Results 292 Montevue Lane
Fort Detrick, Fredrick, Maryland

Analyte	Units	Commercial Indoor Air Screening Level	Residential Indoor Air Screening Level	Commercial Sub-slab Screening Level	Residential Sub-slab Screening Level	B292-01S 1/29/2016	B292-02S(1L) 1/29/2016	B292-03S(1L) 1/292016	B292-O2A 1/29/2016
						Sub-Slab	Sub-Slab	Sub-Slab	Outdoor Air
Tetrachloroethene	µg/m^3	47	11	1600	370	0.49	1.1	0.25 U	0.15 J
Tetrahydrofuran	µg/m^3	8800	2100	290000	70000	1 J	2.4	0.69 U	0.34 U
Toluene	µg/m^3	22000	5200	733333	173333	33	47	3.1	2.1
Trichloroethene	µg/m^3	3.00	0.48	100	16	0.35 U	0.37 U	0.3 U	0.15 U
Trichlorofluoromethane (CFC 11)	µg/m^3	3100	730	103333	24333	18	1.6	5.8	1.3
Vinyl Acetate	µg/m^3	880	210	29333	7000	2.6 U	6.3 J	3.1 J	1.1 U

Notes:

NA = Not Applicable

CFC = chlorofluorocarbon

U = Data qualifier where result is non-detect. Non-detect values use the Reporting Limit.

J = Data qualifier where the result is a detection but considered an estimate.

-- - Not annalyzed

Table A.7.8-B4
Sampling Results 1699 Shookstown
Fort Detrick, Fredrick, Maryland

Analyte	Units	Commercial Indoor Air Screening Level	Residential Indoor Air Screening Level	Commercial Sub-slab Screening Level	Residential Sub-slab Screening Level	B1699-01A (6L) 1/31/2016	B1699-01S 1/31/2016	B1699-OA3 1/31/2016
						Indoor Air	Sub-Slab	Outdoor Air
1,1,2-Trichlorotrifluoroethane (CFC113)	µg/m^3	130000	31000	4300000	1000000	0.52	0.49	0.54
1,2,4-Trimethylbenzene	µg/m^3	31	7.3	1000	240	0.53 J	1.1 J	0.17 U
1,2-Dichlorobenzene	µg/m^3	880	210	29000	7000	0.11 U	0.37 U	0.11 U
1,2-Dichloroethane	µg/m^3	0.47	0.11	16	3.7	0.081 J	0.25 U	0.071 J
1,3,5-Trimethylbenzene	µg/m^3	NA	NA	NA	NA	0.2 J	0.64 U	0.18 U
1,4-Dichlorobenzene	µg/m^3	1.11	0.26	37	8.7	0.18	0.3 U	0.087 U
2-Butanone (MEK)	µg/m^3	22000	5200	730000	170000	0.5 J	5.9 J	0.5 J
2-Hexanone	µg/m^3	131	31	4400	1000	0.19 U	0.97 J	0.18 U
2-Propanol (Isopropyl Alcohol)	µg/m^3	NA	NA	NA	NA	0.95 J	430	0.5 J
4-Ethyltoluene	µg/m^3	NA	NA	NA	NA	0.32 J	0.64 U	0.18 U
4-Methyl-2-pentanone	µg/m^3	13000	3100	430000	100000	0.19 U	24	0.18 U
Acetone	µg/m^3	140000	32000	4700000	1100000	6.2	34	3.9 J
Acrolein	µg/m^3	0.088	0.021	2.9	0.7	0.32 J	6.6 J	0.27 J
alpha-Pinene	µg/m^3	NA	NA	NA	NA	0.31 J	1.2 J	0.25 J
Benzene	µg/m^3	1.6	0.36	53	12	0.56	6	0.61
Carbon Disulfide	µg/m^3	3100	730	100000	24000	0.18 U	2.6 J	0.17 U
Carbon Tetrachloride	µg/m^3	2.0	0.47	67	16	0.53	0.63	0.51
Chlorobenzene	µg/m^3	220	52	7300	1700	0.1 U	1.1	0.095 U
Chloroform	µg/m^3	0.53	0.12	18	4.0	0.24	0.35 U	0.23
Chloromethane	µg/m^3	390	94	13000	3100	0.55	0.56 U	0.65
Cyclohexane	µg/m^3	26000	6300	870000	210000	0.35 U	25	0.33 U
Dichlorodifluoromethane (CFC 12)	µg/m^3	440	100	15000	3300	2.7	2.5	2.7
d-Limonene	µg/m^3	NA	NA	NA	NA	0.36 J	0.56 U	0.16 U
Ethanol	µg/m^3	NA	NA	NA	NA	46	67	13
Ethyl Acetate	µg/m^3	310	73	10000	2400	1.4	21	0.68 J
Ethylbenzene	µg/m^3	4.9	1.1	160	37	0.19 U	1 J	0.18 U
Isopropylbenzene (Cumene)	µg/m^3	1800	420	60000	14000	0.18 U	0.6 U	0.17 U
m,p-Xylenes	µg/m^3	440	100	15000	3300	0.43 J	2.6	0.35 J
Methylene Chloride	µg/m^3	1200	100	40000	3300	0.42 J	1.4 J	0.43 J
n-Butyl Acetate	µg/m^3	NA	NA	NA	NA	0.19 U	0.72 J	0.18 U
n-Heptane	µg/m^3	NA	NA	NA	NA	0.21 U	0.68 U	0.26 J
n-Hexane	µg/m^3	3100	730	100000	24000	0.35 J	0.6 U	0.39 J
n-Nonane	µg/m^3	88	21	2900	700	1.2	0.98 J	0.17 U
n-Octane	µg/m^3	NA	NA	NA	NA	0.22 U	0.85 J	0.21 U
n-Propylbenzene	µg/m^3	4400	1000	150000	33000	0.2 J	1.9 J	0.18 U
o-Xylene	µg/m^3	440	100	15000	3300	0.26 J	2.9	0.17 U
Propene	µg/m^3	13000	3100	430000	100000	0.17 U	82	0.16 U

Table A.7.8-B4
Sampling Results 1699 Shookstown
Fort Detrick, Fredrick, Maryland

Analyte	Units	Commercial Indoor Air Screening Level	Residential Indoor Air Screening Level	Commercial Sub-slab Screening Level	Residential Sub-slab Screening Level	B1699-01A (6L) 1/31/2016	B1699-01S 1/31/2016	B1699-OA3 1/31/2016
						Indoor Air	Sub-Slab	Outdoor Air
Styrene	µg/m^3	4400	1000	150000	33000	0.18 U	0.6 U	0.17 U
Tetrahydrofuran	µg/m^3	8800	2100	290000	70000	0.24 U	0.8 U	0.23 U
Toluene	µg/m^3	22000	5200	730000	170000	0.6 J	22	0.64
Trichlorofluoromethane (CFC 11)	µg/m^3	3100	730	100000	24000	1.6	1.4	1.3
Vinyl Acetate	µg/m^3	880	210	29000	7000	0.79 U	3.9 J	0.75 U

Notes:

NA = Not Applicable

CFC = chlorofluorocarbon

U = Data qualifier where result is non-detect. Non-detect values use the Reporting Limit.

J = Data qualifier where the result is a detection but considered an estimate.

Table A.7.8-B5
Sampling Results Fort Detrick 1261
Fort Detrick, Fredrick, Maryland

Analyte	Units	Commercial Indoor Air Screening Level	Residential Indoor Air Screening Level	Commercial Sub-slab Screening Level	Residential Sub-slab Screening Level	B1261-01A(6L) 2/3/2016	B1261-01S(1L) 2/3/2016	B1261-01S(1L) DUP 2/3/2016	B1261-02A(6L) 2/3/2016	B1261-02S(1L) 2/3/2016
						Indoor Air	Sub-Slab	Sub-Slab	Indoor Air	Sub-Slab
1,1,2-Trichlorotrifluoroethane (CFC113)	µg/m^3	130000	31000	4300000	1000000	0.55	0.73	0.69	0.52	0.49
1,2,4-Trimethylbenzene	µg/m^3	31	7.30	1000	240	0.25 U	0.59 U	0.56 U	0.3 J	0.59 U
1,2-Dichloroethane	µg/m^3	0.47	0.11	16	3.7	0.1 U	0.24 U	0.23 U	0.11 U	0.24 U
1,2-Dichloropropane	µg/m^3	1.2	0.28	40	9.3	0.14 U	0.32 U	0.31 U	0.14 U	0.33 U
2-Butanone (MEK)	µg/m^3	22000	5200	730000	170000	0.98 J	5.5 J	2.7 J	0.81 J	3.1 J
2-Hexanone	µg/m^3	13000	31	430000	1000	0.27 U	0.62 U	0.6 U	0.27 U	0.63 U
2-Propanol (Isopropyl Alcohol)	µg/m^3	NA	NA	NA	NA	0.74 J	120	89	0.94 J	66
4-Methyl-2-pentanone	µg/m^3	13000	3100	430000	100000	0.27 U	2.2	3.1	0.27 U	2 J
Acetone	µg/m^3	140000	32000	4700000	1100000	9	48 J	20 J	9.7	26
Acrolein	µg/m^3	0.088	0.021	2.9	0.7	0.65 J	0.66 U	0.74 J	0.59 J	0.86 J
alpha-Pinene	µg/m^3	NA	NA	NA	NA	0.23 U	0.55 U	0.53 U	0.81 J	0.55 U
Benzene	µg/m^3	1.6	0.36	53	12	0.61	2	1.8	0.61	1.6
Carbon Disulfide	µg/m^3	3100	730	100000	24000	0.25 U	11 J	0.56 U	0.26 U	0.59 U
Carbon Tetrachloride	µg/m^3	2.0	0.47	67	16	0.34	0.49	0.32 U	0.44	0.34 U
Chlorobenzene	µg/m^3	220	52	7300	1700	0.14 U	0.32 U	0.31 U	0.14 U	0.33 U
Chloroform	µg/m^3	0.53	0.12	18	4.0	0.15 U	0.35 U	0.33 U	0.15 U	0.35 U
Chloromethane	µg/m^3	390	94	13000	3100	0.81	0.55 U	0.53 U	0.64	0.78 J
Cyclohexane	µg/m^3	26000	6300	870000	210000	0.48 U	3 J	2.9 J	0.5 U	3.2 J
Dichlorodifluoromethane (CFC 12)	µg/m^3	440	100	15000	3300	2.7	2.8	2.8	2.8	2.6
d-Limonene	µg/m^3	NA	NA	NA	NA	0.23 U	0.55 U	0.53 U	0.43 J	0.55 U
Ethanol	µg/m^3	NA	NA	NA	NA	5 J	74 J	30 J	3.7 J	34
Ethyl Acetate	µg/m^3	310	73	10000	2400	3.1	5.4	4.7	0.6 U	4.3
Ethylbenzene	µg/m^3	4.90	1.1	160	37	0.27 U	0.62 U	1 J	0.27 U	0.63 U
m,p-Xylenes	µg/m^3	440	100	15000	3300	0.48 U	1.7 J	3.5	0.5 U	1.7 J
Methyl Methacrylate	µg/m^3	3100	730	100000	24000	0.52 U	1.2 U	1.2 U	0.53 U	1.2 U
Methylene Chloride	µg/m^3	1200	100	40000	3300	0.59 J	1 U	0.95 U	0.58 U	1 U
n-Butyl Acetate	µg/m^3	NA	NA	NA	NA	0.27 U	0.62 U	0.6 U	0.27 U	0.63 U
n-Heptane	µg/m^3	NA	NA	NA	NA	0.97	0.66 U	0.64 U	0.29 U	0.67 U
n-Hexane	µg/m^3	3100	730	100000	24000	0.48 J	1 J	0.98 J	0.32 J	0.87 J
n-Nonane	µg/m^3	88	21	2900	700	0.37 J	1.4 J	1.3 J	1.1	0.96 J
n-Octane	µg/m^3	NA	NA	NA	NA	0.3 U	0.7 U	0.68 U	0.31 U	0.71 U
n-Propylbenzene	µg/m^3	4400	1000	150000	33000	0.27 U	0.76 J	0.6 U	0.27 U	0.63 U
o-Xylene	µg/m^3	440	100	15000	3300	0.25 U	1.2 J	1.3 J	0.26 U	0.84 J
Propene	µg/m^3	13000	3100	430000	100000	0.23 U	22	19	1.4	13

Table A.7.8-B5
Sampling Results Fort Detrick 1261
Fort Detrick, Fredrick, Maryland

Analyte	Units	Commercial Indoor Air Screening Level	Residential Indoor Air Screening Level	Commercial Sub-slab Screening Level	Residential Sub-slab Screening Level	B1261-01A(6L) 2/3/2016	B1261-01S(1L) 2/3/2016	B1261-01S(1L) DUP 2/3/2016	B1261-02A(6L) 2/3/2016	B1261-02S(1L) 2/3/2016
						Indoor Air	Sub-Slab	Sub-Slab	Indoor Air	Sub-Slab
Styrene	µg/m^3	4400	1000	150000	33000	0.25 U	0.59 U	0.56 U	0.26 U	0.59 U
Tetrachloroethene	µg/m^3	47	11	1600	370	0.12 U	0.28 U	0.27 U	0.12 U	0.37 J
Tetrahydrofuran	µg/m^3	8800	2100	290000	70000	0.33 U	0.78 U	0.75 U	0.34 U	0.79 U
Toluene	µg/m^3	22000	5200	730000	170000	1.2	7.7	5.9	0.6 J	4.9
Trichloroethene	µg/m^3	3.0	0.48	100	16	0.15 U	0.35 U	0.33 U	0.15 U	0.35 U
Trichlorofluoromethane (CFC 11)	µg/m^3	3100	730	100000	24000	14	34	32	9.8	28
Vinyl Acetate	µg/m^3	880	210	29000	7000	1.1 U	4.7 J	2.4 U	1.1 U	2.6 U

Notes:

NA = Not Applicable

CFC = chlorofluorocarbon

U = Data qualifier where result is non-detect. Non-detect values use the Reporting Limit.

J = Data qualifier where the result is a detection but considered an estimate.

Table A.7.8-B5
Sampling Results Fort Detrick 1261
Fort Detrick, Fredrick, Maryland

Analyte	Units	Commercial Indoor Air Screening Level	Residential Indoor Air Screening Level	Commercial Sub-slab Screening Level	Residential Sub-slab Screening Level	B1261-03A(6L) 2/3/2016 Indoor Air	B1261-03S(1L) 2/3/2016 Sub-Slab	B1261-OA4 2/3/2016 Outdoor Air
1,1,2-Trichlorotrifluoroethane (CFC113)	µg/m^3	130000	31000	4300000	1000000	0.85	0.51	0.53
1,2,4-Trimethylbenzene	µg/m^3	31	7.30	1000	240	0.58 J	0.53 U	0.26 U
1,2-Dichloroethane	µg/m^3	0.47	0.11	16	3.7	0.27	0.29 J	0.11 U
1,2-Dichloropropane	µg/m^3	1.2	0.28	40	9.3	0.28	0.35	0.15 U
2-Butanone (MEK)	µg/m^3	22000	5200	730000	170000	2.5 J	7.1 J	1.3 J
2-Hexanone	µg/m^3	13000	31	430000	1000	0.25 U	0.56 U	0.28 U
2-Propanol (Isopropyl Alcohol)	µg/m^3	NA	NA	NA	NA	4.2 J	160	0.74 U
4-Methyl-2-pentanone	µg/m^3	13000	3100	430000	100000	0.77 J	1.2 J	0.28 U
Acetone	µg/m^3	140000	32000	4700000	1100000	10	35	5.4 J
Acrolein	µg/m^3	0.088	0.021	2.9	0.7	4.2	2.4 J	0.53 J
alpha-Pinene	µg/m^3	NA	NA	NA	NA	2.7	1.7 J	0.37 J
Benzene	µg/m^3	1.6	0.36	53	12	1.1	2.6	0.66
Carbon Disulfide	µg/m^3	3100	730	100000	24000	0.41 J	0.62 J	0.26 U
Carbon Tetrachloride	µg/m^3	2.0	0.47	67	16	0.51	0.3 U	0.51
Chlorobenzene	µg/m^3	220	52	7300	1700	0.13 U	0.29 U	0.15 U
Chloroform	µg/m^3	0.53	0.12	18	4.0	0.16	0.34 J	0.16 U
Chloromethane	µg/m^3	390	94	13000	3100	0.64	0.67 J	0.56
Cyclohexane	µg/m^3	26000	6300	870000	210000	1.2 J	6.6	0.51 U
Dichlorodifluoromethane (CFC 12)	µg/m^3	440	100	15000	3300	2.8	2.7	2.7
d-Limonene	µg/m^3	NA	NA	NA	NA	0.91	0.49 U	0.25 U
Ethanol	µg/m^3	NA	NA	NA	NA	16	44	5.6 J
Ethyl Acetate	µg/m^3	310	73	10000	2400	84	81	0.64 J
Ethylbenzene	µg/m^3	4.90	1.1	160	37	0.88	1 J	0.28 U
m,p-Xylenes	µg/m^3	440	100	15000	3300	2.4	2.4	0.51 U
Methyl Methacrylate	µg/m^3	3100	730	100000	24000	0.48 U	1.1 U	0.55 U
Methylene Chloride	µg/m^3	1200	100	40000	3300	1.4	1.5 U	0.61 U
n-Butyl Acetate	µg/m^3	NA	NA	NA	NA	1.3	1.5 J	0.28 U
n-Heptane	µg/m^3	NA	NA	NA	NA	0.73 J	1 J	0.3 U
n-Hexane	µg/m^3	3100	730	100000	24000	1.8	2.9	0.36 J
n-Nonane	µg/m^3	88	21	2900	700	0.47 J	0.91 J	0.26 U
n-Octane	µg/m^3	NA	NA	NA	NA	0.37 J	4.6	0.32 U
n-Propylbenzene	µg/m^3	4400	1000	150000	33000	0.25 U	0.56 U	0.28 U
o-Xylene	µg/m^3	440	100	15000	3300	0.94	1.4 J	0.26 U
Propene	µg/m^3	13000	3100	430000	100000	4	24	0.25 U

Table A.7.8-B5
Sampling Results Fort Detrick 1261
Fort Detrick, Fredrick, Maryland

Analyte	Units	Commercial Indoor Air Screening Level	Residential Indoor Air Screening Level	Commercial Sub-slab Screening Level	Residential Sub-slab Screening Level	B1261-03A(6L) 2/3/2016	B1261-03S(1L) 2/3/2016	B1261-OA4 2/3/2016
						Indoor Air	Sub-Slab	Outdoor Air
Styrene	µg/m^3	4400	1000	150000	33000	0.69 J	0.53 U	0.26 U
Tetrachloroethene	µg/m^3	47	11	1600	370	0.16	0.26 J	0.13 U
Tetrahydrofuran	µg/m^3	8800	2100	290000	70000	0.35 J	0.7 U	0.35 U
Toluene	µg/m^3	22000	5200	730000	170000	9.1	14	0.63 J
Trichloroethene	µg/m^3	3.0	0.48	100	16	0.32	0.32 J	0.16 U
Trichlorofluoromethane (CFC 11)	µg/m^3	3100	730	100000	24000	840	110	7.5
Vinyl Acetate	µg/m^3	880	210	29000	7000	3.1 J	3.4 J	1.1 U

Notes:

NA = Not Applicable

CFC = chlorofluorocarbon

U = Data qualifier where result is non-detect. Non-detect values use the Reporting Limit.

J = Data qualifier where the result is a detection but considered an estimate.

Attachment 7.9
Landfill Lysimeter and Well Details

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Attachment 7.9
TABLES

Table A.7.9-1 Replacement and Expansion Well Network Information

Well ID	Target Depth	Depth to Bedrock	Depth to Water Encountered	Screened Interval	Screen Length	Total Drilled Depth	Voids Encountered
BMW6R	55	32.0	75.0	74.6 - 89.6	15	91.0	34.8 - 39.5, 46.0 - 47.0, 77.5 - 79.0
BMW18R	50	38.4	57.5	54.1 - 64.1	10	75.0	57.3 - 73.5
BMW25R	45	47.0	45	46.0 - 61.0	15	66.0	None Encountered
BMW26R	45	25.0	25.3	30.2 - 45.2	15	52.0	34.0 - 39.0
BMW81R	45	24.0	39.0	40.5 - 55.5	15	60.0	36.5 - 41.0, 44.0 - 45.0, 46.5 - 47.0, 51.0 - 52.0
BMW86	NA	22	36	31-46	15	50	35-36.5, 37-38.
BMW88	NA	33	42	44.5-59.5	15	61.5	36-44.5, 49-50.5, 52-54.
BMW89	NA	32	78	75-90	15	92	None Encountered
BMW90	NA	20.5	37.7	30-45	15	51	23.5 - 31, 46 - 47.
BMW91	NA	17	68	68-83	15	85	43 - 71 clay filled void
BMW92	NA	33	39	39-54	15	55	39-39.5, 47.5-50.
BMW93	NA	2.5	33.8	33-48	15	51	15-17, 25-27.5, 32.5-34.
BMW87	NA	22	31.5	31 - 46	15	47.5	31 - 35, 40 - 46.
BMW82	NA	47	65	60-75	15	75	59-65, 66.5-74.5
BMW83	NA	10	65	65-80	15	80	30-30.5
BMW97	NA	25	20	20-35	15	46	14 - 25.
BMW84	NA	27	25.5	25.8-40.8	15	40.5	28.5 - 31, 32 - 35
BMW85	NA	21	37.5	30-45	15	44.5	34 - 36, 37.5 - 42.5
BMW94	NA	39	80	39-54	15	85	None Encountered
BMW95	NA	31	72	72.5-87.5	15	89	48-50.
BMW96	NA	31	20	22-32	10	33	None Encountered

All units are in feet

Table A.7.9-2 Lysimeter Information

Well ID	Lysimeter angle	Total Depth Drilled	Casing length	Screen Length	Bottom of Screen Depth	Sump Length	Bottom of Sump Depth
L1T	40°	28.0	12.5	10.0	22.5	5.0	27.5
L2A	40°	25.0	10.0	10.0	20.0	5.0	25.0
L2T	40°	25.0	10.0	10.0	20.0	5.0	25.0
L3A	40°	30.0	20.0	5.0	25.0	5.0	30.0
L3T	40°	27.0	15.5	5.0	20.5	5.0	25.5
L5A	40°	30.0	15.0	10.0	25.0	5.0	30.0
L5T	40°	29.0	14.0	10.0	24.0	5.0	29.0
L6A	40°	30.0	20.0	5.0	25.0	5.0	30.0
L6T	40°	30.0	20.0	5.0	25.0	5.0	30.0

All units are in feet

T - toward landfill

A - away from landfill

Table A.7.9-3 Well and Lysimeter Survey Information

Well ID	Lat (N) Degrees	Long (W) Degrees	Northing	Easting	Elevation (TOC)
BMW6R	39.4390765	-77.4505881	645810.6	1185069.47	380.48
BMW18R	39.4335038	-77.4596590	643817.02	1182509.82	389.63
BMW25R	39.4339334	-77.4570512	643952.15	1183236.45	369.56
BMW26R	39.4348967	-77.4572141	644300.55	1183200.08	370.75
BMW-81R	39.4400828	-77.4518286	646174.36	1184732.55	373.77
BMW82	39.4351875	-77.4614574	644412.89	1181997.84	402.66
BMW83	39.4355332	-77.4593120	644533.6	1182527.12	385.08
BMW84	39.4354128	-77.4574415	644488.12	1183127.41	367.96
BMW85	39.4351204	-77.4574535	644371.62	1183119.24	371.43
BMW86	39.4341592	-77.4567411	644030.66	1183324.1	369.21
BMW87	39.4334598	-77.4564672	643780.11	1183397.08	366.54
BMW88	39.4322587	-77.4585737	643345.79	1182785.04	388.16
BMW89	39.4320145	-77.4553369	643242.58	1183712.37	370.75
BMW90	39.4377283	-77.4563522	645329.75	1183422.36	379.27
BMW91	39.4390147	-77.4563699	645800.75	1183441.14	394.32
BMW92	39.4412694	-77.4526041	646636.23	1184506.58	364.73
BMW93	39.4393976	-77.4524120	645947.8	1184562.49	396.14
BMW94	39.4382345	-77.4538822	645519.13	1184148.75	386.75
BMW95	39.4381640	-77.4500990	645487.897	1185205.635	NA
BMW96	39.4383610	-77.4500950	645559.648	1185207.119	NA
BMW97	39.4371785	-77.4471351	645111.07	1186044.15	354.13
L1T	39.4396817	-77.4512147	646042.69	1184896.95	371.75
L2T	39.4383588	-77.4549574	645549.39	1183835.44	380.62
L2A	39.4383388	-77.4550023	645558.15	1183819.43	380.98
L3T	39.4376527	-77.4502290	645323.81	1185156.21	384.19
L3A	39.4376480	-77.4502404	645307.15	1185128.71	385.77
L5T	39.4342193	-77.4607627	644073.2	1182190.85	393.32
L5A	39.4346406	-77.4584580	644248.69	1182823.59	371.59
L6T	39.4319068	-77.4555451	643207.64	1183654.91	366.48
L6A	39.4319159	-77.4554560	643200.51	1183691.35	364.97

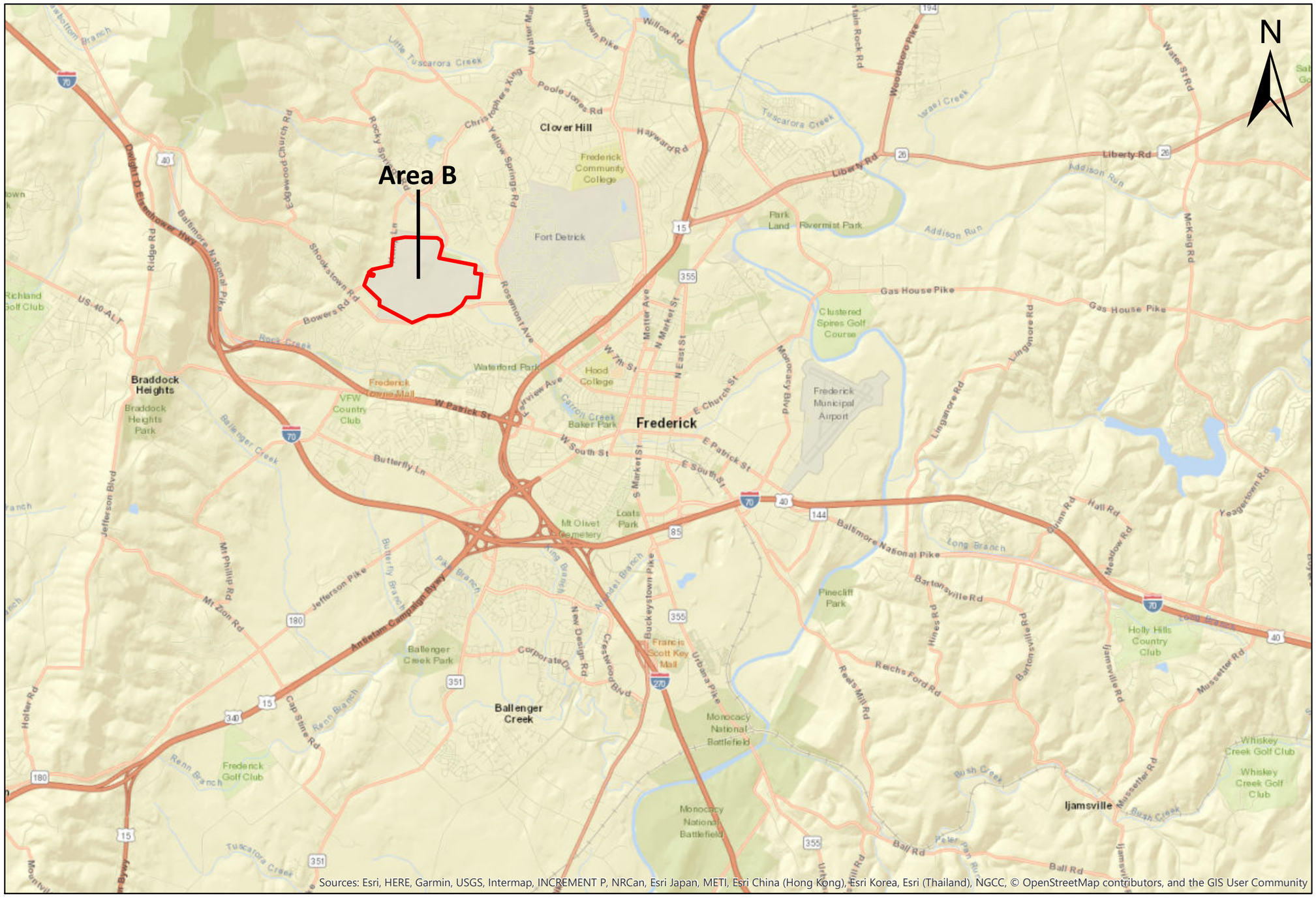
All units are in US Survey Feet

Elevation at top of casing (TOC)

NA - Wells were installed after survey was completed

Datum used: NAD83, Maryland State Plane, Zone 1900

Attachment 7.9
FIGURES



Legend

Area B Boundary

0 2,000 4,000 8,000 Feet

US Army Corps of Engineers
BUILDING STRONG®

Fort Detrick
Frederick, Maryland

Landfill Monitoring Network Expansion & Replacemnt Wells

Figure A.7.9-1

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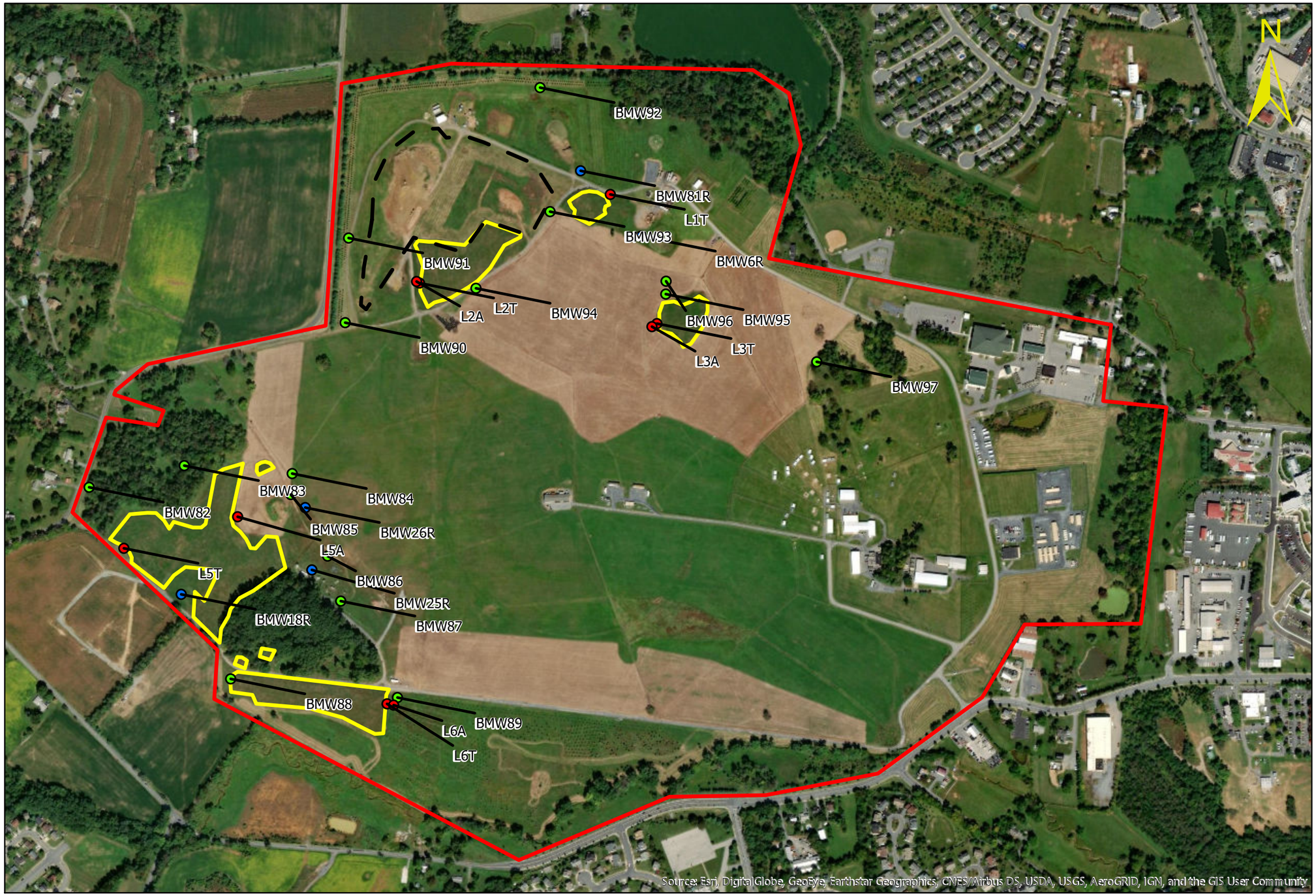

Legend

- Active Landfill
- Former Disposal_Area
- Area B Boundary

Type

- Expansion Well
- Lysimeter Well
- Replacement Well

Feet
0 250 500 1,000

US Army Corps of Engineers
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Frederick, Maryland

Landfill Monitoring Network Expansion & Replacemnt Wells

Figure A.7.9-2

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Legend

- Active Landfill
- Former Disposal_Area
- Area B Boundary

US Army Corps of Engineers
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Landfill Monitoring Network Expansion & Replacemnt Wells

Figure A.7.9-3

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Attachment 7.9
APPENDIX A

Monitoring Well Boring Logs
Monitoring Well As-Builds
Monitoring Well Development Record

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 2 SHEETS

1. PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation
2. BORING LOCATION (Coordinates or Station): N 643,817.02 E 1,182,509.82
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Steve Simmons
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN: 38.4 ft
8. DEPTH DRILLED INTO ROCK: 36.6 ft
9. TOTAL DEPTH OF HOLE: 75.0 ft
10. SIZE AND TYPE OF BIT: 6" Tricoone and 5.75" Hammer
11a. VERTICAL DATUM
11b. HORIZONTAL DATUM
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-550
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER: 37.4 ft
16. DATE/TIME: STARTED 10/10/17 0000 COMPLETED 10/10/17 0000
17. ELEVATION TOP OF HOLE: 389.6 ft
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR

▽ 57.5ft
▼ 43.0ft
▼ 37.4ft

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
389.6	0.0		SANDY CLAY (CL), fine to coarse; tannish brown, very moist.								
385.6	4.0		Dry.								
382.6	7.0		Moist.								
366.6	23.0		LEAN CLAY (CL), fine to medium; tannish brown, dry, trace sand.								
364.6	25.0		SANDY CLAY (CL), fine to coarse; tannish brown, moist.								
363.1	26.5		LEAN CLAY (CL), fine to medium; tannish brown, dry, trace sand.								
351.2	38.4		At 38' Drill bit changed out to 5.75" Hammer								
			LIMESTONE, light tan, dry, Moderately weathered.								
336.6	53.0		Moist.								
332.1	57.5										
330.3	59.3		MUD FILLED VOID, wet. Water and clay filled void ROCK DEBRIS.								
316.1	73.5										
314.6	75.0		LIMESTONE, light tan, wet, Highly								

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG (Cont. Sheet) | ELEVATION TOP OF HOLE 389.6 ft | **Hole No. BMW18R**

PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation | INSTALLATION: Fort Drum | SHEET 2 OF 2 SHEETS

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
			weathered.								
			BOTTOM OF HOLE								
			Notes:								
			Soils are field visually classified by air cuttings in accordance with the Unified Soils Classification System.								

NAB 1836 LETTER_AREA B SOIL LOGS.GPJ_ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 1 SHEETS

1. PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation
2. BORING LOCATION (Coordinates or Station): N 643,952.15 E 1,183,236.45
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Steve Simmons
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN: 47.0 ft
8. DEPTH DRILLED INTO ROCK: 19.0 ft
9. TOTAL DEPTH OF HOLE: 66.0 ft
10. SIZE AND TYPE OF BIT: 6" Tricoone and 5.75" Hammer
11a. VERTICAL DATUM
11b. HORIZONTAL DATUM
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-550
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER: ▽ 45.0ft ▼ 27.1ft
16. DATE/ TIME: STARTED 10/3/17 0000 COMPLETED 10/4/17 0000
17. ELEVATION TOP OF HOLE
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
	0.0		SANDY CLAY (CL), fine to medium; yellowish brown, dry.								
	5.0										
	8.0		Slightly moist.								
	14.0										
	15.0		Very moist. Perched water. LEAN CLAY (CL), fine to medium; yellowish brown, trace sand.	▼							
	35.0		Very soft.								
	41.0		LIMESTONE BOULDER, tan, Highly weathered.								
	43.0		LEAN CLAY (CL), fine to medium; reddish brown, very moist, trace sand.	▽							
	45.0		Very soft.								
	47.0		Wet.								
	50.0		LIMESTONE, highly weathered, wet. At 47' Drill bit changed out to 5.75" Hammer Moderately weathered.								
	57.0		Slightly weathered.								
	66.0		BOTTOM OF HOLE								

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

NAB FORM 1836 NOV 06

▽ ATD ▼ CC ▼ AD ___ HRS

Notes:

PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring W

HOLE NO. BMW25R

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 1 SHEETS

1. PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation
2. BORING LOCATION (Coordinates or Station): N 644,300.55 E 1,183,200.08
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Steve Simmons
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN: 25.0 ft
8. DEPTH DRILLED INTO ROCK: 27.0 ft
9. TOTAL DEPTH OF HOLE: 52.0 ft
10. SIZE AND TYPE OF BIT: 6" Tricoone and 5.75" Hammer
11a. VERTICAL DATUM
11b. HORIZONTAL DATUM
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-550
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER: 24.8 ft
16. DATE/TIME: STARTED 9/18/17 0000 COMPLETED 9/28/17 0000
17. ELEVATION TOP OF HOLE: 370.8 ft
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR

▽ 25.3ft
▼ 29.2ft
▼ 24.8ft

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
370.8	0.0		LEAN CLAY WITH SAND (CL), fine to coarse; reddish yellow, moist.								
363.8	7.0										
362.8	8.0		Dry. Moist.								
347.8	23.0										
345.8	25.0		LIMESTONE WITH CLAY FILLED FRACTURES, reddish yellow and light tan, very moist.								
344.8	26.0		Wet. LIMESTONE, highly weathered, dry. At 26' Drill bit changed out to 5.75" Hammer								
338.8	32.0		Moderately weathered, Highly Fractured.								
336.8	34.0		WATER AND CLAY FILLED VOID.								
331.8	39.0										
331.3	39.5		LIMESTONE, highly weathered, wet, Soft. Moderately weathered.								
327.8	43.0		Highly weathered, Highly fractured, clay mud filled.								
321.8	49.0		Slightly weathered.								
318.8	52.0										

BOTTOM OF HOLE ▽ ATD ▼ CC ▼ AD ___ HRS

Notes:

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 1 SHEETS

1. PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation
2. BORING LOCATION (Coordinates or Station): N 645,810.6 E 1,185,069.47
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Steve Simmons
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN: 32.0 ft
8. DEPTH DRILLED INTO ROCK: 59.0 ft
9. TOTAL DEPTH OF HOLE: 91.0 ft
10. SIZE AND TYPE OF BIT: 6" Tricoone and 5.75" Hammer
11a. VERTICAL DATUM
11b. HORIZONTAL DATUM
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-550
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER
16. DATE/TIME: STARTED 10/12/17 0000 COMPLETED 10/13/17 0000
17. ELEVATION TOP OF HOLE
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
	0.0		SANDY LEAN CLAY (CL), fine to coarse; reddish brown, moist.								
	20.0		Very moist.								
	28.0		CLAYEY GRAVEL WITH SAND (GC), fine to coarse; reddish brown, moist, trace silt.								
	32.0		LIMESTONE, highly weathered, damp. At 32' Drill bit changed out to 5.75" Hammer								
	34.8		AIR FILLED VOID.								
	39.5		Moderately weathered, dry.								
	46.0										
	47.0		Clay and silt filled void. LIMESTONE, dry.								
	53.0										
	54.0		Highly weathered. Moderately weathered.								
	57.0		Highly weathered.								
	59.0		Moderately weathered.								
	60.0		Slightly weathered. Moderately weathered.								
	62.0										
	69.0		Slightly weathered.								
	75.0		Wet.								
	77.5										
	79.0		Water, clay and silt filled void. Water filled void								
	82.0		LIMESTONE, highly weathered, wet. Moderately weathered.								
	91.0										

BOTTOM OF HOLE

▽ ATD ▽ CC ▼ AD ___ HRS

Notes:

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 2 SHEETS

1. PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation

2. BORING LOCATION (Coordinates or Station): N 644,412.89 E 1,181,997.84

3. DRILLING AGENCY: USACE, Baltimore District

4. NAME OF DRILLER: Steve Simmons

5. NAME OF INSPECTOR: Ashley Woods

6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.

7. THICKNESS OF OVERBURDEN: 47.0 ft

8. DEPTH DRILLED INTO ROCK: 28.0 ft

9. TOTAL DEPTH OF HOLE: 75.0 ft

10. SIZE AND TYPE OF BIT: 6" Tricoone and 5.75" Hammer

11a. VERTICAL DATUM

11b. HORIZONTAL DATUM

12. MANUFACTURER'S DESIGNATION OF DRILL: CME-550

13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0

14. TOTAL # OF CORE BOXES: 0

15. ELEVATION GROUND WATER: 33.8 ft

16. DATE/TIME: STARTED 1/18/17 0000 COMPLETED 2/12/18 0000

17. ELEVATION TOP OF HOLE: 402.7 ft

18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A

19. SIGNATURE OF INSPECTOR

▽ 65.0ft

▼ 33.8ft

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)		SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
402.7	0.0		SANDY LEAN CLAY (CL), fine to medium; reddish brown, moist, trace gravel.									
369.7	33.0		Very moist. Low down pressure required to drill 33.0'-47.0'	▼								

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG (Cont. Sheet) | ELEVATION TOP OF HOLE 402.7 ft | **Hole No. BMW82**

PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation | INSTALLATION: Fort Detrick | SHEET 2 OF 2 SHEETS

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
355.7	47.0										
354.7	48.0										
353.7	49.0										
352.7	50.0		LIMESTONE, highly weathered, dry.								
			Completely weathered.								
348.7	54.0										
			Moderately weathered.								
			At 55' Drill bit changed out to 5.75" Hammer								
343.7	59.0										
			Void.								
337.7	65.0										
			LIMESTONE, highly weathered, wet.								
336.2	66.5										
			Void, yellowish tan mud filled.								
328.2	74.5										
327.7	75.0		LIMESTONE, highly weathered, wet.								
			BOTTOM OF HOLE								

Notes:

0' to 55' was drilled with a mud mix opf 300 gallons non potable water, 1 bag quick gel, 4 lbs EZ Mud Gold and 4 lbs penetrol.
On 2/6/18 Boring was reamed out and cleaned using tricone bit and polymer.
Soils are field visually classified by air cuttings in accordance with the Unified Soils Classification System.

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

Hole No. BMW83

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 2 SHEETS

1. PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation
2. BORING LOCATION (Coordinates or Station): N 644,533.6 E 1,182,527.12
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Steve Simmons
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN: 10.0 ft
8. DEPTH DRILLED INTO ROCK: 70.0 ft
9. TOTAL DEPTH OF HOLE: 80.0 ft
10. SIZE AND TYPE OF BIT: 6" Tricoone and 5.75" Hammer
11a. VERTICAL DATUM
11b. HORIZONTAL DATUM
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-550
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER: 38.8 ft
16. DATE/TIME: STARTED 1/9/18 0000 COMPLETED 1/10/18 0000
17. ELEVATION TOP OF HOLE
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR

▽ 65.0ft
▼ 38.8ft

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
	0.0		CLAYEY SAND (SC), fine to coarse; reddish yellow, dry, with silt, and gravel.								
	10.0		LIMESTONE, highly weathered, very close fracture spacing, dry, highly fractured, possible fall in zone.								
	15.0										
	16.5		At 16.5' tricone drill bit changed out to 5.75" Hammer								
	18.0		Close fracture spacing.								
	22.0		Moderately weathered.								
	24.0		Fracture zone 24-25'.								
	25.0		Highly weathered.								
	28.0										
	30.0										
	30.5		Air filled void.								
			LIMESTONE, highly weathered, very close fracture spacing, dry.								
	34.0		Small voids, fracture zone.								

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG (Cont. Sheet) | ELEVATION TOP OF HOLE | **Hole No. BMW83**

PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation | INSTALLATION: Fort Detrick | SHEET 2 OF 2 SHEETS

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
	41.5										
			Moderately weathered, medium fracture spacing.								
	43.0		Highly weathered, very close fracture spacing.								
	48.0										
			Moderately weathered, medium fracture spacing.								
	49.5		Highly weathered.								
	53.0		Very close fracture spacing.								
	56.0										
			Moderately weathered, medium fracture spacing.								
	63.0		Less dust in air return, very moist								
	65.0			▽							
			Completely weathered, very close fracture spacing, wet, Soft, fractured limestone.								
	71.0										
	72.0		Highly weathered. Many fractures.								
	78.5										
			Moderately weathered, close fracture spacing.								
	80.0		BOTTOM OF HOLE								

Notes:

Soils are field visually classified by air cuttings in accordance with the Unified Soils Classification System.

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 2 SHEETS

1. PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation
2. BORING LOCATION (Coordinates or Station): N 644,488.12 E 1,183,127.41
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Steve Simmons
5. NAME OF INSPECTOR: David King
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN: 27.0 ft
8. DEPTH DRILLED INTO ROCK: 13.5 ft
9. TOTAL DEPTH OF HOLE: 40.5 ft
10. SIZE AND TYPE OF BIT: 6" Tricoone and 5.75" Hammer
11a. VERTICAL DATUM
11b. HORIZONTAL DATUM
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-550
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER: ▽ 25.4ft ▼ 26.4ft
16. DATE/ TIME: STARTED 10/20/17 0000 COMPLETED 10/20/17 0000
17. ELEVATION TOP OF HOLE: 368.0 ft
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
368.0	0.0		SANDY LEAN CLAY (CL), brown.								
358.0	10.0		Reddish brown, moist.								
342.6	25.4		Wet. ▽ ▼								
341.0	27.0		LIMESTONE, highly weathered, wet.								
339.5	28.5		Water, clay and silt filled void.								
337.0	31.0		LIMESTONE, highly weathered, wet.								
336.0	32.0		Water, clay and silt filled void.								
333.0	35.0		LIMESTONE, highly weathered, wet.								

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG (Cont. Sheet) | ELEVATION TOP OF HOLE 368.0 ft | **Hole No. BMW84**

PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation | INSTALLATION: Former Detrital | SHEET 2 OF 2 SHEETS

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
327.5	40.5		BOTTOM OF HOLE								

Notes:

Soils are field visually classified by air cuttings in accordance with the Unified Soils Classification System.

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

Hole No. BMW85

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 2 SHEETS

1. PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation
2. BORING LOCATION (Coordinates or Station): N 644,371.62 E 1,183,119.24
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Steve Simmons
5. NAME OF INSPECTOR: David King
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN: 21.0 ft
8. DEPTH DRILLED INTO ROCK: 23.5 ft
9. TOTAL DEPTH OF HOLE: 44.5 ft
10. SIZE AND TYPE OF BIT: 6" Tricoone and 5.75" Hammer
11a. VERTICAL DATUM
11b. HORIZONTAL DATUM
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-550
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0; UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER: 25.5 ft
16. DATE/TIME: STARTED 10/18/17 0000; COMPLETED 10/18/17 0000
17. ELEVATION TOP OF HOLE: 371.4 ft
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR

▽ 37.5ft
▼ 29.9ft
▼ 25.5ft

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
371.4	0.0		CLAYEY SAND (SC), fine to medium; brown, dry.								
361.4	10.0		SANDY LEAN CLAY (CL), fine to medium; reddish brown, moist.								
357.4	14.0		LEAN CLAY (CL), fine to medium; light brown, moist, trace sand.								
355.4	16.0		Dark red.								
350.4	21.0		LIMESTONE, highly weathered, dry. At 21' Drill bit changed out to 5.75" Hammer								
340.4	31.0		Moderately weathered.								
337.4	34.0		Silt and clay filled void.								
335.4	36.0		LIMESTONE, highly weathered, wet.								
333.9	37.5		Water and clay filled void.								

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG (Cont. Sheet) | ELEVATION TOP OF HOLE 371.4 ft | **Hole No. BMW85**

PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation | INSTALLATION: FWD Installation | SHEET 2 OF 2 SHEETS

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
328.9	42.5										
			LIMESTONE, moderately weathered, wet.								
326.9	44.5										
			BOTTOM OF HOLE								

Notes:

Soils are field visually classified by air cuttings in accordance with the Unified Soils Classification System.

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 2 SHEETS

1. PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation
2. BORING LOCATION (Coordinates or Station): N 644,030.66 E 1,183,324.1
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Steve Simmons
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN: 22.0 ft
8. DEPTH DRILLED INTO ROCK: 28.0 ft
9. TOTAL DEPTH OF HOLE: 50.0 ft
10. SIZE AND TYPE OF BIT: 6" Tricoone and 5.75" Hammer
11a. VERTICAL DATUM
11b. HORIZONTAL DATUM
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-550
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER: 23.4 ft
16. DATE/TIME: STARTED 11/15/17 0000 COMPLETED 11/15/17 0000
17. ELEVATION TOP OF HOLE: 369.2 ft
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR

▽ 36.0ft
▼ 28.0ft
▼ 23.4ft

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
369.2	0.0		CLAYEY GRAVEL (GC), yellowish brown.								
362.2	7.0										
361.2	8.0		POORLY GRADED SAND (SP), fine to medium; yellowish brown, dry, with clay, trace gravel. No gravel.								
358.2	11.0										
			CLAYEY SAND (SC), yellowish brown, dry.								
355.2	14.0										
			LEAN CLAY (CL), fine to medium; reddish brown, moist, with sand.								
347.2	22.0										
			LIMESTONE, completely weathered, dry.	▼							
344.7	24.5		Highly weathered. At 24.5' Drill bit changed out to 5.75" Hammer								
341.2	28.0		Wet, Fracture zone.	▼							
339.2	30.0		LIMESTONE, moderately weathered.								
334.2	35.0										
			Water filled void.	▽							
332.7	36.5										
332.2	37.0		LIMESTONE, highly weathered.								
331.2	38.0		Water filled void, lost air return.								
330.2	39.0		LIMESTONE, highly weathered. Moderately weathered.								

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

▽ ATD ▼ CO ▼ AD ___ HRS

PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring W

HOLE NO. BMW86

DRILLING LOG (Cont. Sheet)

ELEVATION TOP OF HOLE 369.2 ft

Hole No. BMW86

PROJECT Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation

INSTALLATION Fort Detrick

SHEET 2 OF 2 SHEETS

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
319.2	50.0		BOTTOM OF HOLE								

Notes:

Soils are field visually classified by air cuttings in accordance with the Unified Soils Classification System.

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 2 SHEETS

1. PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation
2. BORING LOCATION (Coordinates or Station): N 643,780.11 E 1,183,397.08
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Steve Simmons
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN: 22.0 ft
8. DEPTH DRILLED INTO ROCK: 25.5 ft
9. TOTAL DEPTH OF HOLE: 47.5 ft
10. SIZE AND TYPE OF BIT: 6" Tricoone and 5.75" Hammer
11a. VERTICAL DATUM
11b. HORIZONTAL DATUM
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-550
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER: ▽ 31.5ft ▼ 22.9ft
16. DATE/ TIME: STARTED 10/16/17 0000 COMPLETED 10/17/17 0000
17. ELEVATION TOP OF HOLE: 366.5 ft
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
366.5	0.0		CLAYEY SAND (SC), fine to medium; brown, dry.								
360.5	6.0		Fine to coarse; yellowish brown, with gravel.								
356.5	10.0		Moist, trace gravel.								
353.5	13.0		SANDY LEAN CLAY (CL), fine to coarse; light reddish yellow, moist, trace gravel.								
344.5	22.0		LIMESTONE, moderately weathered, dry. At 22' Drill bit changed out to 5.75" Hammer ▼								
337.0	29.5		Highly weathered.								
335.5	31.0		Wet, water, clay and silt filled void. Lost cuttings return ▽								
331.5	35.0		LIMESTONE, moderately weathered, wet.								
326.5	40.0										

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

▽ ATD ▼ CO ▼ AD ___ HRS

PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring W

HOLE NO. BMW87

DRILLING LOG (Cont. Sheet) | ELEVATION TOP OF HOLE 366.5 ft | **Hole No. BMW87**

PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation | INSTALLATION: Fort Detrick | SHEET 2 OF 2 SHEETS

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
			Water, clay and silt filled void.								
320.5	46.0										
			LIMESTONE, highly weathered, wet.								
319.0	47.5										
			BOTTOM OF HOLE								
			Notes:								
			Soils are field visually classified by air cuttings in accordance with the Unified Soils Classification System.								

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 2 SHEETS

1. PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation
2. BORING LOCATION (Coordinates or Station): N 643,345.79 E 1,182,758.04
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Steve Simmons
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN: 33.0 ft
8. DEPTH DRILLED INTO ROCK: 28.5 ft
9. TOTAL DEPTH OF HOLE: 61.5 ft
10. SIZE AND TYPE OF BIT: 6" Tricoone and 5.75" Hammer
11a. VERTICAL DATUM
11b. HORIZONTAL DATUM
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-550
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER: 36.0 ft
16. DATE/TIME: STARTED 10/25/17 0000 COMPLETED 10/25/17 0000
17. ELEVATION TOP OF HOLE: 388.2 ft
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR

▽ 42.0ft
▼ 41.5ft
▼ 36.0ft

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
388.2	0.0		CLAYEY SAND (SC), fine to coarse; yellowish tan, dry.								
383.2	5.0		With gravel.								
379.2	9.0		SILTY CLAYEY SAND (SC-SM), fine to coarse; reddish tan, dry, trace gravel.								
377.2	11.0		SILTY SAND WITH GRAVEL (SM), fine to coarse; yellowish tan, dry, trace clay.								
361.2	27.0		SANDY LEAN CLAY (CL), fine to medium; reddish brown, moist.								
355.2	33.0		LIMESTONE, highly weathered, damp, Clay filled fractures.								
352.2	36.0		Clay filled void, dry.								

▼ (water level)

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG (Cont. Sheet) | ELEVATION TOP OF HOLE 388.2 ft | **Hole No. BMW88**

PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation | INSTALLATION: Fort Detrick | SHEET 2 OF 2 SHEETS

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
346.2	42.0		Wet.								
343.7	44.5		LIMESTONE, highly weathered, wet, Soft. At 46' Drill bit changed out to 5.75" Hammer								
339.2	49.0		Water, clay and silt filled void.								
337.7	50.5		LIMESTONE, highly weathered, wet, Highly fractured.								
336.2	52.0		Water, clay and silt filled void.								
334.2	54.0		LIMESTONE, Highly fractured.								
326.7	61.5		BOTTOM OF HOLE <u>Notes:</u> Soils are field visually classified by air cuttings in accordance with the Unified Soils Classification System.								

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

NAB FORM 1836-A NOV 06 | ▽ ATD | ▼ CO | ▼ AD ___ HRS | PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring W | HOLE NO. BMW88

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 3 SHEETS

1. PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation

2. BORING LOCATION (Coordinates or Station): N 643,242.58 E 1,183,712.37

3. DRILLING AGENCY: USACE, Baltimore District

4. NAME OF DRILLER: Steve Simmons

5. NAME OF INSPECTOR: Alexander Soroka

6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.

7. THICKNESS OF OVERBURDEN: 32.0 ft

8. DEPTH DRILLED INTO ROCK: 60.0 ft

9. TOTAL DEPTH OF HOLE: 92.0 ft

10. SIZE AND TYPE OF BIT: 6" Tricoone and 5.75" Hammer

11a. VERTICAL DATUM

11b. HORIZONTAL DATUM

12. MANUFACTURER'S DESIGNATION OF DRILL: CME-550

13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0

14. TOTAL # OF CORE BOXES: 0

15. ELEVATION GROUND WATER: 23.4 ft

16. DATE/TIME: STARTED 12/19/17 0000 COMPLETED 12/20/17 0000

17. ELEVATION TOP OF HOLE: 370.8 ft

18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A

19. SIGNATURE OF INSPECTOR

▽ 78.0ft

▼ 23.4ft

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
370.8	0.0		POORLY GRADED SAND WITH CLAY (SP-SC), fine to coarse; orangish brown, trace gravel.								
355.8	15.0		LEAN TO FAT CLAY (CL), fine to medium; reddish brown, dry, trace sand.								
349.8	21.0										
348.8	22.0		Moist.								
347.8	23.0		LIMESTONE, highly weathered, dry.	▼							
344.8	26.0		Moderately weathered.								
340.8	30.0		Slightly weathered.								

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG (Cont. Sheet) | ELEVATION TOP OF HOLE 370.8 ft | **Hole No. BMW89**

PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation | INSTALLATION: Fort Detrick | SHEET 2 OF 3 SHEETS

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)		SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
292.8	78.0			▽								
291.8	79.0		Wet. With clay filled fractures.									
288.8	82.0		Moderately weathered, 82'-83' fracture zone.									

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG (Cont. Sheet)

ELEVATION TOP OF HOLE 370.8 ft

Hole No. BMW89

PROJECT Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation

INSTALLATION Former Detrital

SHEET 3 OF 3 SHEETS

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
278.8	92.0		BOTTOM OF HOLE								

Notes:

Soils are field visually classified by air cuttings in accordance with the Unified Soils Classification System.

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 2 SHEETS

1. PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation
2. BORING LOCATION (Coordinates or Station): N 645,329.75 E 1,183,422.36
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Steve Simmons
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN: 20.5 ft
8. DEPTH DRILLED INTO ROCK: 30.5 ft
9. TOTAL DEPTH OF HOLE: 51.0 ft
10. SIZE AND TYPE OF BIT: 6" Tricoone and 5.75" Hammer
11a. VERTICAL DATUM
11b. HORIZONTAL DATUM
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-550
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER: 30.4 ft
16. DATE/TIME: STARTED 11/14/17 0000 COMPLETED 11/15/17 0000
17. ELEVATION TOP OF HOLE: 379.3 ft
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR

▽ 37.7ft
▼ 35.6ft
▼ 30.4ft

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
379.3	0.0		CLAYEY SAND (SC), fine to coarse; brownish red, moist, trace gravel.								
374.3	5.0		CLAYEY GRAVEL WITH SAND (GC), subangular to rounded; fine to coarse; tan, moist.								
372.3	7.0		POORLY GRADED GRAVEL (GP), subangular to rounded; fine to coarse; tan, moist, with sand. Dry.								
370.3	9.0										
363.3	16.0		POORLY GRADED SAND (SP), fine to coarse; yellowish tan, dry, with gravel. Moist, trace clay.								
361.3	18.0										
358.8	20.5		LIMESTONE, highly weathered, dry.								
355.8	23.5		Clay filled void.								
348.3	31.0		LIMESTONE, moderately weathered, dry.								
343.8	35.5		Wet, Fracture zone, loss of air return. At 35.5' Drill bit changed out to 5.75" Hammer								
341.8	37.5		Highly weathered.								
341.3	38.0		Moderately weathered.								

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

▽ ATD ▼ CO ▼ AD ___ HRS

PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring W

HOLE NO. BMW90

DRILLING LOG (Cont. Sheet) | ELEVATION TOP OF HOLE 379.3 ft | **Hole No. BMW90**

PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation | INSTALLATION: Former Detrick | SHEET 2 OF 2 SHEETS

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
333.3	46.0										
332.3	47.0		Water and clay filled void.								
328.3	51.0		LIMESTONE, moderately weathered, wet.								
			BOTTOM OF HOLE Notes: Soils are field visually classified by air cuttings in accordance with the Unified Soils Classification System.								

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 2 SHEETS

1. PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation
2. BORING LOCATION (Coordinates or Station): N 645,800.75 E 1,183,441.14
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Steve Simmons
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN: 17.0 ft
8. DEPTH DRILLED INTO ROCK: 68.0 ft
9. TOTAL DEPTH OF HOLE: 85.0 ft
10. SIZE AND TYPE OF BIT: 6" Tricoone and 5.75" Hammer
11a. VERTICAL DATUM
11b. HORIZONTAL DATUM
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-550
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER: 49.1 ft
16. DATE/TIME: STARTED 11/27/17 0000 COMPLETED 11/28/17 0000
17. ELEVATION TOP OF HOLE: 394.3 ft
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR

▽ 68.0ft
▼ 51.6ft
▼ 49.1ft

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
394.3	0.0		SANDY LEAN CLAY (CL), fine to medium; brown, dry.								
383.3	11.0		Reddish brown, moist.								
381.3	13.0		POORLY GRADED SAND (SP), fine to coarse; reddish yellow, dry, with clay, with silt.								
379.8	14.5		SANDY LEAN CLAY (CL), fine to medium; reddish brown, dry.								
377.3	17.0		LIMESTONE, completely weathered, dry.								
364.3	30.0		Highly weathered.								

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG (Cont. Sheet) | ELEVATION TOP OF HOLE 394.3 ft | **Hole No. BMW91**

PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation | INSTALLATION: Fort Detrick | SHEET 2 OF 2 SHEETS

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
351.3	43.0										
			Clay and silt filled void, dry.								
344.3	50.0										
343.3	51.0		Moist.								
			Dry.								
339.3	55.0		Red.								
326.3	68.0		Wet.								
323.3	71.0		LIMESTONE, moderately weathered, wet.								
312.3	82.0		Highly weathered, with clay filled fractures.								
309.3	85.0		BOTTOM OF HOLE								

Notes:

Drilled air rotary to 82.5' and encountered fall in to 71'. The boring was tripped down with casing advancer to 85'.
Soils are field visually classified by air cuttings in accordance with the Unified Soils Classification System.

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 2 SHEETS

1. PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation
2. BORING LOCATION (Coordinates or Station): N 646,636.23 E 1,184,506.58
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Steve Simmons
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN: 33.0 ft
8. DEPTH DRILLED INTO ROCK: 22.0 ft
9. TOTAL DEPTH OF HOLE: 55.0 ft
10. SIZE AND TYPE OF BIT: 6" Tricoone and 5.75" Hammer
11a. VERTICAL DATUM
11b. HORIZONTAL DATUM
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-550
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER: 27.0 ft
16. DATE/TIME: STARTED 10/26/17 0000 COMPLETED 10/27/17 0000
17. ELEVATION TOP OF HOLE: 364.7 ft
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR

▽ 39.0ft
▼ 24.0ft
▼ 27.0ft

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
364.7	0.0		LEAN CLAY WITH SAND (CL), fine to coarse; wet.								
362.7	2.0		POORLY GRADED SAND WITH GRAVEL (SP), fine to coarse; light brown and white, dry, trace clay.								
357.7	7.0		SANDY LEAN CLAY (CL), fine to coarse; reddish brown, dry.								
350.7	14.0		CLAYEY SAND (SC), fine to coarse; yellowish brown and white, dry, with gravel.								
347.7	17.0		Trace gravel.								
343.7	21.0		LEAN CLAY (CL), fine to medium; reddish brown, very moist, trace sand.								
331.7	33.0		LIMESTONE, highly weathered, dry. At 34' Drill bit changed out to 5.75" Hammer Moderately weathered.								
329.7	35.0										
325.7	39.0										
325.2	39.5		Water, clay and silt filled void.								

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG (Cont. Sheet) | ELEVATION TOP OF HOLE 364.7 ft | **Hole No. BMW92**

PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation | INSTALLATION: Fort Detrick | SHEET 2 OF 2 SHEETS

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
323.7	41.0		LIMESTONE, highly weathered, highly fractured. Moderately weathered, wet.								
317.2	47.5		Water, clay and silt filled void. At 47.5', lost majority of cuttings and air return								
314.7	50.0		LIMESTONE, moderately weathered, wet.								
313.2	51.5		Highly weathered, highly fractured.								
311.7	53.0		Moderately weathered.								
309.7	55.0		BOTTOM OF HOLE Notes: Soils are field visually classified by air cuttings in accordance with the Unified Soils Classification System.								

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 2 SHEETS

1. PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation
2. BORING LOCATION (Coordinates or Station): N 645,947.8 E 1,184,562.49
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Steve Simmons
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN: 2.5 ft
8. DEPTH DRILLED INTO ROCK: 48.5 ft
9. TOTAL DEPTH OF HOLE: 51.0 ft
10. SIZE AND TYPE OF BIT: 6" Tricoone and 5.75" Hammer
11a. VERTICAL DATUM
11b. HORIZONTAL DATUM
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-550
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER: 16.3 ft
16. DATE/TIME: STARTED 12/12/17 0000 COMPLETED 12/12/17 0000
17. ELEVATION TOP OF HOLE: 396.1 ft
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR

▽ 33.8ft
▼ 16.3ft

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
396.1	0.0		CLAYEY SAND (SC), fine to coarse; reddish brown, moist, trace silt.								
393.6	2.5		LIMESTONE, highly weathered, dry.								
391.1	5.0		Moderately weathered.								
388.1	8.0		Highly weathered.								
383.1	13.0		Completely weathered.								
381.1	15.0		Silt and clay filled void, dry.								
379.1	17.0		LIMESTONE, moderately weathered, dry.								
371.1	25.0		Silt and clay filled void, dry.								
368.6	27.5		LIMESTONE, moderately weathered, dry.								
363.6	32.5		Damp, silt and clay filled void.								
362.1	34.0		LIMESTONE, moderately weathered, wet.								
358.1	38.0		Highly weathered.								
357.1	39.0		Moderately weathered, with fractures.								

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG (Cont. Sheet)

ELEVATION TOP OF HOLE: 396.1 ft

Hole No. BMW93

PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation

INSTALLATION: Fort Detrick

SHEET 2 OF 2 SHEETS

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
345.1	51.0		BOTTOM OF HOLE								

Notes:

Soils are field visually classified by air cuttings in accordance with the Unified Soils Classification System.

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 2 SHEETS

1. PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation
2. BORING LOCATION (Coordinates or Station): N 645,111.07 E 1,186,044.15
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Steve Simmons
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN: 25.0 ft
8. DEPTH DRILLED INTO ROCK: 21.0 ft
9. TOTAL DEPTH OF HOLE: 46.0 ft
10. SIZE AND TYPE OF BIT: 5.75" Hammer
11a. VERTICAL DATUM
11b. HORIZONTAL DATUM
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-550
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER: ▽ 20.0ft
16. DATE/TIME: STARTED 10/31/17 0000 COMPLETED 11/1/17 0000
17. ELEVATION TOP OF HOLE: 354.1 ft
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
354.1	0.0		SANDY TOP SOIL, fine to coarse; strong brown, dry, with silt.								
351.6	2.5		CONGLOMERATE, dry.								
346.6	7.5		LIMESTONE, moderately weathered, dry.								
342.1	12.0										
341.6	12.5		Highly weathered, Clay filled fracture zone. Moderately weathered.								
340.1	14.0		VOID. At 14' Lost air and cuttings return								
335.1	19.0		Clay mud. ▽								
329.1	25.0		LIMESTONE, highly weathered, damp, Clay filled fractures.								
325.1	29.0		Soft.								
323.1	31.0		Moderately weathered, wet. At 31' gained air and cuttings return								
315.1	39.0		Some fractures.								

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG (Cont. Sheet) | ELEVATION TOP OF HOLE 354.1 ft | **Hole No. BMW97**

PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation | INSTALLATION: Fort Detrick | SHEET 2 OF 2 SHEETS

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
308.1	46.0		BOTTOM OF HOLE								

Notes:

Soils are field visually classified by air cuttings in accordance with the Unified Soils Classification System.

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 2 SHEETS

1. PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation

2. BORING LOCATION (Coordinates or Station): N 646,174.36 E 1,184,732.55

3. DRILLING AGENCY: USACE, Baltimore District

4. NAME OF DRILLER: Steve Simmons

5. NAME OF INSPECTOR: Ashley Woods

6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.

7. THICKNESS OF OVERBURDEN: 24.0 ft

8. DEPTH DRILLED INTO ROCK: 28.0 ft

9. TOTAL DEPTH OF HOLE: 52.0 ft

10. SIZE AND TYPE OF BIT: 6" Tricoone and 5.75" Hammer

11a. VERTICAL DATUM

11b. HORIZONTAL DATUM

12. MANUFACTURER'S DESIGNATION OF DRILL: CME-550

13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0

14. TOTAL # OF CORE BOXES: 0

15. ELEVATION GROUND WATER: 36.2 ft

16. DATE/TIME STARTED: 10/11/17 0000 COMPLETED: 10/11/17 0000

▽ 39.0ft
▼ 38.2ft
▼ 36.2ft

17. ELEVATION TOP OF HOLE: 373.8 ft

18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A

19. SIGNATURE OF INSPECTOR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
373.8	0.0		SANDY LEAN CLAY (CL), fine to medium; reddish brown, moist.								
361.8	12.0		Very moist.								
357.8	16.0		Fine to coarse; moist, trace gravel.								
353.8	20.0		LIMESTONE BOULDERS. At 20' Drill bit changed out to 5.75" Hammer								
349.8	24.0		LIMESTONE, highly weathered, medium fracture spacing, dry.								
337.3	36.5		Silt and clay filled void, dry. At 36.5' lost air and cuttings return.								

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

▽ ATD ▼ CO ▼ AD ___ HRS

PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring W

HOLE NO. MW-81R

DRILLING LOG (Cont. Sheet) | ELEVATION TOP OF HOLE 373.8 ft | **Hole No. MW-81R**

PROJECT: Area B Well Replacement, Landfill Lysimeters, and Monitoring Well Installation | INSTALLATION: Former Detrick | SHEET 2 OF 2 SHEETS

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
332.8	41.0										
329.8	44.0		LIMESTONE, moderately weathered, dry.								
328.8	45.0		Water filled void.								
327.3	46.5		LIMESTONE, highly weathered, close fracture spacing, wet.								
326.8	47.0		Water, silt and clay filled void.								
322.8	51.0		LIMESTONE, highly weathered, close fracture spacing, wet.								
321.8	52.0		Water, silt and clay filled void.								
313.8	60.0		LIMESTONE, moderately weathered, wet.								
			BOTTOM OF HOLE								

Notes:

Soils are field visually classified by air cuttings in accordance with the Unified Soils Classification System.

NAB 1836 LETTER AREA B SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/22/18

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 2 SHEETS

1. PROJECT: Area B Well Replacement and Monitoring Well Installation
2. BORING LOCATION (Coordinates or Station): 39.4382345, -77.4538822
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Steve Simmons
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN: 39.0 ft
8. DEPTH DRILLED INTO ROCK: 46.0 ft
9. TOTAL DEPTH OF HOLE: 85.0 ft
10. SIZE AND TYPE OF BIT: 6" Tricone and 5.75" Hammer
11a. VERTICAL DATUM
11b. HORIZONTAL DATUM
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-550
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0; UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER: 36.7 ft
16. DATE/TIME: STARTED 12/13/17; COMPLETED 12/18/17
17. ELEVATION TOP OF HOLE
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR

▽ 80.0 ft
▼ 36.7 ft

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
	0.0		CLAYEY SAND (SC), fine to coarse; reddish brown, moist, trace gravel.								
	6.0		CLAYEY POORLY GRADED GRAVEL (GP-GC), fine to coarse; brown, moist, with sand.								
	10.0		POORLY GRADED GRAVEL WITH SAND (GP), fine to coarse; brownish tan, dry.								
	13.0		LEAN CLAY WITH SAND (CL), fine to medium; reddish brown, dry.								
	39.0										
	40.0		LIMESTONE, highly weathered, tan, dry. Moderately weathered.								
	47.0		Slightly weathered.								

PRELIMINARY
INSPECTOR'S LOG
CLASSIFICATION
NOT FINAL

NAB 1836 LETTER AREA B SOIL LOGS.GPJ USACE WITH RAPID CPT (01-07-2011).SBS (04-13-2011).GDT 3/26/18

DRILLING LOG (Cont. Sheet) | ELEVATION TOP OF HOLE | **Hole No. BMW94**

PROJECT | INSTALLATION | SHEET 2 OF 2 SHEETS

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
	54.0		Unweathered, hard limestone, slow progress. No air or cuttings return								
	68.0		Highly weathered.								
	79.0										
	80.0		Moderately weathered. Wet.								
	85.0		BOTTOM OF HOLE								

Notes:

Soils are field visually classified by air cuttings in accordance with the Unified Soils Classification System.

On 12/15 and 12/16 from 17' to 39' polymer was used. 300 Gal non potable water, 3lbs Easy Mud, 1.5 lbs penetrol.

PRELIMINARY
INSPECTOR'S LOG
CLASSIFICATION
NOT FINAL

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 2 SHEETS

1. PROJECT: Area B Well Replacement and Monitoring Well Installation
2. BORING LOCATION (Coordinates or Station): 39.438164, -77.450099
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Steve Simmons
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN: 31.0 ft
8. DEPTH DRILLED INTO ROCK: 58.0 ft
9. TOTAL DEPTH OF HOLE: 89.0 ft
10. SIZE AND TYPE OF BIT: 6" Tricone and 5.75" Hammer
11a. VERTICAL DATUM
11b. HORIZONTAL DATUM
12. MANUFACTURER'S DESIGNATION OF DRILL: GP-1300CXR-ATD
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0; UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER: 34.4 ft
16. DATE/TIME: STARTED 10/11/17 0000; COMPLETED 10/11/17 0000
17. ELEVATION TOP OF HOLE
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR

▽ 72.0 ft
▼ 26.5 ft
▼ 34.4 ft

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
	0.0		LEAN CLAY (CL), fine to medium; reddish brown, moist, trace sand.								
	15.0		Very moist.								
	31.0		LIMESTONE, highly weathered, damp.								
			Lost air return								
	40.0		Following vertical fracture.								
	45.0		Moderately weathered.								
			Void from 48' to 50'								
	50.0		LIMESTONE, moderately weathered.								

PRELIMINARY INSPECTOR'S LOG CLASSIFICATION NOT FINAL

NAB 1836 LETTER AREA B SOIL LOGS.GPJ USACE WITH RAPID CPT (01-07-2011).SBS (04-13-2011).GDT 5/31/18

DRILLING LOG (Cont. Sheet) | ELEVATION TOP OF HOLE | **Hole No. BMW95**

PROJECT | INSTALLATION | SHEET 2 OF 2 SHEETS

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)		SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
	58.0		Highly weathered, Possibly debris filled void.									
	67.0		Moderately weathered, wet.									
	71.0		Highly weathered, flowing.	▽								
	75.0		Moderately weathered, flowing.									
	89.0		BOTTOM OF HOLE									

Notes:

Soils are field visually classified by air cuttings in accordance with the Unified Soils Classification System.

PRELIMINARY
INSPECTOR'S LOG
CLASSIFICATION
NOT FINAL

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 1 SHEETS

1. PROJECT: Area B Well Replacement and Monitoring Well Installation
2. BORING LOCATION (Coordinates or Station): 39.438361, -77.450095
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Steve Simmons
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN:
8. DEPTH DRILLED INTO ROCK:
9. TOTAL DEPTH OF HOLE: 33.0 ft
10. SIZE AND TYPE OF BIT: 6" Tricone and 5.75" Hammer
11a. VERTICAL DATUM:
11b. HORIZONTAL DATUM:
12. MANUFACTURER'S DESIGNATION OF DRILL: GP-1300CXR-ATD
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0; UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER: 27.5 ft
16. DATE/TIME: STARTED 10/11/17 0000; COMPLETED 10/11/17 0000
17. ELEVATION TOP OF HOLE:
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR:

▽ 13.0 ft
▼ 27.1 ft
▼ 27.5 ft

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
	0.0		LEAN CLAY (CL), fine to medium; trace sand.								
	31.0		LIMESTONE, highly weathered, damp.								
	33.0		BOTTOM OF HOLE								

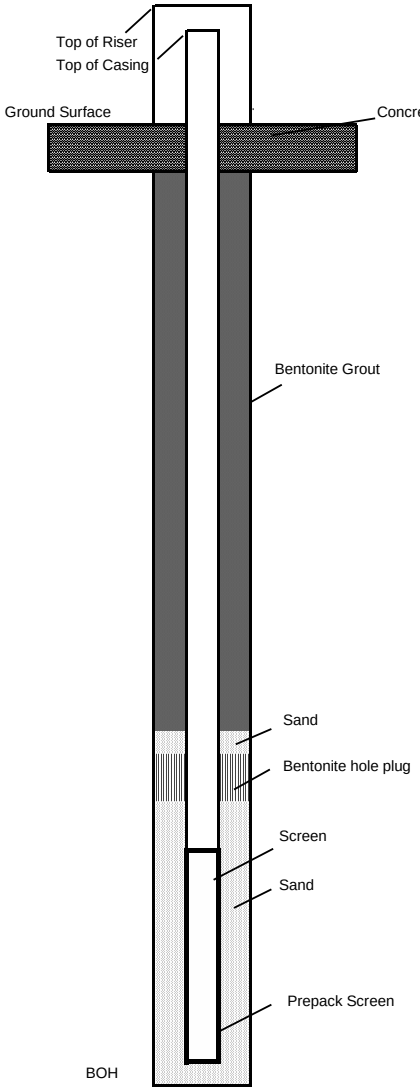
Notes:
Soils are field visually classified by air cuttings in accordance with the Unified Soils Classification System.

PRELIMINARY
INSPECTOR'S LOG
CLASSIFICATION
NOT FINAL

NAB 1836 LETTER AREA B SOIL LOGS.GPJ USACE WITH RAPID CPT (01-07-2011).SBS (04-13-2011).GDT 5/31/18

AS BUILT WELL CONSTRUCTION

HOLE NUMBER: BMW6R	**LOCATION: Fort Detrick, MD**		**DRILLER: Steve Simmons**
PROJECT NAME: Area B	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: 75'**
DATE WELL COMPLETED: 10/13/2017	**SURFACE:**		**DRILLING METHOD: Air Rotary**
DATE DEVELOPMENT COMPLETED: 10/31/2017	**TOP OF PVC CASING:**	**2.3'**	
INSPECTOR: Ashley Woods	**TOP OF OUTER CASING:**	**2.6'**	**DEVELOPMENT METHOD: Surge Block & Air Lift**



COORDINATES:	39.4390765 N
	-77.4505881 W
I.D.OF Flush Mount:	BMW6R
TYPE OF FLUSH MOUNT:	Monitorng Well
BOREHOLE DIAMETER:	5.75" Hammer
TOP OF RISER	2.6'
TOP OF CASING	2.3'
TYPE OF SEAL	Portland Cement
DEPTH TO TOP OF SEAL:	0.0'
WIDTH OF CASING	2" OD
TYPE OF CASING	Schedule 40 PVC
TYPE OF GROUT	Bentonite Grout
TOP OF GROUT	0.4'
BOTTOM OF GROUT	68.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	68.0'
BOTTOM OF SAND	69.2'
TYPE OF GROUT	Bentonite Hole Plug
TOP OF GROUT	69.2'
BOTTOM OF GROUT	72.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	72.0'
BOTTOM OF SAND	89.6'
TYPE OF SCREEN	2" slotted PVC
DEPTH TO TOP OF SCREEN:	74.6'
DEPTH TO BOTTOM OF SCREEN:	84.6'
TYPE OF SCREEN	2" PrePack slotted PVC
DEPTH TO TOP OF SCREEN:	84.6
DEPTH TO BOTTOM OF SCREEN:	89.6
DEPTH TO BOTTOM OF HOLE:	91.0'

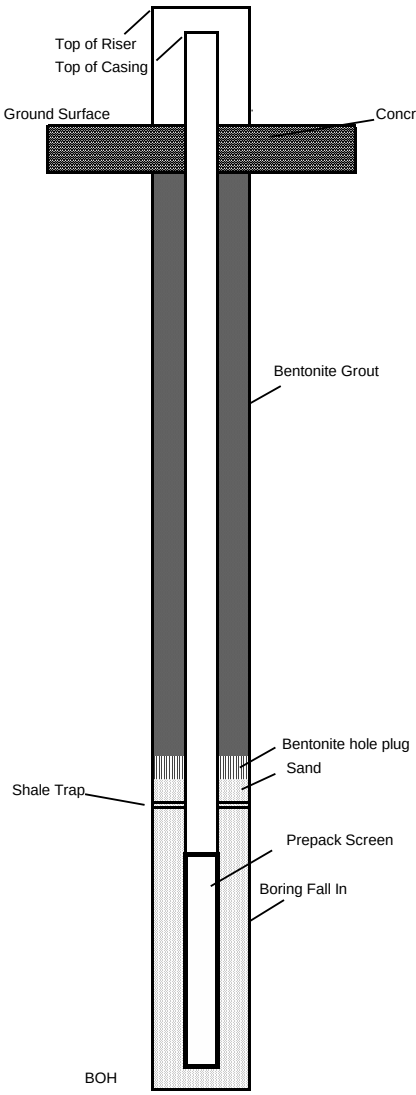
* Depth to groundwater measured relative to top of casing

USACE - Baltimore District

PROJECT: **Area B Well Replacement/Landfill Lysimeters/Monitoring Well Installation**	**HOLE NO.: BMW6R**

AS BUILT WELL CONSTRUCTION

HOLE NUMBER: BMW18R	**LOCATION: Fort Detrick, MD**		**DRILLER: Steve Simmons**
PROJECT NAME: Area B	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: 42.95**
DATE WELL COMPLETED: 10/10/2017	**SURFACE:**		**DRILLING METHOD: Air Rotary**
DATE DEVELOPMENT COMPLETED: 10/26/2017	**TOP OF PVC CASING:**	**2.3'**	
INSPECTOR: Ashley Woods	**TOP OF OUTER CASING:**	**2.6'**	**DEVELOPMENT METHOD: Surge Block & Air Lift**



COORDINATES:	39.4335038 N
	-77.459659 W
I.D.OF RISER:	BMW18R
TYPE OF RISER:	Monitoring Well
BOREHOLE DIAMETER:	5.75" Hammer
TOP OF RISER	2.6'
TOP OF CASING	2.3'
TYPE OF SEAL	Portland Cement
DEPTH TO TOP OF SEAL:	0.0'
WIDTH OF CASING	2" OD
TYPE OF CASING	Schedule 40 PVC
TYPE OF GROUT	Bentonite Grout
TOP OF GROUT	0.4'
BOTTOM OF GROUT	39.3'
TYPE OF GROUT	Bentonite Hole Plug
TOP OF GROUT	39.3'
BOTTOM OF GROUT	44.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	44.0'
BOTTOM OF SAND	45.0'
TYPE OF SHALE TRAP	4.25"
DEPTH OF SHALE TRAP	45.0'
TYPE OF SCREEN	2" PrePack slotted PVC
DEPTH TO TOP OF SCREEN:	54.1'
DEPTH TO BOTTOM OF SCREEN:	64.1'
DEPTH TO BOTTOM OF HOLE:	75.0'

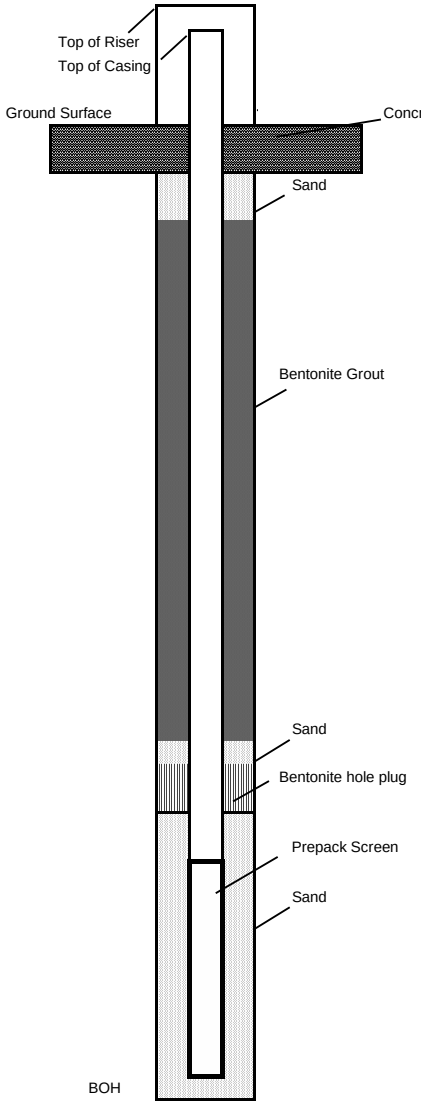
* Depth to groundwater measured relative to ground surface

USACE - Baltimore District

PROJECT: **Area B Well Replacement/Landfill Lysimeters/Monitoring Well Installation**	**HOLE NO.: BMW18**

AS BUILT WELL CONSTRUCTION

HOLE NUMBER: BMW25R	**LOCATION: Fort Detrick, MD**		**DRILLER: Steve Simmons**
PROJECT NAME: Area B	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: 45'**
DATE WELL COMPLETED: 10/03/2017	**SURFACE:**		**DRILLING METHOD: Air Rotary**
DATE DEVELOPMENT COMPLETED: 10/24/2017	**TOP OF PVC CASING:**	**2.3'**	
INSPECTOR: Ashley Woods	**TOP OF OUTER CASING:**	**2.6'**	**DEVELOPMENT METHOD: Surge Block & Air Lift**



COORDINATES:	39.4339334 N
	-77.4570512 W
I.D.OF RISER:	BMW25R
TYPE OF RISER:	Monitorng Well
BOREHOLE DIAMETER:	5.75" Hammer
TOP OF RISER	2.6'
TOP OF CASING	2.3'
TYPE OF SEAL	Portland Cement
DEPTH TO TOP OF SEAL:	0.0'
WIDTH OF CASING	2" OD
TYPE OF CASING	Schedule 40 PVC
TYPE OF GROUT	Bentonite Grout
TOP OF GROUT	0.4'
BOTTOM OF GROUT	40.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	39.0'
BOTTOM OF SAND	40.0'
TYPE OF GROUT	Hole Plug
TOP OF GROUT	40.0'
BOTTOM OF GROUT	44.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	44.0'
BOTTOM OF SAND	61.0'
TYPE OF SCREEN	2" PrePack slotted PVC
DEPTH TO TOP OF SCREEN:	46.0'
DEPTH TO BOTTOM OF SCREEN:	61.0'
DEPTH TO BOTTOM OF HOLE:	66.0'

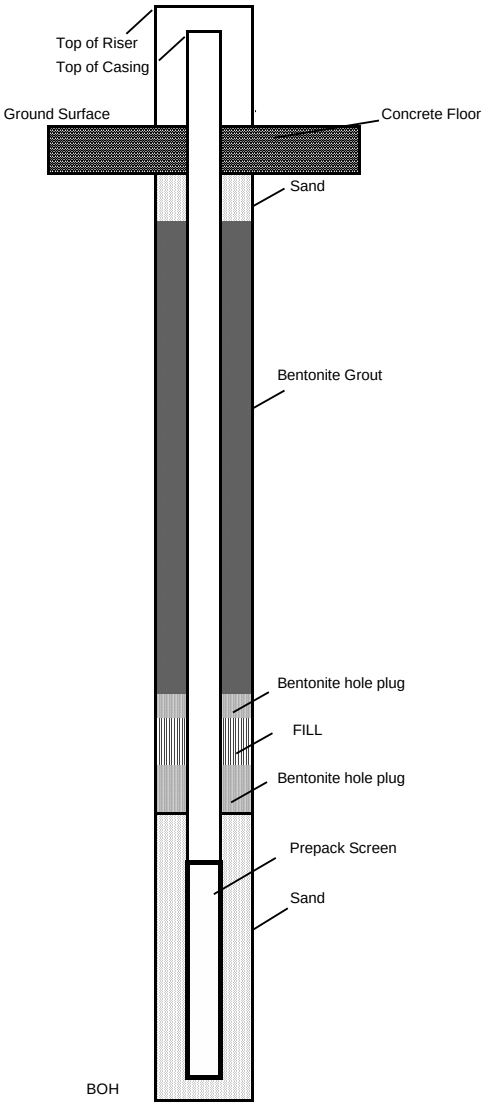
* Depth to groundwater measured relative to top of casing

USACE - Baltimore District

PROJECT: **Area B Well Replacement/Landfill Lysimeters/Monitoring Well Installation**	**HOLE NO.: BMW25R**

AS BUILT WELL CONSTRUCTION

HOLE NUMBER: BMW26R	**LOCATION: Fort Detrick, MD**		**DRILLER: Steve Simmons**
PROJECT NAME: Area B	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: 25.3'**
DATE WELL COMPLETED: 09/28/2017	**SURFACE:**		**DRILLING METHOD: Air Rotary**
DATE DEVELOPMENT COMPLETED:	**TOP OF PVC CASING:**	**2.3'**	
INSPECTOR: Ashley Woods	**TOP OF OUTER CASING:**	**2.6'**	**DEVELOPMENT METHOD: Surge Block & Air Lift**



COORDINATES:	39.4348967
	-77.4572141
I.D.OF RISER:	BMW26R
TYPE OF RISER:	Monitoring Well
BOREHOLE DIAMETER:	5.75" Hammer
TOP OF RISER	2.6'
TOP OF CASING	2.3'
TYPE OF SEAL	Portland Cement
DEPTH TO TOP OF SEAL:	0.0'
WIDTH OF CASING	2" OD
TYPE OF CASING	Schedule 40 PVC
TYPE OF GROUT	Bentonite Grout
TOP OF GROUT	0.4'
BOTTOM OF GROUT	20.2'
TYPE OF GROUT	Bentonite Hole Plug
TOP OF GROUT	20.2'
BOTTOM OF GROUT	20.0'
TYPE OF FILL	Clean Pea Gravel
TOP OF FILL	20.0'
BOTTOM OF FILL	27.0'
TYPE OF GROUT	Hole Plug
TOP OF GROUT	27.0'
BOTTOM OF GROUT	28.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	28.0'
BOTTOM OF SAND	45.2'
TYPE OF SCREEN	2" PrePack slotted PVC
DEPTH TO TOP OF SCREEN:	30.2'
DEPTH TO BOTTOM OF SCREEN:	45.2'
DEPTH TO BOTTOM OF HOLE:	52'

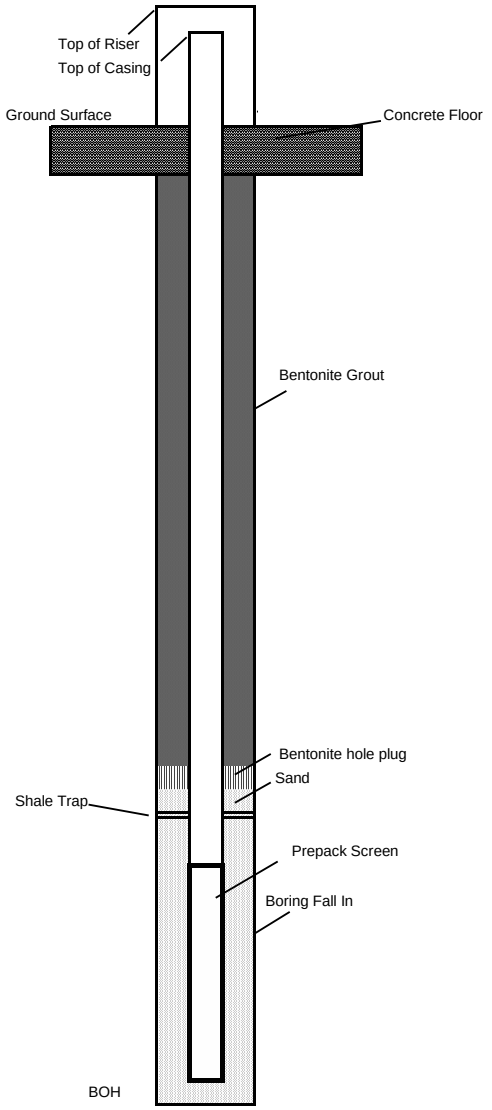
* Depth to groundwater measured relative to ground surface

USACE - Baltimore District

PROJECT: **Area B Well Replacement/Landfill Lysimeters/Monitoring Well Installation**	**HOLE NO.: BMW26R**

AS BUILT WELL CONSTRUCTION

HOLE NUMBER: MW-81R	**LOCATION: Fort Detrick, MD**		**DRILLER: Steve Simmons**
PROJECT NAME: Area B	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: 39'**
DATE WELL COMPLETED: 10/12/2017	**SURFACE:**		**DRILLING METHOD:**
DATE DEVELOPMENT COMPLETED:	**TOP OF PVC CASING:**	**2.3'**	**Air Rotary**
INSPECTOR: Ashley Woods	**TOP OF OUTER CASING:**	**2.6'**	**DEVELOPMENT METHOD: Surge Block & Air Lift**



COORDINATES:	39.4400828 N
	-77.4518286 W
I.D.OF RISER:	MW-81R
TYPE OF RISER:	Monitorng Well
BOREHOLE DIAMETER:	5.75" Hammer
TOP OF RISER	2.6'
TOP OF CASING	2.3'
TYPE OF SEAL	Portland Cement
DEPTH TO TOP OF SEAL:	0.0'
WIDTH OF CASING	2" OD
TYPE OF CASING	Schedule 40 PVC
TYPE OF GROUT	Bentonite Grout
TOP OF GROUT	0.4'
BOTTOM OF GROUT	26.0'
TYPE OF GROUT	Hole Plug
TOP OF GROUT	26.0'
BOTTOM OF GROUT	28.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	28.0'
BOTTOM OF SAND	30.0'
TYPE OF SHALE TRAP	4.25"
DEPTH OF SHALE TRAP	30.0'
TYPE OF SCREEN	2" PrePack slotted PVC
DEPTH TO TOP OF SCREEN:	40.5'
DEPTH TO BOTTOM OF SCREEN:	55.5'
DEPTH TO BOTTOM OF HOLE:	60.0'

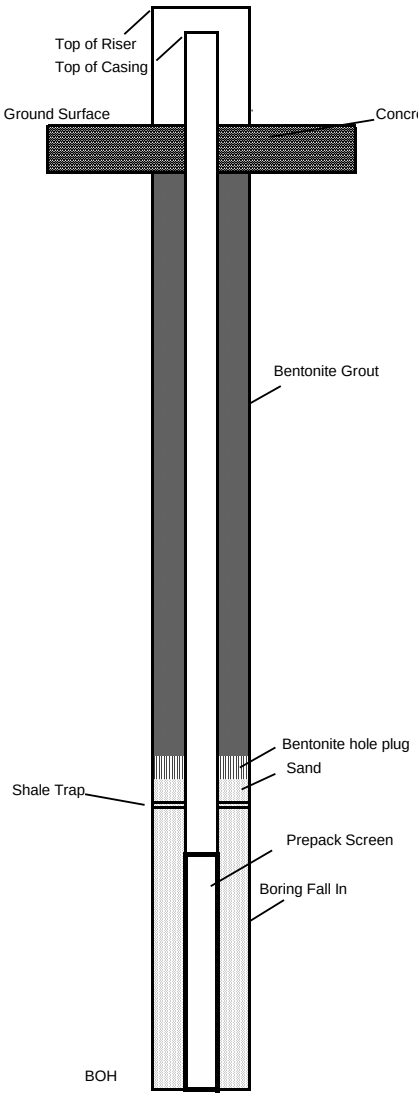
* Depth to groundwater measured relative to top of riser

USACE - Baltimore District

PROJECT: **Area B Well Replacement/Landfill Lysimeters/Monitoring Well Installation**	**HOLE NO.: MW-81R**

AS BUILT WELL CONSTRUCTION

HOLE NUMBER: BMW82	**LOCATION: Fort Detrick, MD**		**DRILLER: Steve Simmons**
PROJECT NAME: Area B	**ELEVATIONS (FT MSL)**	**402.66'**	**DEPTH TO GW (FT)*: 42.95**
DATE WELL COMPLETED:2/12/2018	**SURFACE:**		**DRILLING METHOD: Air Rotary**
DATE DEVELOPMENT COMPLETED: 2/28/2018	**TOP OF PVC CASING:**	**2.3'**	
INSPECTOR: Ashley Woods	**TOP OF OUTER CASING:**	**2.6'**	**DEVELOPMENT METHOD: Surge Block & Air Lift**



COORDINATES:	39.4351875 N
	-77.4614574 W
I.D.OF RISER:	BMW82
TYPE OF RISER:	Monitoring Well
BOREHOLE DIAMETER:	5.75" Hammer
TOP OF RISER	2.6'
TOP OF CASING	2.3'
TYPE OF SEAL	Portland Cement
DEPTH TO TOP OF SEAL:	0.0'
WIDTH OF CASING	2" OD
TYPE OF CASING	Schedule 40 PVC
TYPE OF GROUT	Bentonite Grout
TOP OF GROUT	0.4'
BOTTOM OF GROUT	56
TYPE OF GROUT	Bentonite Hole Plug
TOP OF GROUT	56.0'
BOTTOM OF GROUT	58.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	58.0'
BOTTOM OF SAND	60.0'
TYPE OF SCREEN	2" PrePack slotted PVC
DEPTH TO TOP OF SCREEN:	60.0'
DEPTH TO BOTTOM OF SCREEN:	75.0'
DEPTH TO BOTTOM OF HOLE:	75.0'

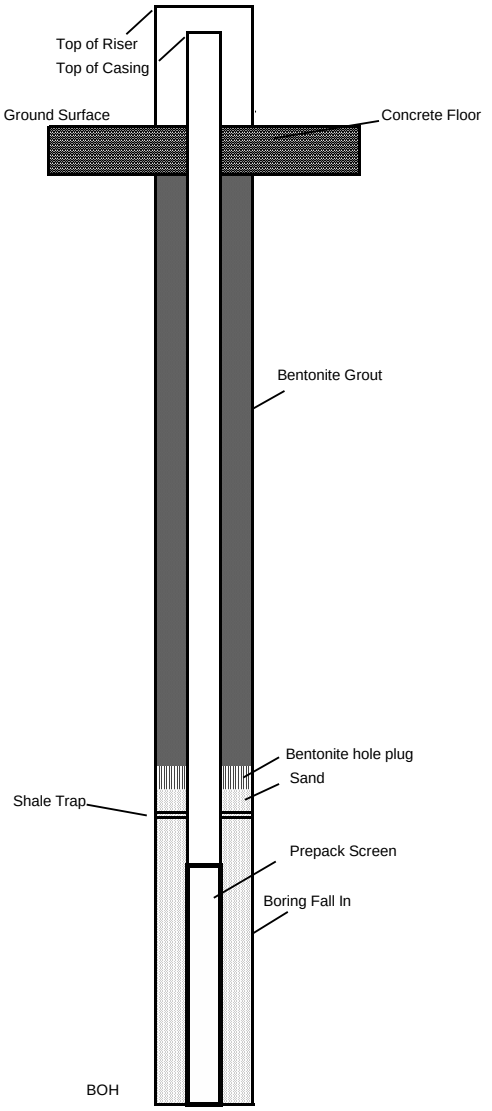
* Depth to groundwater measured relative to ground surface

USACE - Baltimore District

PROJECT: **Area B Well Replacement/Landfill Lysimeters/Monitoring Well Installation**	**HOLE NO.: BMW82**

AS BUILT WELL CONSTRUCTION

HOLE NUMBER: BMW83	**LOCATION: Fort Detrick, MD**		**DRILLER: Steve Simmons**
PROJECT NAME: Area B	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: 20'**
DATE WELL COMPLETED: 01/10/18	**SURFACE:**		**DRILLING METHOD:**
DATE DEVELOPMENT COMPLETED:	**TOP OF PVC CASING:**	**2.3'**	**Air Rotary**
INSPECTOR: Ashley Woods	**TOP OF OUTER CASING:**	**2.6'**	**DEVELOPMENT METHOD: Surge Block & Air Lift**



COORDINATES:	39.4355332 N
	-77.459312 W
I.D.OF RISER:	BMW83
TYPE OF RISER:	Monitoring Well
BOREHOLE DIAMETER:	5.75" Hammer
TOP OF RISER	2.6'
TOP OF CASING	2.3'
TYPE OF SEAL	Portland Cement
DEPTH TO TOP OF SEAL:	0.0'
WIDTH OF CASING	2" OD
TYPE OF CASING	Schedule 40 PVC
TYPE OF GROUT	Bentonite Grout
TOP OF GROUT	0.4'
BOTTOM OF GROUT	58.5'
TYPE OF GROUT	Bentonite Hole Plug
TOP OF GROUT	58.5'
BOTTOM OF GROUT	61.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	61.0'
BOTTOM OF SAND	64.0'
TYPE OF SHALE TRAP	4.25"
DEPTH OF SHALE TRAP	64.0'
TYPE OF SCREEN	2" PrePack slotted PVC
DEPTH TO TOP OF SCREEN:	65.0'
DEPTH TO BOTTOM OF SCREEN:	80'
DEPTH TO BOTTOM OF HOLE:	80.0'

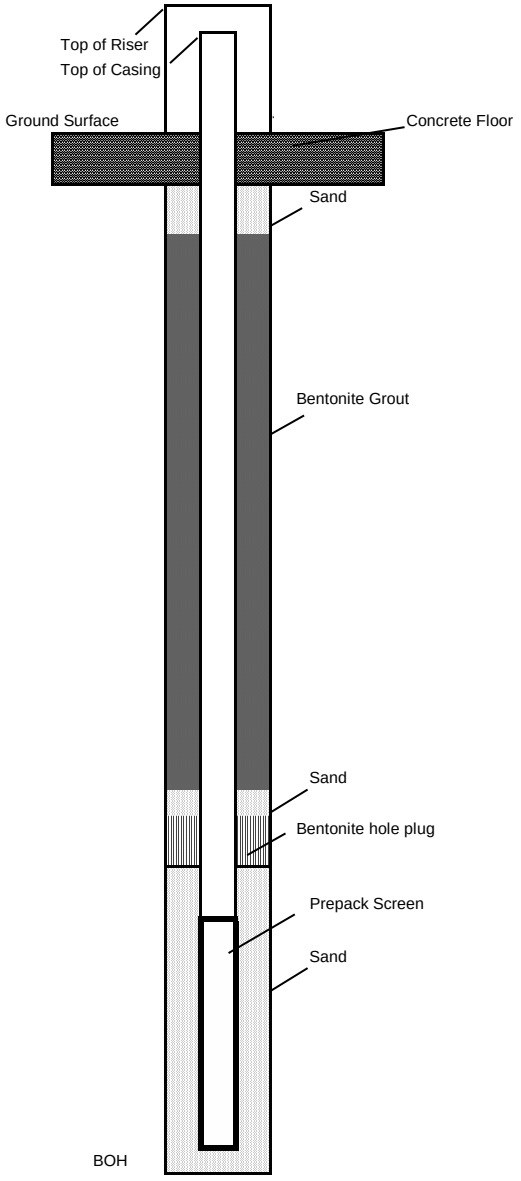
* Depth to groundwater measured relative to ground surface

USACE - Baltimore District

PROJECT: **Area B Well Replacement/Landfill Lysimeters/Monitoring Well Installation**	**HOLE NO.: BMW83**

AS BUILT WELL CONSTRUCTION

HOLE NUMBER: BMW84	**LOCATION: Fort Detrick, MD**		**DRILLER: Steve Simmons**
PROJECT NAME: Area B	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: 25.4'**
DATE WELL COMPLETED: 10/20/2017	**SURFACE:**		**DRILLING METHOD: Air Rotary**
DATE DEVELOPMENT COMPLETED: 11/21/2017	**TOP OF PVC CASING:**	**2.3'**	
INSPECTOR: David King	**TOP OF OUTER CASING:**	**2.6'**	**DEVELOPMENT METHOD: Surge Bloc & Air Lift**



COORDINATES:	39.4354128 N
	-77.4574415 W
I.D.OF RISER:	BMW84
TYPE OF RISER:	Monitorng Well
BOREHOLE DIAMETER:	5.75" Hammer
TOP OF RISER	2.6'
TOP OF CASING	2.3'
TYPE OF SEAL	Portland Cement
DEPTH TO TOP OF SEAL:	0.0'
WIDTH OF CASING	2" OD
TYPE OF CASING	Schedule 40 PVC
TYPE OF GROUT	Bentonite Grout
TOP OF GROUT	0.4'
BOTTOM OF GROUT	25.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	25.0'
BOTTOM OF SAND	26.0'
TYPE OF GROUT	Hole Plug
TOP OF GROUT	21.0'
BOTTOM OF GROUT	23.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	23.0'
BOTTOM OF SAND	40.5'
TYPE OF SCREEN	2" PrePack slotted PVC
DEPTH TO TOP OF SCREEN:	25.8'
DEPTH TO BOTTOM OF SCREEN:	40.5'
DEPTH TO BOTTOM OF HOLE:	40.5'

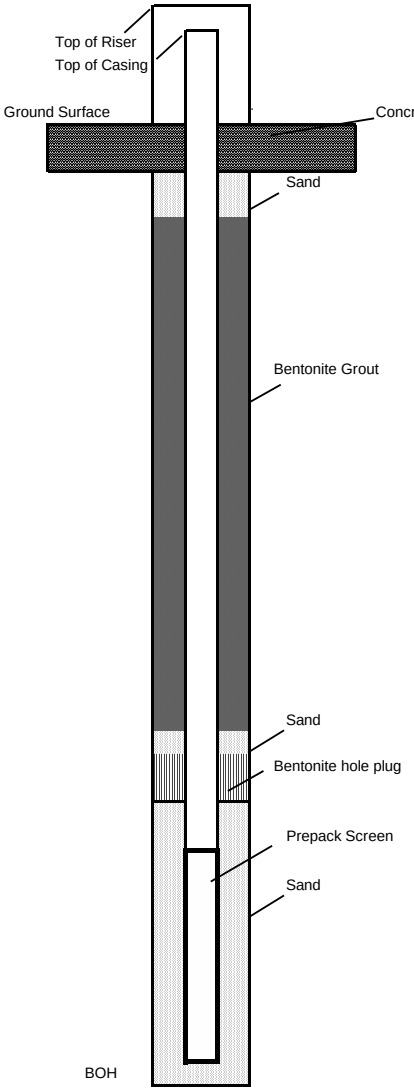
* Depth to groundwater measured relative to top of casing

USACE - Baltimore District

PROJECT: **Area B Well Replacement/Landfill Lysimeters/Monitoring Well Installation**	**HOLE NO.: BMW84**

AS BUILT WELL CONSTRUCTION

HOLE NUMBER: BMW85	**LOCATION: Fort Detrick, MD**		**DRILLER: Steve Simmons**
PROJECT NAME: Area B	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: 29.85**
DATE WELL COMPLETED: 10/18/2017	**SURFACE:**		**DRILLING METHOD: Air Rotary**
DATE DEVELOPMENT COMPLETED: 3/13/2018	**TOP OF PVC CASING:**	**2.3'**	
INSPECTOR: David King	**TOP OF OUTER CASING:**	**2.6'**	**DEVELOPMENT METHOD: Surge Block & Air Lift**



COORDINATES:	39.4351204 N
	-77.4574535 W
I.D.OF RISER:	BMW85
TYPE OF RISER:	Monitorng Well
BOREHOLE DIAMETER:	5.75" Hammer
TOP OF RISER	2.6'
TOP OF CASING	2.3'
TYPE OF SEAL	Portland Cement
DEPTH TO TOP OF SEAL:	0.0'
WIDTH OF CASING	2" OD
TYPE OF CASING	Schedule 40 PVC
TYPE OF GROUT	Bentonite Grout
TOP OF GROUT	0.4'
BOTTOM OF GROUT	25.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	25.0'
BOTTOM OF SAND	26.0'
TYPE OF GROUT	Hole Plug
TOP OF GROUT	26.0'
BOTTOM OF GROUT	28.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	28.0'
BOTTOM OF SAND	44.5'
TYPE OF SCREEN	2" PrePack slotted PVC
DEPTH TO TOP OF SCREEN:	30.0'
DEPTH TO BOTTOM OF SCREEN:	44.5'
DEPTH TO BOTTOM OF HOLE:	44.5'

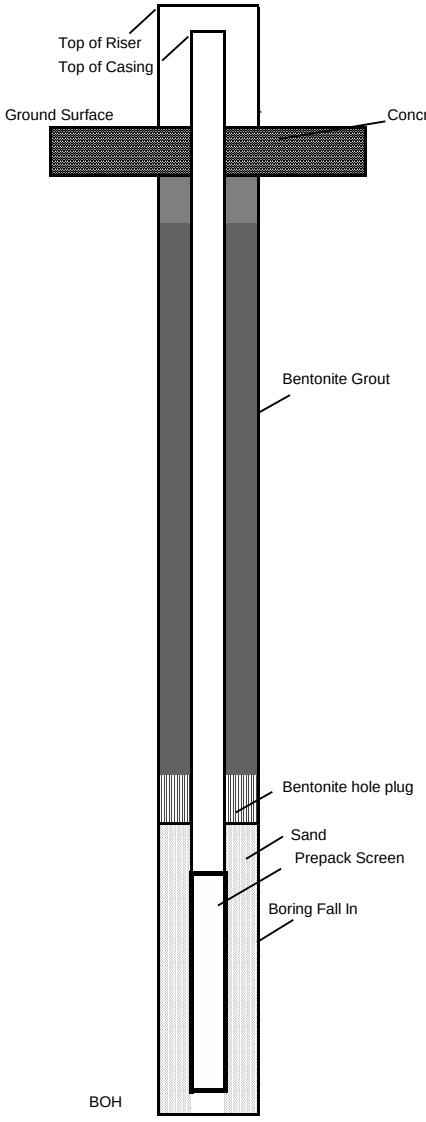
* Depth to groundwater measured relative to top of casing

USACE - Baltimore District

PROJECT: **Area B Well Replacement/Landfill Lysimeters/Monitoring Well Installation**	**HOLE NO.: BMW85**

AS BUILT WELL CONSTRUCTION

HOLE NUMBER: BMW86	**LOCATION: Fort Detrick, MD**		**DRILLER: Steve Simmons**
PROJECT NAME: Area B	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: 36'**
DATE WELL COMPLETED: 10/18/2017	**SURFACE:**		**DRILLING METHOD: Air Rotary**
DATE DEVELOPMENT COMPLETED:	**TOP OF PVC CASING:**	**2.3'**	
INSPECTOR: David King	**TOP OF OUTER CASING:**	**2.6'**	**DEVELOPMENT METHOD: Surge Block & Air Lift**



COORDINATES:	39.4341592 N
	-77.4567411 W
I.D.OF RISER:	BMW85
TYPE OF RISER:	Monitorng Well
BOREHOLE DIAMETER:	5.75" Hammer
TOP OF RISER	2.6'
TOP OF CASING	2.3'
TYPE OF SEAL	Portland Cement
DEPTH TO TOP OF SEAL:	0.0'
WIDTH OF CASING	2" OD
TYPE OF CASING	Schedule 40 PVC
TYPE OF GROUT	Bentonite Grout
TOP OF GROUT	0.4'
BOTTOM OF GROUT	26.0'
TYPE OF GROUT	Bentonite Hole Plug
TOP OF GROUT	26.0'
BOTTOM OF GROUT	29.5'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	29.5'
BOTTOM OF SAND	31.0'
TYPE OF SCREEN	2" PrePack slotted PVC
DEPTH TO TOP OF SCREEN:	31.0'
DEPTH TO BOTTOM OF SCREEN:	46.0'
DEPTH TO BOTTOM OF HOLE:	50.0'

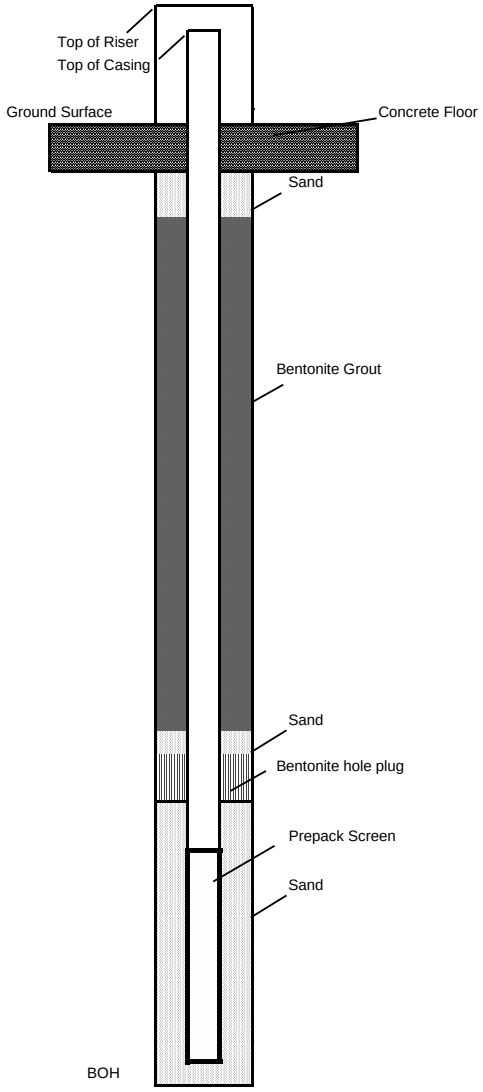
* Depth to groundwater measured relative to top of casing

USACE - Baltimore District

PROJECT: **Area B Well Replacement/Landfill Lysimeters/Monitoring Well Installation**	**HOLE NO.: BMW86**

AS BUILT WELL CONSTRUCTION

HOLE NUMBER: BMW87	**LOCATION: Fort Detrick, MD**		**DRILLER: Steve Simmons**
PROJECT NAME: Area B	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: 65'**
DATE WELL COMPLETED: 10/17/2017	**SURFACE:**		**DRILLING METHOD: Air Rotary**
DATE DEVELOPMENT COMPLETED: 11/1/2017	**TOP OF PVC CASING:**	**2.3'**	
INSPECTOR: Ashley Woods	**TOP OF OUTER CASING:**	**2.6'**	**DEVELOPMENT METHOD: Surge Block & Air Lift**



COORDINATES:	39.4334598 N -77.4564672 W
I.D.OF RISING:	BMW87
TYPE OF RISING:	Monitorng Well
BOREHOLE DIAMETER:	5.75" Hammer
TOP OF RISER	2.6'
TOP OF CASING	2.3'
TYPE OF SEAL	Portland Cement
DEPTH TO TOP OF SEAL:	0.0'
WIDTH OF CASING	2" OD
TYPE OF CASING	Schedule 40 PVC
TYPE OF GROUT	Bentonite Grout
TOP OF GROUT	0.4'
BOTTOM OF GROUT	25.5'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	25.5'
BOTTOM OF SAND	27.0'
TYPE OF GROUT	Hole Plug
TOP OF GROUT	27.0'
BOTTOM OF GROUT	29.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	29.0'
BOTTOM OF SAND	46.0'
TYPE OF SCREEN	2" PrePack slotted PVC
DEPTH TO TOP OF SCREEN:	31.0'
DEPTH TO BOTTOM OF SCREEN:	46.0'
DEPTH TO BOTTOM OF HOLE:	47.5'

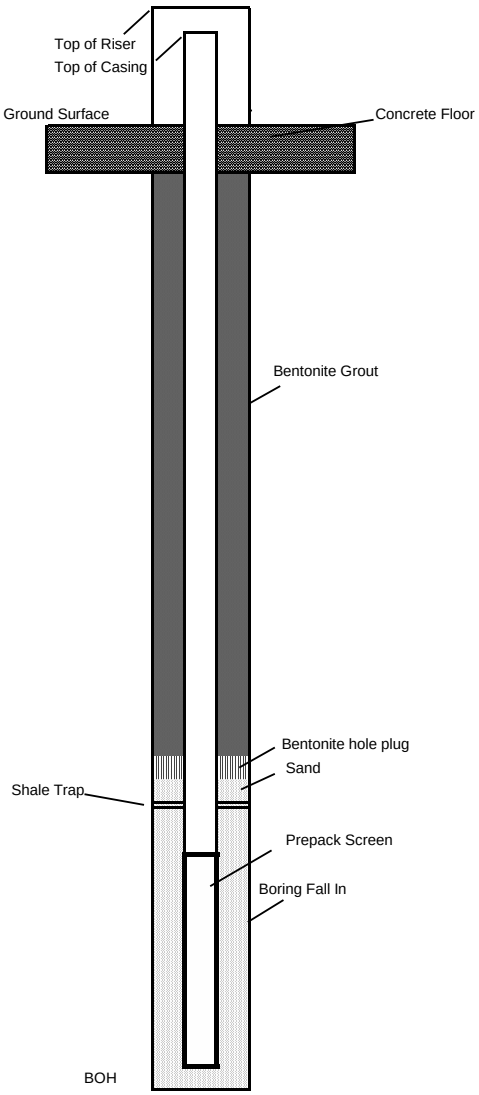
* Depth to groundwater measured relative to top of casing

USACE - Baltimore District

PROJECT: **Area B Well Replacement/Landfill Lysimeters/Monitoring Well Installation**	**HOLE NO.: BMW87**

AS BUILT WELL CONSTRUCTION

HOLE NUMBER: BMW88	**LOCATION: Fort Detrick, MD**		**DRILLER: Steve Simmons**
PROJECT NAME: Area B	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: 42'**
DATE WELL COMPLETED: 10/25/2017	**SURFACE:**		**DRILLING METHOD: Air Rotary**
DATE DEVELOPMENT COMPLETED:	**TOP OF PVC CASING:**	**2.3'**	
INSPECTOR: Ashley Woods	**TOP OF OUTER CASING:**	**2.6'**	**DEVELOPMENT METHOD: Surge Block & Air Lift**



COORDINATES:	39.4322587 N
	-77.4585737 W
I.D.OF RISER:	BMW88
TYPE OF RISER:	Monitorng Well
BOREHOLE DIAMETER:	5.75" Hammer
TOP OF RISER	2.6'
TOP OF CASING	2.3'
TYPE OF SEAL	Portland Cement
DEPTH TO TOP OF SEAL:	0.0'
WIDTH OF CASING	2" OD
TYPE OF CASING	Schedule 40 PVC
TYPE OF GROUT	Bentonite Grout
TOP OF GROUT	0.4'
BOTTOM OF GROUT	36.0'
TYPE OF GROUT	Bentonite Hole Plug
TOP OF GROUT	36.0'
BOTTOM OF GROUT	40.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	40.0'
BOTTOM OF SAND	43.0'
TYPE OF SHALE TRAP	4.25"
DEPTH OF SHALE TRAP	43.0'
TYPE OF SCREEN	2" PrePack slotted PVC
DEPTH TO TOP OF SCREEN:	44.5'
DEPTH TO BOTTOM OF SCREEN:	59.5'
DEPTH TO BOTTOM OF HOLE:	61.5'

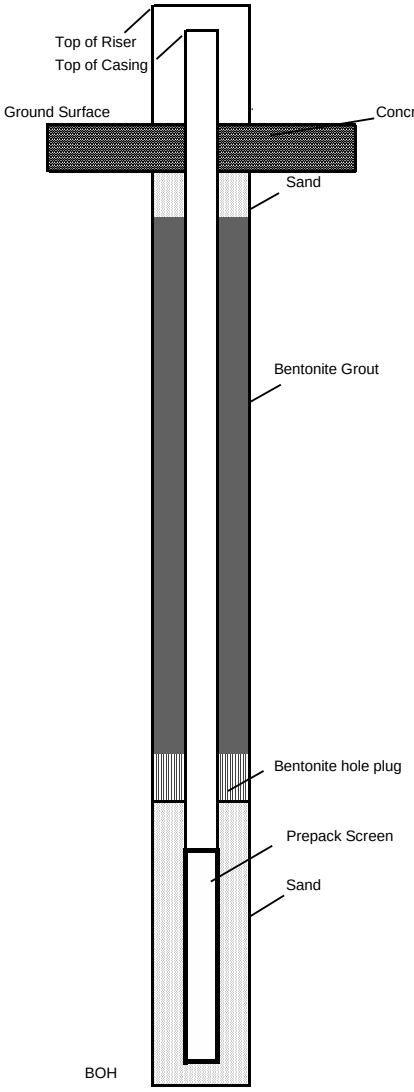
* Depth to groundwater measured relative to top of casing

USACE - Baltimore District

PROJECT: **Area B Well Replacement/Landfill Lysimeters/Monitoring Well Installation**	**HOLE NO.: BMW88**

AS BUILT WELL CONSTRUCTION

HOLE NUMBER: BMW89	**LOCATION: Fort Detrick, MD**		**DRILLER: Steve Simmons**
PROJECT NAME: Area B	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: 78'**
DATE WELL COMPLETED: 12/20/2017	**SURFACE:**		**DRILLING METHOD: Air Rotary**
DATE DEVELOPMENT COMPLETED: 2/14/2018	**TOP OF PVC CASING:**	**2.3'**	
INSPECTOR: Alexander Soroka	**TOP OF OUTER CASING:**	**2.6'**	**DEVELOPMENT METHOD: Surge Block & Air Lift**



COORDINATES:	39.4320145 N -77.4553369 W
I.D.OF RISER:	BMW91
TYPE OF RISER:	Monitorng Well
BOREHOLE DIAMETER:	5.75" Hammer
TOP OF RISER	2.6'
TOP OF CASING	2.3'
TYPE OF SEAL	Portland Cement
DEPTH TO TOP OF SEAL:	0.0'
WIDTH OF CASING	2" OD
TYPE OF CASING	Schedule 40 PVC
TYPE OF GROUT	Bentonite Grout
TOP OF GROUT	0.4'
BOTTOM OF GROUT	60.5'
TYPE OF GROUT	Hole Plug
TOP OF GROUT	60.5'
BOTTOM OF GROUT	72.5'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	72.5'
BOTTOM OF SAND	92.0'
TYPE OF SCREEN	2" PrePack slotted PVC
DEPTH TO TOP OF SCREEN:	75.0'
DEPTH TO BOTTOM OF SCREEN:	90.0'
DEPTH TO BOTTOM OF HOLE:	92.0'

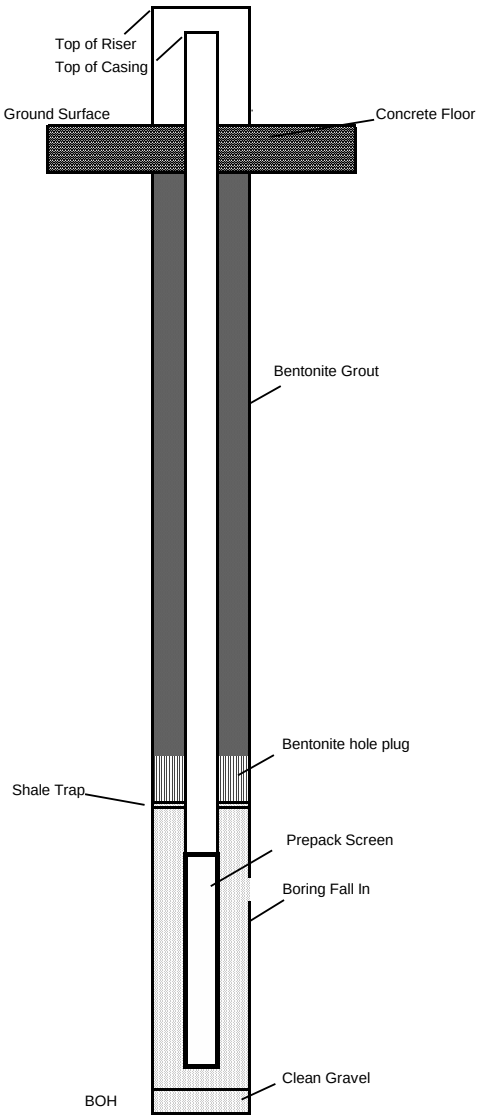
* Depth to groundwater measured relative to top of casing

USACE - Baltimore District

PROJECT: **Area B Well Replacement/Landfill Lysimeters/Monitoring Well Installation**	**HOLE NO.: BMW89**

AS BUILT WELL CONSTRUCTION

HOLE NUMBER: BMW90	**LOCATION: Fort Detrick, MD**		**DRILLER: Steve Simmons**
PROJECT NAME: Area B	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: 37.7'**
DATE WELL COMPLETED: 11/15/2017	**SURFACE:**		**DRILLING METHOD: Air Rotary**
DATE DEVELOPMENT COMPLETED: 2/2/2018	**TOP OF PVC CASING:**	**2.3'**	
INSPECTOR: Ashley Woods	**TOP OF OUTER CASING:**	**2.6'**	**DEVELOPMENT METHOD: Surge Block & Air Lift**



COORDINATES:	39.4377283 N
	-77.4563522 W
I.D.OF RISER:	BMW90
TYPE OF RISER:	Monitorng Well
BOREHOLE DIAMETER:	5.75" Hammer
TOP OF RISER	2.6'
TOP OF CASING	2.3'
TYPE OF SEAL	Portland Cement
DEPTH TO TOP OF SEAL:	0.0'
WIDTH OF CASING	2" OD
TYPE OF CASING	Schedule 40 PVC
TYPE OF GROUT	Bentonite Grout
TOP OF GROUT	0.4'
BOTTOM OF GROUT	19.5'
TYPE OF GROUT	Bentonite Hole Plug
TOP OF GROUT	19.0'
BOTTOM OF GROUT	22.0'
TYPE OF SHALE TRAP	4.25"
DEPTH OF SHALE TRAP	22.0'
TYPE OF SCREEN	2" PrePack slotted PVC
DEPTH TO TOP OF SCREEN:	30.0'
DEPTH TO BOTTOM OF SCREEN:	45.0'
TYPE OF FILL	Clean sorted pea gravel
DEPTH TO TOP OF FILL:	45.0'
DEPTH TO BOTTOM OF FILL:	51.0'
DEPTH TO BOTTOM OF HOLE:	51.0'

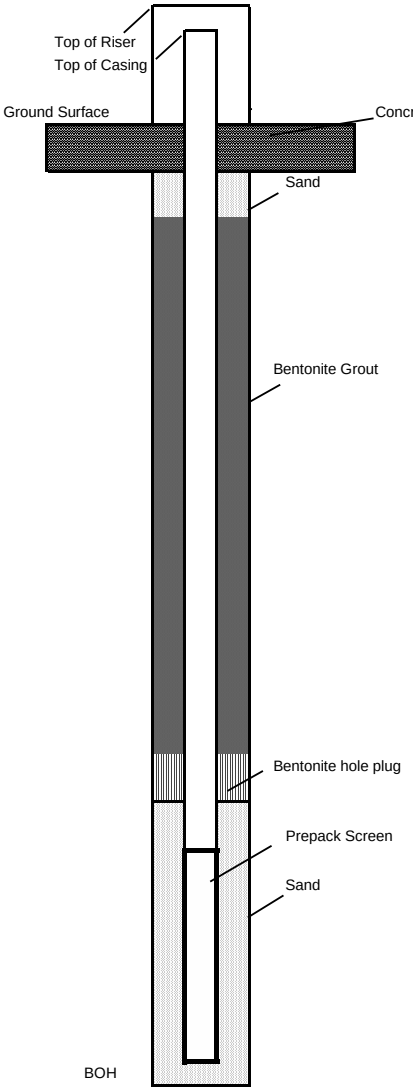
* Depth to groundwater measured relative to top of casing

USACE - Baltimore District

PROJECT: **Area B Well Replacement/Landfill Lysimeters/Monitoring Well Installation**	**HOLE NO.: BMW90**

AS BUILT WELL CONSTRUCTION

HOLE NUMBER: BMW91	**LOCATION: Fort Detrick, MD**		**DRILLER: Steve Simmons**
PROJECT NAME: Area B	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: 68'**
DATE WELL COMPLETED: 11/28/2017	**SURFACE:**		**DRILLING METHOD: Air Rotary**
DATE DEVELOPMENT COMPLETED:	**TOP OF PVC CASING:**	**2.3'**	
INSPECTOR: Ashley Woods	**TOP OF OUTER CASING:**	**2.6'**	**DEVELOPMENT METHOD: Surge Block & Air Lift**



COORDINATES:	39.4390147 N -77.456399 W
I.D.OF RISER:	BMW91
TYPE OF RISER:	Monitorng Well
BOREHOLE DIAMETER:	5.75" Hammer
TOP OF RISER	2.6'
TOP OF CASING	2.3'
TYPE OF SEAL	Portland Cement
DEPTH TO TOP OF SEAL:	0.0'
WIDTH OF CASING	2" OD
TYPE OF CASING	Schedule 40 PVC
TYPE OF GROUT	Bentonite Grout
TOP OF GROUT	0.4'
BOTTOM OF GROUT	63.0'
TYPE OF GROUT	Hole Plug
TOP OF GROUT	63.0'
BOTTOM OF GROUT	66.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	68.0'
BOTTOM OF SAND	83.0'
TYPE OF SCREEN	2" PrePack slotted PVC
DEPTH TO TOP OF SCREEN:	68.0'
DEPTH TO BOTTOM OF SCREEN:	83.0'
DEPTH TO BOTTOM OF HOLE:	85.0'

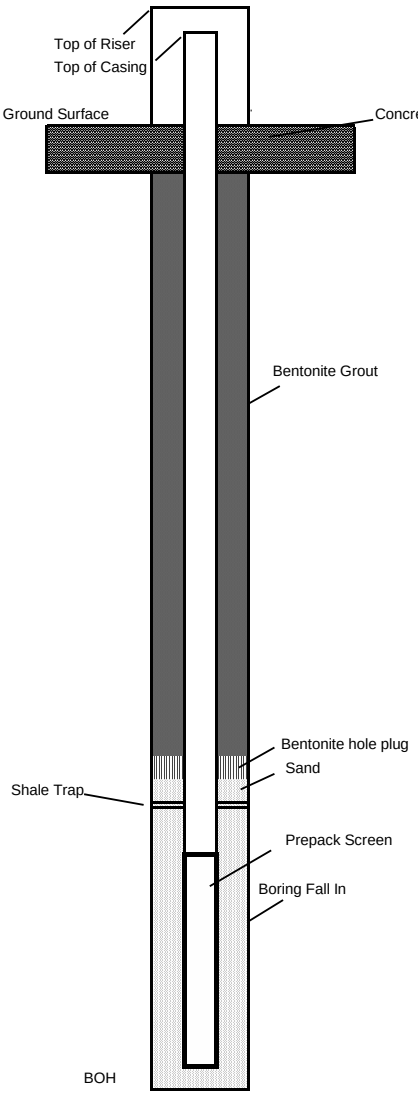
* Depth to groundwater measured relative to top of casing

USACE - Baltimore District

PROJECT: **Area B Well Replacement/Landfill Lysimeters/Monitoring Well Installation**	**HOLE NO.: BMW91**

AS BUILT WELL CONSTRUCTION

HOLE NUMBER: BMW92	**LOCATION: Fort Detrick, MD**		**DRILLER: Steve Simmons**
PROJECT NAME: Area B	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: 39'**
DATE WELL COMPLETED: 10/27/2017	**SURFACE:**		**DRILLING METHOD: Air Rotary**
DATE DEVELOPMENT COMPLETED: 11/16/17	**TOP OF PVC CASING:**	**2.3'**	
INSPECTOR: Ashley Woods	**TOP OF OUTER CASING:**	**2.6'**	**DEVELOPMENT METHOD: Surge Block & Air Lift**



COORDINATES:	39.4412694 N
	-77.4526041 W
I.D.OF RISER:	BMW92
TYPE OF RISER:	Monitorng Well
BOREHOLE DIAMETER:	5.75" Hammer
TOP OF RISER	2.6'
TOP OF CASING	2.3'
TYPE OF SEAL	Portland Cement
DEPTH TO TOP OF SEAL:	0.0'
WIDTH OF CASING	2" OD
TYPE OF CASING	Schedule 40 PVC
TYPE OF GROUT	Bentonite Grout
TOP OF GROUT	0.4'
BOTTOM OF GROUT	33.0'
TYPE OF GROUT	Bentonite Hole Plug
TOP OF GROUT	33.0'
BOTTOM OF GROUT	35.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	35.0'
BOTTOM OF SAND	36.0'
TYPE OF SHALE TRAP	4.25"
DEPTH OF SHALE TRAP	36.0'
TYPE OF SCREEN	2" PrePack slotted PVC
DEPTH TO TOP OF SCREEN:	39.3'
DEPTH TO BOTTOM OF SCREEN:	54.3'
DEPTH TO BOTTOM OF HOLE:	55.0'

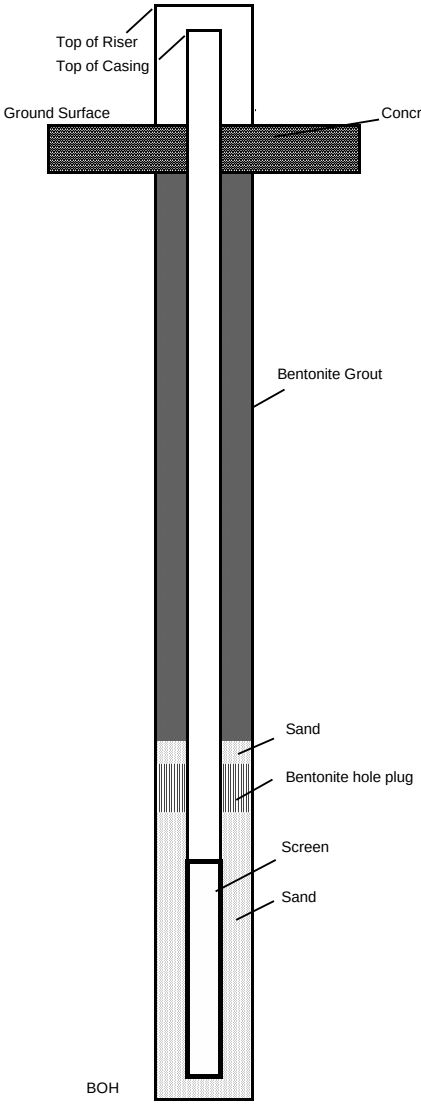
* Depth to groundwater measured relative to top of casing

USACE - Baltimore District

PROJECT: **Area B Well Replacement/Landfill Lysimeters/Monitoring Well Installation**	**HOLE NO.: BMW92**

AS BUILT WELL CONSTRUCTION

HOLE NUMBER: BMW93	**LOCATION: Fort Detrick, MD**		**DRILLER: Steve Simmons**
PROJECT NAME: Area B	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: 33.8'**
DATE WELL COMPLETED: 12/12/17	**SURFACE:**		**DRILLING METHOD: Air Rotary**
DATE DEVELOPMENT COMPLETED: 3/3/2018	**TOP OF PVC CASING:**	**2.3'**	
INSPECTOR: Ashley Woods	**TOP OF OUTER CASING:**	**2.6'**	**DEVELOPMENT METHOD: Surge Block & Airlift**



COORDINATES:	39.4393976 N -77.452412 W
I.D.OF RISER:	BMW93
TYPE OF RISER:	Monitorng Well
BOREHOLE DIAMETER:	5.75" Hammer
TOP OF RISER	2.6'
TOP OF CASING	2.3'
TYPE OF SEAL	Portland Cement
DEPTH TO TOP OF SEAL:	0.0'
WIDTH OF CASING	2" OD
TYPE OF CASING	Schedule 40 PVC
TYPE OF GROUT	Bentonite Grout
TOP OF GROUT	0.4'
BOTTOM OF GROUT	28.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	27.0'
BOTTOM OF SAND	28.0'
TYPE OF GROUT	Bentonite Hole Plug
TOP OF GROUT	28.0'
BOTTOM OF GROUT	31.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	31.0'
BOTTOM OF SAND	48.0'
TYPE OF SCREEN	2" slotted PVC
DEPTH TO TOP OF SCREEN:	33.0'
DEPTH TO BOTTOM OF SCREEN:	48.0'
DEPTH TO BOTTOM OF HOLE:	51.0'

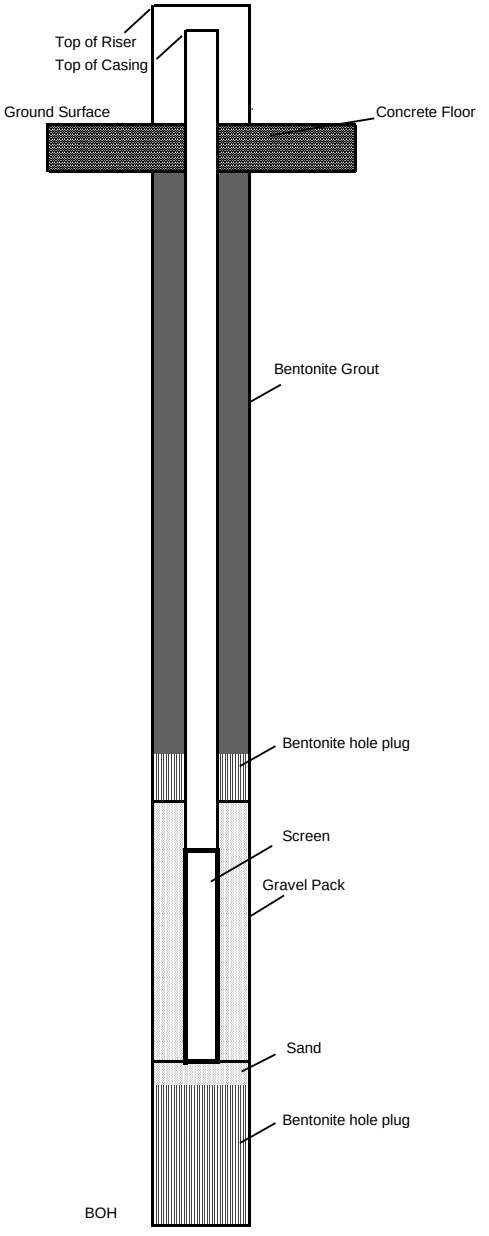
* Depth to groundwater measured relative to top of casing

USACE - Baltimore District

PROJECT: **Area B Well Replacement/Landfill Lysimeters/Monitoring Well Installation**	**HOLE NO.: BMW93**

AS BUILT WELL CONSTRUCTION

HOLE NUMBER: BMW94	**LOCATION: Fort Detrick, MD**		**DRILLER: Steve Simmons**
PROJECT NAME: Area B	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: 46.4'**
DATE WELL COMPLETED: 12/18/2017	**SURFACE:**		**DRILLING METHOD:**
DATE DEVELOPMENT COMPLETED:	**TOP OF PVC CASING:**	**2.3'**	**Air Rotary**
INSPECTOR: Ashley Woods	**TOP OF OUTER CASING:**	**2.6'**	**DEVELOPMENT METHOD: Surge Block & Air Lift**



COORDINATES:	39.4382345 N
	-77.4538822 W
I.D.OF RISER:	BMW97
TYPE OF RISER:	Monitorng Well
BOREHOLE DIAMETER:	5.75" Hammer
TOP OF RISER	2.6'
TOP OF CASING	2.3'
TYPE OF SEAL	Portland Cement
DEPTH TO TOP OF SEAL:	0.0'
WIDTH OF CASING	2" OD
TYPE OF CASING	Schedule 40 PVC
TYPE OF GROUT	Bentonite Grout
TOP OF GROUT	0.4'
BOTTOM OF GROUT	33.0'
TYPE OF GROUT	Bentonite Hole Plug
TOP OF GROUT	33.0'
BOTTOM OF GROUT	35.0'
TYPE OF SCREEN	2" slotted PVC
DEPTH TO TOP OF SCREEN:	39.0'
DEPTH TO BOTTOM OF SCREEN:	54.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	35.0'
BOTTOM OF SAND	58.0'
BENTONITE HOLE PLUG FILL	58.0' to 85.0'
DEPTH TO BOTTOM OF HOLE:	85.0'

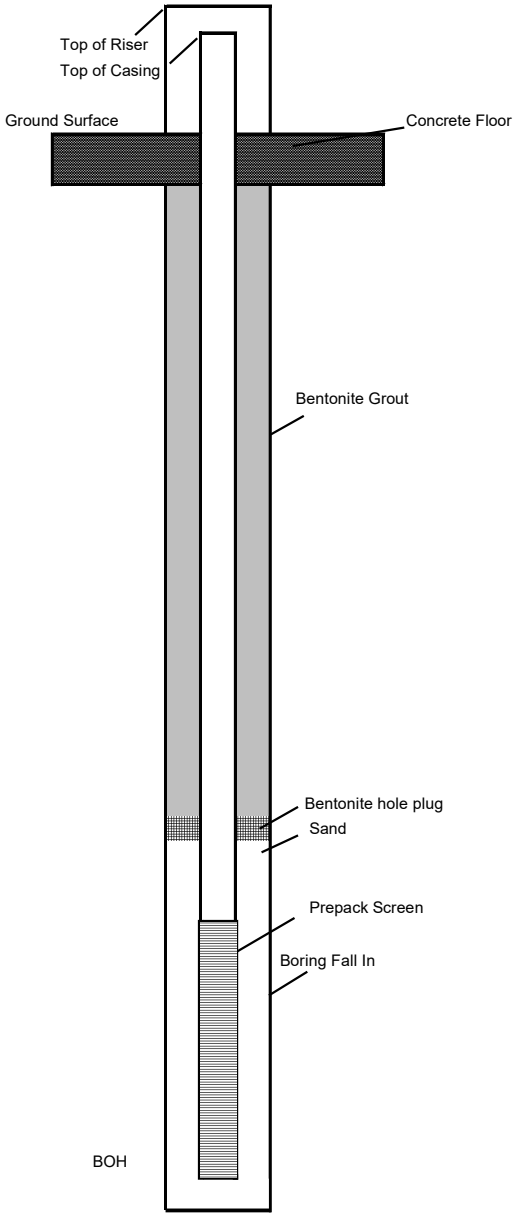
* Depth to groundwater measured relative to top of casing

USACE - Baltimore District

PROJECT: **Area B Well Replacement/Landfill Lysimeters/Monitoring Well Installation**	**HOLE NO.: BMW94**

AS BUILT WELL CONSTRUCTION

HOLE NUMBER: BMW95	**LOCATION: Fort Detrick, MD**		**DRILLER: Steve Simmons**
PROJECT NAME: Area B	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: 72.0'**
DATE WELL COMPLETED: 5/23/2018	**SURFACE:**		**DRILLING METHOD: Air Rotary**
DATE DEVELOPMENT COMPLETED: 5/30/18	**TOP OF PVC CASING:**	2.3'	
INSPECTOR: Ashley Woods	**TOP OF OUTER CASING:**	2.6'	**DEVELOPMENT: Surge Block & Air Lift**



COORDINATES:	39.438164
	-77.450099
I.D.OF RISER:	BMW95
TYPE OF RISER:	Monitorng Well
BOREHOLE DIAMETER:	5.75" Hammer
TOP OF RISER	2.6'
TOP OF CASING	2.3'
TYPE OF SEAL	Portland Cement
DEPTH TO TOP OF SEAL:	0.0'
WIDTH OF CASING	2" OD
TYPE OF CASING	Schedule 40 PVC
TYPE OF GROUT	Bentonite Grout
TOP OF GROUT	0.4'
BOTTOM OF GROUT	68.3'
TYPE OF GROUT	Bentonite Hole Plug
TOP OF GROUT	68.3'
BOTTOM OF GROUT	70.6'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	70.6'
BOTTOM OF SAND	72.0'
TYPE OF SCREEN	2" PrePack slotted PVC
DEPTH TO TOP OF SCREEN:	72.53'
DEPTH TO BOTTOM OF SCREEN:	87.53'
DEPTH TO BOTTOM OF HOLE:	89.0'

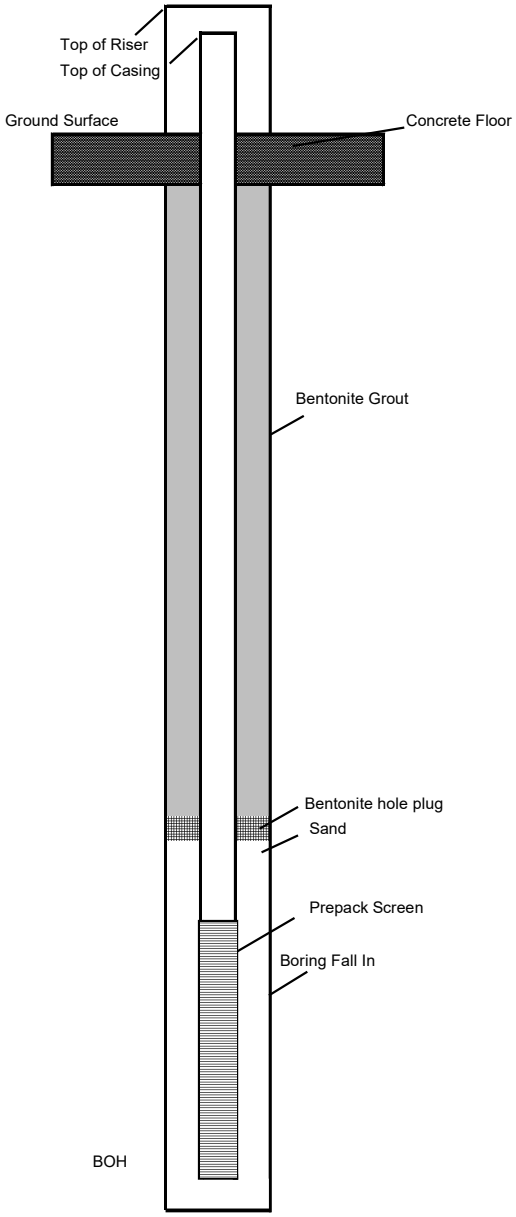
* Depth to groundwater measured relative to ground surface

USACE - Baltimore District

PROJECT: **Area B Well Replacement/Landfill Lysimeters/Monitoring Well Installation**	**HOLE NO.: BMW95**

AS BUILT WELL CONSTRUCTION

HOLE NUMBER: BMW96	**LOCATION: Fort Detrick, MD**		**DRILLER: Steve Simmons**
PROJECT NAME: Area B	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: 27.1**
DATE WELL COMPLETED: 5/24/2018	**SURFACE:**		**DRILLING METHOD: Air Rotary**
DATE DEVELOPMENT COMPLETED: 5/31/18	**TOP OF PVC CASING:**	2.3'	
INSPECTOR: Ashley Woods	**TOP OF OUTER CASING:**	2.6'	**DEVELOPMENT: Surge Block & Air Lift**



COORDINATES:	39.438361
	-77.450095
I.D.OF RISER:	BMW96
TYPE OF RISER:	Monitorng Well
BOREHOLE DIAMETER:	5.75" Hammer
TOP OF RISER	2.6'
TOP OF CASING	2.3'
TYPE OF SEAL	Portland Cement
DEPTH TO TOP OF SEAL:	0.0'
WIDTH OF CASING	2" OD
TYPE OF CASING	Schedule 40 PVC
TYPE OF GROUT	Bentonite Grout
TOP OF GROUT	0.4'
BOTTOM OF GROUT	15.0'
TYPE OF GROUT	Bentonite Hole Plug
TOP OF GROUT	15.0'
BOTTOM OF GROUT	19.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	19.0'
BOTTOM OF SAND	32
TYPE OF SCREEN	2" PrePack slotted PVC
DEPTH TO TOP OF SCREEN:	22.0'
DEPTH TO BOTTOM OF SCREEN:	32.0'
DEPTH TO BOTTOM OF HOLE:	33.0'

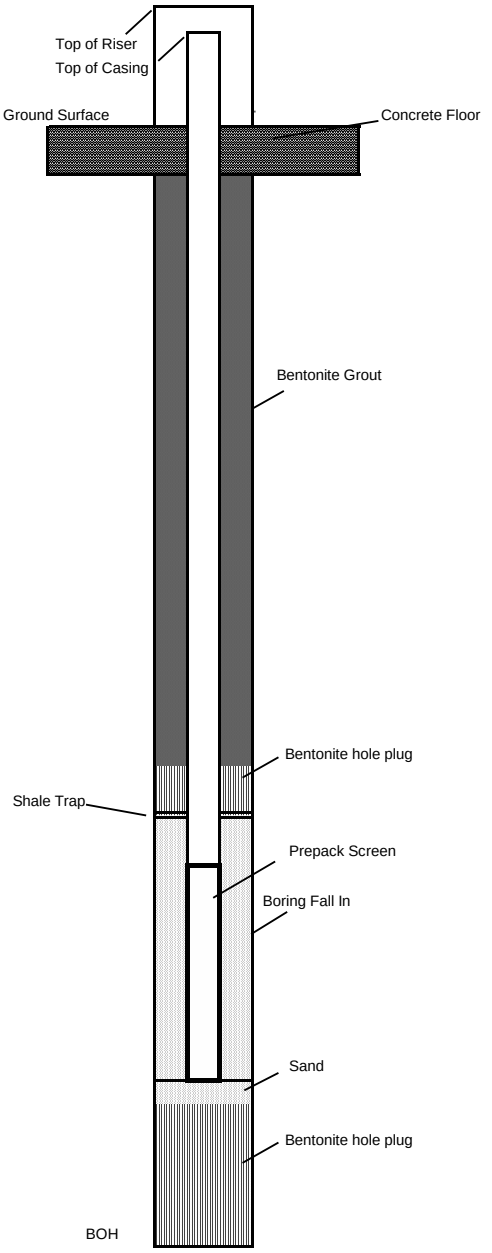
* Depth to groundwater measured relative to ground surface

USACE - Baltimore District

PROJECT: **Area B Well Replacement/Landfill Lysimeters/Monitoring Well Installation**	**HOLE NO.: BMW96**

AS BUILT WELL CONSTRUCTION

HOLE NUMBER: BMW97	**LOCATION: Fort Detrick, MD**		**DRILLER: Steve Simmons**
PROJECT NAME: Area B	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: 19.95**
DATE WELL COMPLETED: 11/01/2017	**SURFACE:**		**DRILLING METHOD:**
DATE DEVELOPMENT COMPLETED:	**TOP OF PVC CASING:**	**2.3'**	**Air Rotary**
INSPECTOR: Ashley Woods	**TOP OF OUTER CASING:**	**2.6'**	**DEVELOPMENT METHOD: Surge Block & Air Lift**



COORDINATES:	39.4371785 N
	-77.4471351 W
I.D.OF RISER:	BMW97
TYPE OF RISER:	Monitorng Well
BOREHOLE DIAMETER:	5.75" Hammer
TOP OF RISER	2.6'
TOP OF CASING	2.3'
TYPE OF SEAL	Portland Cement
DEPTH TO TOP OF SEAL:	0.0'
WIDTH OF CASING	2" OD
TYPE OF CASING	Schedule 40 PVC
TYPE OF GROUT	Bentonite Grout
TOP OF GROUT	0.4'
BOTTOM OF GROUT	8.0'
TYPE OF GROUT	Bentonite Hole Plug
TOP OF GROUT	8.0'
BOTTOM OF GROUT	10.3'
TYPE OF SHALE TRAP	4.25"
DEPTH OF SHALE TRAP	10.3'
TYPE OF SCREEN	2" PrePack slotted PVC
DEPTH TO TOP OF SCREEN:	20.0'
DEPTH TO BOTTOM OF SCREEN:	35.0'
TYPE OF SAND	M1 Clean Quartz Sand
TOP OF SAND	35.0'
BOTTOM OF SAND	35.5'
BENTONITE HOLE PLUG FILL	35.5' to 46.0'
DEPTH TO BOTTOM OF HOLE:	46.0'

* Depth to groundwater measured relative to top of casing

USACE - Baltimore District

PROJECT: **Area B Well Replacement/Landfill Lysimeters/Monitoring Well Installation**	**HOLE NO.: BMW97**

Attachment 7.9

APPENDIX B

Lysimeter Boring Logs
Lysimeter As-Builds

Hole No. L1T

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 1 SHEETS

1. PROJECT: Area B Lysimeter Installation
2. BORING LOCATION (Coordinates or Station): N 646,042.69 E 1,184,896.95
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Justin Blackson
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN:
8. DEPTH DRILLED INTO ROCK:
9. TOTAL DEPTH OF HOLE: 28.0 ft
10. SIZE AND TYPE OF BIT: 3.75" Hollow Stem Auger
11a. VERTICAL DATUM:
11b. HORIZONTAL DATUM:
12. MANUFACTURER'S DESIGNATION OF DRILL: CME45 Track Rig
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER: ▽ 27.0ft
16. DATE/TIME: STARTED 2/6/18 0000 COMPLETED 2/6/18 0000
17. ELEVATION TOP OF HOLE: 371.8 ft
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR:

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
371.8	0.0		SANDY LEAN CLAY WITH GRAVEL (SC), fine to coarse; reddish brown, moist.								
364.8	7.0		POORLY GRADED SAND WITH CLAY (SP-SC), fine to coarse; reddish brown, moist, with silt.								
358.8	13.0		LEAN CLAY (CL), fine to coarse; reddish brown, moist, trace sand, trace gravel.								
355.8	16.0		SANDY LEAN CLAY (SC), fine to coarse; reddish brown, moist, trace gravel.								
349.8	22.0		LEAN CLAY (CL), fine to coarse; reddish brown, moist, trace sand, trace gravel.								
344.8	27.0		Reddish brown, wet.	▽							
343.8	28.0		BOTTOM OF HOLE								

Notes:

Soils are field visually classified by auger cuttings in accordance with the Unified Soils Classification System.
No methane gas detected.

NAB 1836 LETTER AREA B LYSIMETER SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/19/18

Hole No. L2A

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 1 SHEETS

1. PROJECT: Area B Lysimeter Installation
2. BORING LOCATION (Coordinates or Station): N 645,549.39 E 1,183,835.44
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Justin Blackson
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN:
8. DEPTH DRILLED INTO ROCK:
9. TOTAL DEPTH OF HOLE: 25.0 ft
10. SIZE AND TYPE OF BIT: 3.75" Hollow Stem Auger
11a. VERTICAL DATUM:
11b. HORIZONTAL DATUM:
12. MANUFACTURER'S DESIGNATION OF DRILL: CME45 Track Rig
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER:
16. DATE/TIME: STARTED 1/17/18 0000 COMPLETED 1/17/18 0000
17. ELEVATION TOP OF HOLE: 381.0 ft
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR:

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
381.0	0.0		LEAN CLAY (CL), fine to coarse; reddish brown, dry, with sand, trace gravel.								
368.0	13.0		CLAYEY SAND WITH GRAVEL (SC), fine to coarse; reddish brown, moist.								
356.0	25.0		BOTTOM OF HOLE								

Notes:

Soils are field visually classified by auger cuttings in accordance with the Unified Soils Classification System.
Groundwater not encountered.
No methane gas detected.

NAB 1836 LETTER AREA B LYSIMETER SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/19/18

Hole No. L2T

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 1 SHEETS

1. PROJECT: Area B Lysimeter Installation
2. BORING LOCATION (Coordinates or Station): N 645,549.39 E 1,183,835.44
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Justin Blackson
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN:
8. DEPTH DRILLED INTO ROCK:
9. TOTAL DEPTH OF HOLE: 25.0 ft
10. SIZE AND TYPE OF BIT: 3.75" Hollow Stem Auger
11a. VERTICAL DATUM:
11b. HORIZONTAL DATUM:
12. MANUFACTURER'S DESIGNATION OF DRILL: CME45 Track Rig
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER:
16. DATE/TIME: STARTED 1/18/17 0000 COMPLETED 1/18/17 0000
17. ELEVATION TOP OF HOLE: 380.6 ft
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR:

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
380.6	0.0		LEAN CLAY (CL), fine to coarse; reddish brown, moist, with sand, trace gravel.								
365.6	15.0		CLAYEY SAND WITH GRAVEL (SC), fine to coarse; reddish brown, moist.								
355.6	25.0		BOTTOM OF HOLE								

Notes:

Soils are field visually classified by auger cuttings in accordance with the Unified Soils Classification System.
Groundwater not encountered.
No methane gas detected.

NAB 1836 LETTER AREA B LYSIMETER SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/19/18

Hole No. L3A

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 1 SHEETS

1. PROJECT: Area B Lysimeter Installation
2. BORING LOCATION (Coordinates or Station): N 645,307.15 E 1,185,128.71
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Justin Blackson
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN:
8. DEPTH DRILLED INTO ROCK:
9. TOTAL DEPTH OF HOLE: 30.0 ft
10. SIZE AND TYPE OF BIT: 3.75" Hollow Stem Auger
11a. VERTICAL DATUM:
11b. HORIZONTAL DATUM:
12. MANUFACTURER'S DESIGNATION OF DRILL: CME45 Track Rig
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER:
16. DATE/TIME: STARTED 11/29/17 0000 COMPLETED 11/29/17 0000
17. ELEVATION TOP OF HOLE: 385.8 ft
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR:

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
385.8	0.0		LEAN CLAY WITH SAND (CL), fine to coarse; reddish brown, dry, trace gravel.								
359.8	26.0		Moist.								
355.8	30.0		BOTTOM OF HOLE								

Notes:

Soils are field visually classified by auger cuttings in accordance with the Unified Soils Classification System.
Groundwater not encountered.
No methane gas detected.

NAB 1836 LETTER AREA B LYSIMETER SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/19/18

NAB FORM 1836 NOV 06

▽ ATD ▼ CO ▼ AD ___ HRS

PROJECT: Area B Lysimeter Installation

HOLE NO. L3A

Hole No. L3T

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 1 SHEETS

1. PROJECT: Area B Lysimeter Installation
2. BORING LOCATION (Coordinates or Station): N 645,323.81 E 1,185,156.21
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Justin Blackson
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN:
8. DEPTH DRILLED INTO ROCK:
9. TOTAL DEPTH OF HOLE: 27.0 ft
10. SIZE AND TYPE OF BIT: 3.75" Hollow Stem Auger
11a. VERTICAL DATUM:
11b. HORIZONTAL DATUM:
12. MANUFACTURER'S DESIGNATION OF DRILL: CME45 Track Rig
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER:
16. DATE/TIME: STARTED 11/29/17 0000 COMPLETED 11/29/17 0000
17. ELEVATION TOP OF HOLE: 384.2 ft
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR:

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
384.2	0.0		SANDY LEAN CLAY (CL), fine to coarse; reddish brown, dry, trace gravel.								
376.2	8.0		Very moist.								
374.2	10.0		Dry.								
363.2	21.0		CLAYEY GRAVEL (GC), fine to coarse; reddish brown, dry, with sand.								
357.2	27.0		At 27.0' Limestone was encountered, auger refusal BOTTOM OF HOLE								

Notes:

Soils are field visually classified by auger cuttings in accordance with the Unified Soils Classification System.
Groundwater not encountered.
No methane gas detected.

NAB 1836 LETTER AREA B LYSIMETER SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/19/18

Hole No. L5A

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 1 SHEETS

1. PROJECT: Area B Lysimeter Installation
2. BORING LOCATION (Coordinates or Station): N 644,248.69 E 1,182,823.59
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Justin Blackson
5. NAME OF INSPECTOR: Ashley Woods
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN:
8. DEPTH DRILLED INTO ROCK:
9. TOTAL DEPTH OF HOLE: 30.0 ft
10. SIZE AND TYPE OF BIT: 3.75" Hollow Stem Auger
11a. VERTICAL DATUM:
11b. HORIZONTAL DATUM:
12. MANUFACTURER'S DESIGNATION OF DRILL: CME45 Track Rig
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER:
16. DATE/TIME: STARTED 11/30/17 0000 COMPLETED 11/30/17 0000
17. ELEVATION TOP OF HOLE: 371.6 ft
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR:

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
371.6	0.0		SANDY LEAN CLAY (CL), fine to coarse; reddish brown, dry, trace gravel.								
366.6	5.0		CLAYEY GRAVEL (GC), fine to coarse; reddish brown, dry, with sand.								
363.6	8.0		SANDY LEAN CLAY (CL), fine to coarse; reddish brown, dry, trace gravel, trace gravel.								
349.6	22.0		Moist.								
341.6	30.0		BOTTOM OF HOLE								

Notes:

Soils are field visually classified by auger cuttings in accordance with the Unified Soils Classification System.
Groundwater not encountered.
No methane gas detected.

NAB 1836 LETTER AREA B LYSIMETER SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/19/18

Hole No. L6A

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 1 SHEETS

1. PROJECT: Area B Lysimeter Installation
2. BORING LOCATION (Coordinates or Station): N 643,207.64 E 1,183,654.91
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Justin Blackson
5. NAME OF INSPECTOR: Justin Blackson
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN:
8. DEPTH DRILLED INTO ROCK:
9. TOTAL DEPTH OF HOLE: 30.0 ft
10. SIZE AND TYPE OF BIT: 3.75" Hollow Stem Auger
11a. VERTICAL DATUM:
11b. HORIZONTAL DATUM:
12. MANUFACTURER'S DESIGNATION OF DRILL: CME45 Track Rig
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER:
16. DATE/TIME: STARTED 11/15/17 0000 COMPLETED 11/15/17 0000
17. ELEVATION TOP OF HOLE: 366.5 ft
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR:

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
366.5	0.0		SANDY LEAN CLAY (SC), fine to coarse; reddish brown, moist, trace gravel.								
336.5	30.0		BOTTOM OF HOLE								

Notes:

Soils are field visually classified by auger cuttings in accordance with the Unified Soils Classification System.
Groundwater not encountered.
No methane gas detected.

NAB 1836 LETTER AREA B LYSIMETER SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/19/18

Hole No. L6T

DRILLING LOG

DIVISION: North Atlantic

INSTALLATION: Fort Detrick

SHEET 1 OF 1 SHEETS

1. PROJECT: Area B Lysimeter Installation
2. BORING LOCATION (Coordinates or Station): N 643,200.51 E 1,183,691.35
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Justin Blackson
5. NAME OF INSPECTOR: Justin Blackson
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN:
8. DEPTH DRILLED INTO ROCK:
9. TOTAL DEPTH OF HOLE: 30.0 ft
10. SIZE AND TYPE OF BIT: 3.75" Hollow Stem Auger
11a. VERTICAL DATUM:
11b. HORIZONTAL DATUM:
12. MANUFACTURER'S DESIGNATION OF DRILL: CME45 Track Rig
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 0 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER: ▽ 27.0ft
16. DATE/ TIME: STARTED 11/15/17 0000 COMPLETED 11/15/17 0000
17. ELEVATION TOP OF HOLE: 365.0 ft
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR:

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
365.0	0.0		SANDY LEAN CLAY (SC), fine to coarse; reddish brown, moist, trace gravel.								
335.0	30.0		BOTTOM OF HOLE								

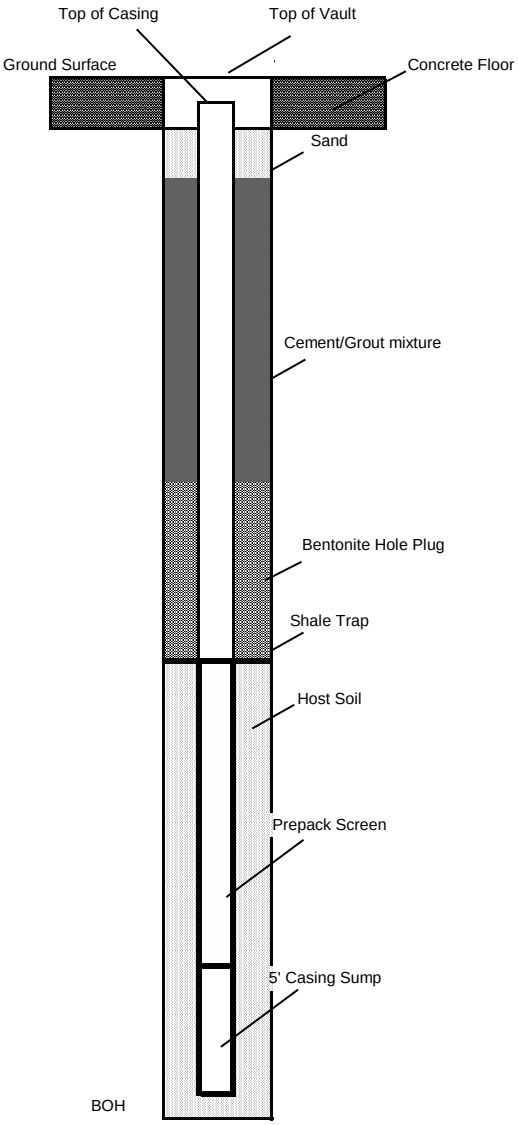
Notes:

Soils are field visually classified by auger cuttings in accordance with the Unified Soils Classification System.
Groundwater not encountered.
No methane gas detected.

NAB 1836 LETTER AREA B LYSIMETER SOIL LOGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 10/19/18

AS BUILT LYSIMETER CONSTRUCTION

HOLE NUMBER: L1-Towards	**LOCATION: Fort Detrick, MD**		**DRILLER: Justin Blackson**
PROJECT NAME: Area B Landfill Lysimeters	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: 27**
DATE LYSIMETER COMPLETED: 2/6/2018	**SURFACE:**		**DRILLING METHOD: Hollow Stem Auger**
DATE DEVELOPMENT COMPLETED: NA	**ANGLE OF BORING:**	**40°**	
INSPECTOR: Ashley Woods	**TOP OF PVC CASING:**	**0.2' bgs**	**DEVELOPMENT METHOD: NA**



COORDINATES:	39.4396817 N -77.4512147 W
VERTICAL DEPTH:	18'
HORIZONTAL LENGTH:	21.45'
I.D.OF VAULT:	Lysimeter
TYPE OF VAULT:	8" Diameter
DEPTH TO TOP OF CONCRETE:	0.6 ft
DEPTH TO TOP OF SAND:	0.6' - 5.2'
TYPE OF SAND:	M1 Clean Quartz Sand
DEPTH TO TOP OF SEAL:	0.6'
TYPE OF SEAL:	Cement & Bentonite Grout Mix
DEPTH TO TOP OF FILTER PACK:	No filter pack
WIDTH OF CASING	4" OD
TYPE OF CASING	Schedule 40 PVC
TOP OF GROUT	0.6
TYPE OF GROUT	3/8" Bentonite Hole Plug
BOTTOM OF GROUT	12.5
TYPE OF SHALE TRAP:	4.25"
DEPTH OF SHALE TRAP:	12.5
DEPTH TO TOP OF SCREEN:	12.5
TYPE OF SCREEN:	2" slotted PVC Prepack
DEPTH TO BOTTOM OF SCREEN:	22.5
DEPTH TO TOP OF SUMP:	22.5'
DEPTH TO BOTTOM OF SUMP:	27.5'
BOREHOLE DIAMETER:	4.25"
DEPTH TO BOTTOM OF HOLE:	28.0'

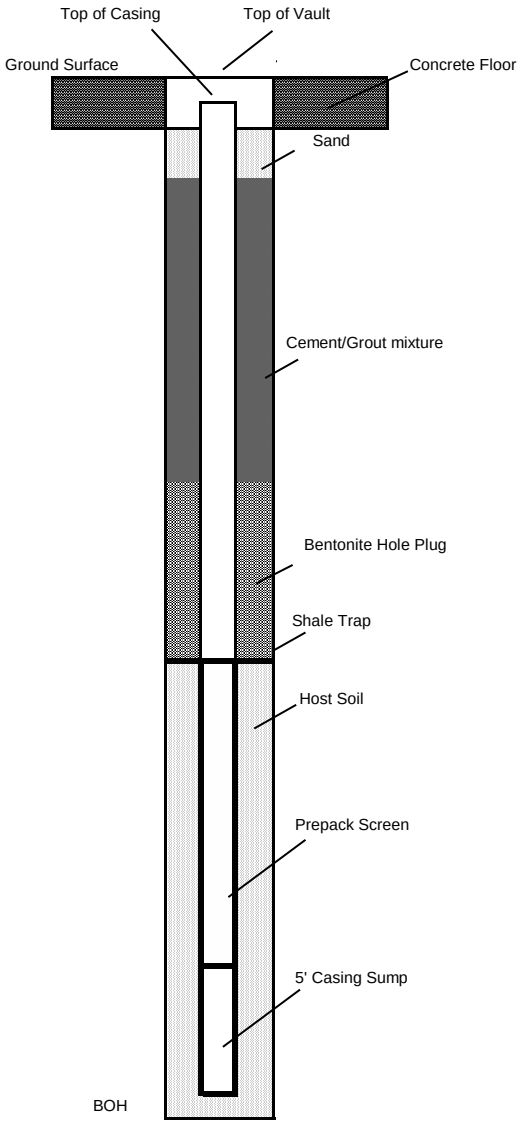
* Depth to groundwater measured relative to ground surface

USACE - Baltimore District

PROJECT: **Area B Landfill Lysimeters**	**HOLE NO.: L1-Towards**

AS BUILT LYSIMETER CONSTRUCTION

HOLE NUMBER: L2-Away	**LOCATION: Fort Detrick, MD**		**DRILLER: Justin Blackson**
PROJECT NAME: Area B Landfill Lysimeters	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: NA**
DATE LYSIMETER COMPLETED: 1/17/2018	**SURFACE:**		**DRILLING METHOD: Hollow Stem Auger**
DATE DEVELOPMENT COMPLETED: NA	**ANGLE OF BORING:**	**40°**	
INSPECTOR: Ashley Woods	**TOP OF PVC CASING:**	**0.2' bgs**	**DEVELOPMENT METHOD: NA**



COORDINATES:	39.4383588 N -77.4549574 W
VERTICAL DEPTH	16.09'
HORIZONTAL LENGTH	19.15'
I.D.OF VAULT:	L2A
TYPE OF VAULT:	8" Diameter
DEPTH TO TOP OF CONCRETE:	0.6 ft
DEPTH TO TOP OF SAND:	0.6' - 5.2'
TYPE OF SAND:	M1 Clean Quartz Sand
DEPTH TO TOP OF SEAL:	0.6'
TYPE OF SEAL:	Cement & Bentonite Grout Mix
DEPTH TO TOP OF FILTER PACK:	No filter pack
DEPTH TO TOP OF FILTER PACK:	No filter pack
WIDTH OF CASING	4" OD
TYPE OF CASING	Schedule 40 PVC
TOP OF GROUT	6.0'
TYPE OF GROUT	3/8" Bentonite Hole Plug
BOTTOM OF GROUT	10.0'
TYPE OF SHALE TRAP:	4.25"
DEPTH OF SHALE TRAP:	10.0'
DEPTH TO TOP OF SCREEN:	10.0'
TYPE OF SCREEN:	2" slotted PVC Prepack
DEPTH TO BOTTOM OF SCREEN:	20.0'
DEPTH TO TOP OF SUMP:	20.0'
DEPTH TO BOTTOM OF SUMP:	25.0'
BOREHOLE DIAMETER:	4.25"
DEPTH TO BOTTOM OF HOLE:	25.0'

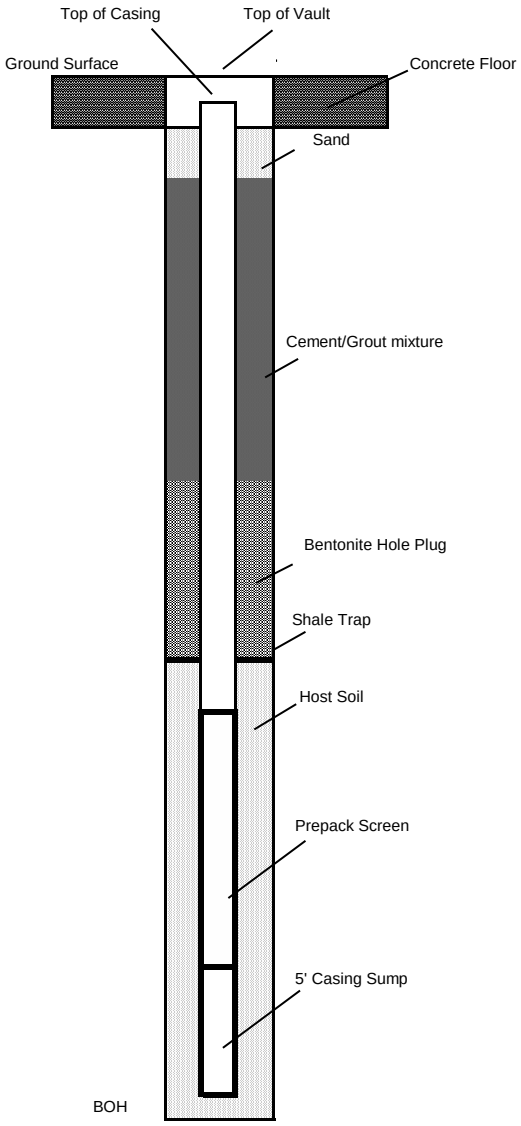
* Depth to groundwater measured relative to ground surface

USACE - Baltimore District

PROJECT: Area B Landfill Lysimeters	**HOLE NO.: L2-Away**

AS BUILT LYSIMETER CONSTRUCTION

HOLE NUMBER: L2-Towards	**LOCATION: Fort Detrick, MD**		**DRILLER: Justin Blackson**
PROJECT NAME: Area B Landfill Lysimeters	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: NA**
DATE LYSIMETER COMPLETED: 1/18/2018	**SURFACE:**		**DRILLING METHOD: Hollow Stem Auger**
DATE DEVELOPMENT COMPLETED: NA	**ANGLE OF BORING:**	**40°**	
INSPECTOR: Ashley Woods	**TOP OF PVC CASING:**	**0.2'**	**DEVELOPMENT METHOD: NA**



COORDINATES:	39.4383588 N -77.4502404 W
VERTICAL DEPTH:	16.07'
HORIZONTAL LENGTH:	19.15'
I.D.OF VAULT:	L2T
TYPE OF VAULT:	8" Diameter
DEPTH TO TOP OF CONCRETE:	0.6 ft
DEPTH TO TOP OF SAND:	0.6' - 5.2'
TYPE OF SAND:	M1 Clean Quartz Sand
DEPTH TO TOP OF SEAL:	0.6'
TYPE OF SEAL:	Cement & Bentonite Grout Mix
DEPTH TO TOP OF FILTER PACK:	No filter pack
DEPTH TO TOP OF FILTER PACK:	No filter pack
WIDTH OF CASING	4" OD
TYPE OF CASING	Schedule 40 PVC
TOP OF GROUT	6.0'
TYPE OF GROUT	3/8" Bentonite Hole Plug
BOTTOM OF GROUT	10.0'
DEPTH TO TOP OF SCREEN:	10.0'
TYPE OF SCREEN:	2" slotted PVC Prepack
DEPTH TO BOTTOM OF SCREEN:	20.0'
DEPTH TO TOP OF SUMP:	20.0'
DEPTH TO BOTTOM OF SUMP:	25.0'
BOREHOLE DIAMETER:	4.25"
DEPTH TO BOTTOM OF HOLE:	25.0'

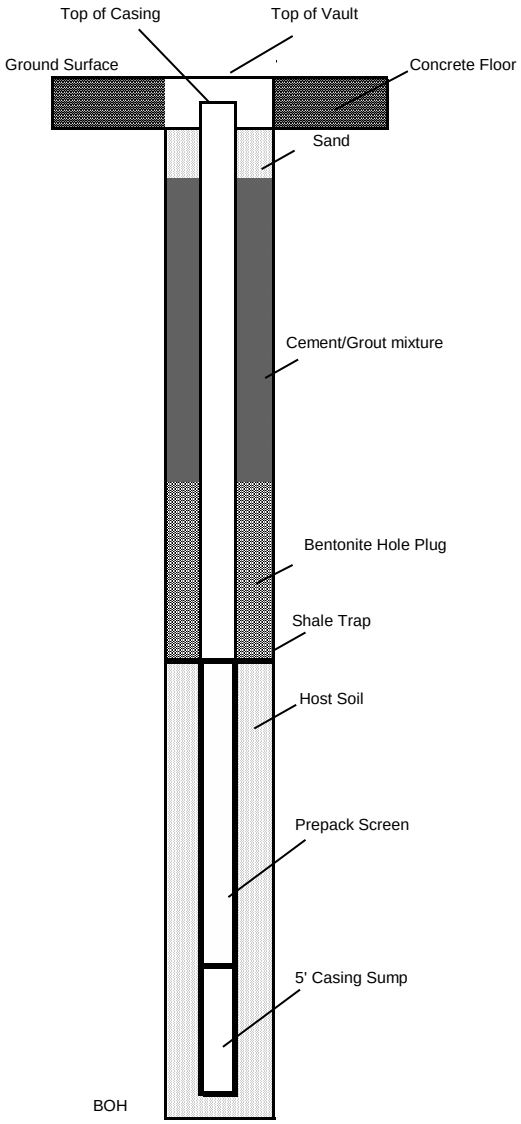
* Depth to groundwater measured relative to ground surface

USACE - Baltimore District

PROJECT: **Area B Landfill Lysimeters**	**HOLE NO.: L2-Towards**

AS BUILT LYSIMETER CONSTRUCTION

HOLE NUMBER: L3-Away	**LOCATION: Fort Detrick, MD**		**DRILLER: Justin Blackson**
PROJECT NAME: Area B Landfill Lysimeters	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: NA**
DATE LYSIMETER COMPLETED: 11/29/2016	**SURFACE:**		**DRILLING METHOD: Hollow Stem Auger**
DATE DEVELOPMENT COMPLETED: NA	**ANGLE OF BORING:**	**40°**	
INSPECTOR: Ashley Woods	**TOP OF PVC CASING:**	**0.2' bgs**	**DEVELOPMENT METHOD: NA**



COORDINATES:	39.437648 N -77.4502404 W
VERTICAL DEPTH:	19.28'
HORIZONTAL LENGTH:	22.98'
I.D.OF VAULT:	L3A
TYPE OF VAULT:	8" Diameter
DEPTH TO TOP OF CONCRETE:	0.6 ft
DEPTH TO TOP OF SAND:	0.4' - 0.6'
TYPE OF SAND:	M1 Clean Quartz Sand
DEPTH TO TOP OF SEAL:	0.6'
TYPE OF SEAL:	Cement & Bentonite Grout Mix
DEPTH TO TOP OF FILTER PACK:	No filter pack
DEPTH TO TOP OF FILTER PACK:	No filter pack
WIDTH OF CASING	4" OD
TYPE OF CASING	Schedule 40 PVC
TOP OF GROUT	10.0'
TYPE OF GROUT	3/8" Bentonite Hole Plug
BOTTOM OF GROUT	20.0'
TYPE OF SHALE TRAP:	4.25"
DEPTH OF SHALE TRAP:	20.0'
DEPTH TO TOP OF SCREEN:	20.0'
TYPE OF SCREEN:	2" slotted PVC Prepack
DEPTH TO BOTTOM OF SCREEN:	25.0'
DEPTH TO TOP OF SUMP:	25.0'
DEPTH TO BOTTOM OF SUMP:	30.0'
BOREHOLE DIAMETER:	4.25"
DEPTH TO BOTTOM OF HOLE:	30.0'

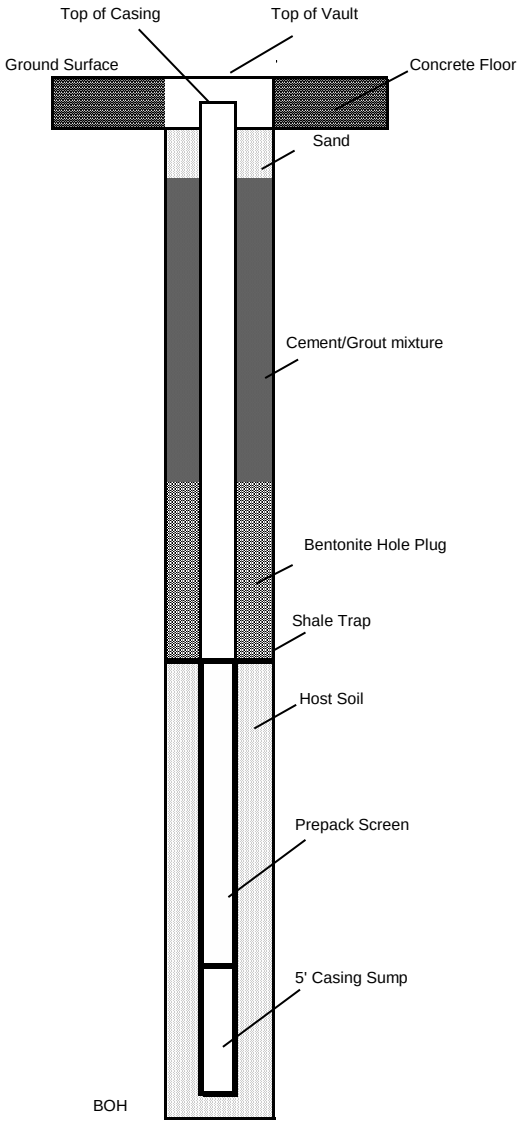
* Depth to groundwater measured relative to ground surface

USACE - Baltimore District

PROJECT: Area B Landfill Lysimeters	**HOLE NO.: L3-Away**

AS BUILT LYSIMETER CONSTRUCTION

HOLE NUMBER: L3-Towards	**LOCATION: Fort Detrick, MD**		**DRILLER: Justin Blackson**
PROJECT NAME: Area B Landfill Lysimeters	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: NA**
DATE LYSIMETER COMPLETED: 11/29/2016	**SURFACE:**		**DRILLING METHOD: Hollow Stem Auger**
DATE DEVELOPMENT COMPLETED: NA	**ANGLE OF BORING:**	**40°**	
INSPECTOR: Ashley Woods	**TOP OF PVC CASING:**	**0.2' bgs**	**DEVELOPMENT METHOD: NA**



COORDINATES:	39.4376527 N -77.450229 W
VERTICAL DEPTH	17.36'
HORIZONTAL LENGTH	20.68'
I.D.OF VAULT:	L3T
TYPE OF VAULT:	8" Diameter
DEPTH TO TOP OF CONCRETE:	0.6 ft
DEPTH TO TOP OF SAND:	0.4' - 0.6'
TYPE OF SAND:	M1 Clean Quartz Sand
DEPTH TO TOP OF SEAL:	0.6'
TYPE OF SEAL:	Cement & Bentonite Grout Mix
DEPTH TO TOP OF FILTER PACK:	No filter pack
DEPTH TO TOP OF FILTER PACK:	No filter pack
WIDTH OF CASING	4" OD
TYPE OF CASING	Schedule 40 PVC
TOP OF GROUT	10.0'
TYPE OF GROUT	3/8" Bentonite Hole Plug
BOTTOM OF GROUT	15.3'
TYPE OF SHALE TRAP:	4.25"
DEPTH OF SHALE TRAP:	15.3'
DEPTH TO TOP OF SCREEN:	15.5'
TYPE OF SCREEN:	2" slotted PVC Prepack
DEPTH TO BOTTOM OF SCREEN:	20.5'
DEPTH TO TOP OF SUMP:	20.5'
DEPTH TO BOTTOM OF SUMP:	25.5'
BOREHOLE DIAMETER:	4.25"
DEPTH TO BOTTOM OF HOLE:	27.0'

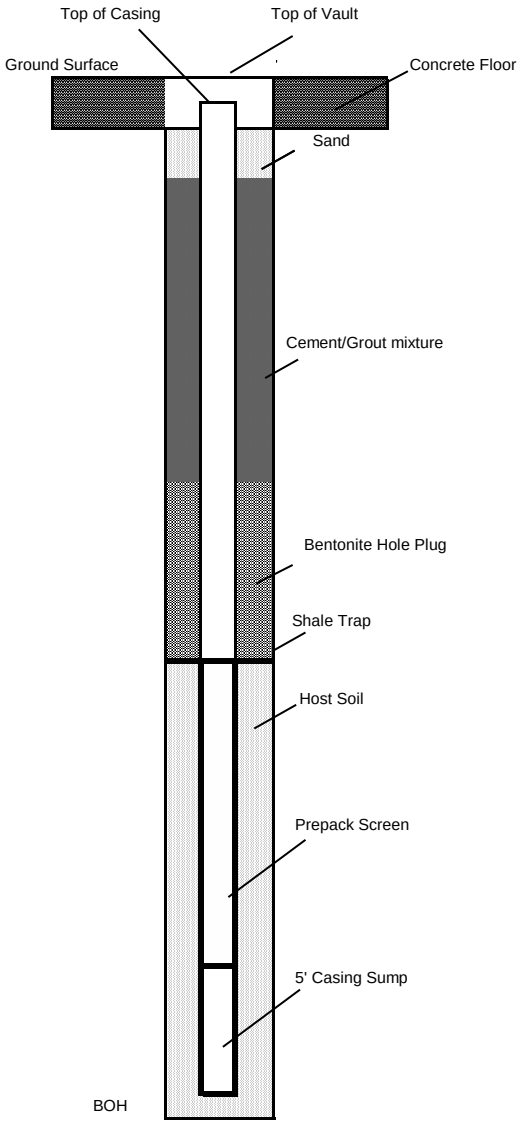
* Depth to groundwater measured relative to ground surface

USACE - Baltimore District

PROJECT: **Area B Landfill Lysimeters**	**HOLE NO.: L3-Towards**

AS BUILT LYSIMETER CONSTRUCTION

HOLE NUMBER: L5-Away	**LOCATION: Fort Detrick, MD**		**DRILLER: Justin Blackson**
PROJECT NAME: Area B Landfill Lysimeters	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: NA**
DATE LYSIMETER COMPLETED: 11/30/2017	**SURFACE:**		**DRILLING METHOD: Hollow Stem Auger**
DATE DEVELOPMENT COMPLETED: NA	**ANGLE OF BORING:**	**40°**	
INSPECTOR: Ashley Woods	**TOP OF PVC CASING:**	**0.2' bgs**	**DEVELOPMENT METHOD: NA**



COORDINATES:	39.4346406 N -77.458458 W
VERTICAL DEPTH:	19.28'
HORIZONTAL LENGTH:	22.98'
I.D.OF VAULT:	L5A
TYPE OF VAULT:	8" Diameter
DEPTH TO TOP OF CONCRETE:	0.6 ft
DEPTH TO TOP OF SAND:	0.4' - 0.6'
TYPE OF SAND:	M1 Clean Quartz Sand
DEPTH TO TOP OF SEAL:	0.6'
TYPE OF SEAL:	Cement & Bentonite Grout Mix
DEPTH TO TOP OF FILTER PACK:	No filter pack
DEPTH TO TOP OF FILTER PACK:	No filter pack
WIDTH OF CASING	4" OD
TYPE OF CASING	Schedule 40 PVC
TOP OF GROUT	10.0'
TYPE OF GROUT	3/8" Bentonite Hole Plug
BOTTOM OF GROUT	15.0'
TYPE OF SHALE TRAP:	4.25"
DEPTH OF SHALE TRAP:	15.0'
DEPTH TO TOP OF SCREEN:	15.0'
TYPE OF SCREEN:	2" slotted PVC Prepack
DEPTH TO BOTTOM OF SCREEN:	25.0'
DEPTH TO TOP OF SUMP:	25.0'
DEPTH TO BOTTOM OF SUMP:	30.0'
BOREHOLE DIAMETER:	4.25"
DEPTH TO BOTTOM OF HOLE:	30.0'

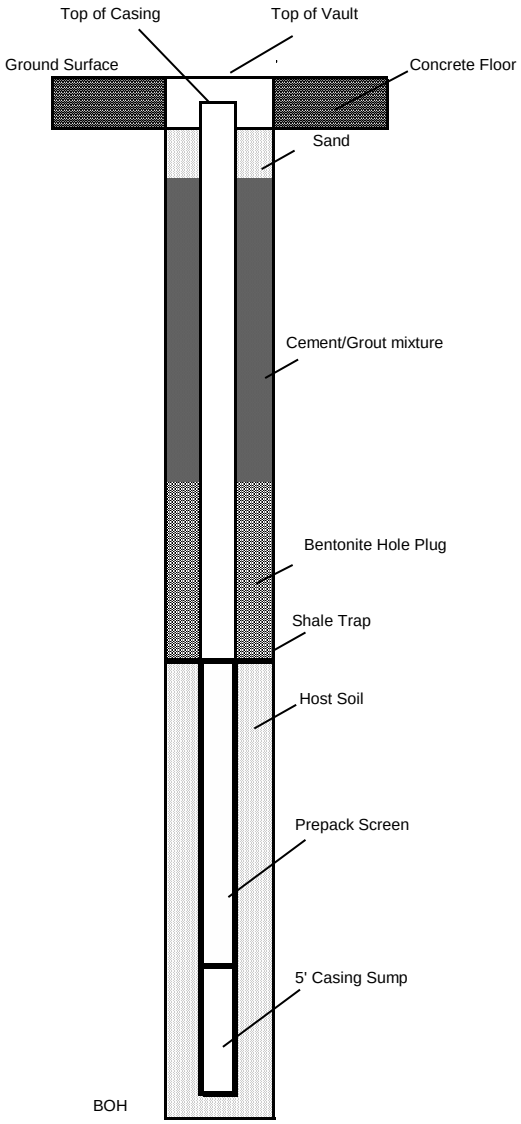
* Depth to groundwater measured relative to ground surface

USACE - Baltimore District

PROJECT: **Area B Landfill Lysimeters**	**HOLE NO.: L5-Away**

AS BUILT LYSIMETER CONSTRUCTION

HOLE NUMBER: L5-Towards	**LOCATION: Fort Detrick, MD**		**DRILLER: Justin Blackson**
PROJECT NAME: Area B Landfill Lysimeters	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: NA**
DATE LYSIMETER COMPLETED: 2/8/2018	**SURFACE:**		**DRILLING METHOD: Hollow Stem Auger**
DATE DEVELOPMENT COMPLETED: NA	**ANGLE OF BORING:**	**40°**	
INSPECTOR: Ashley Woods	**TOP OF PVC CASING:**	**0.2' bgs**	**DEVELOPMENT METHOD: NA**



COORDINATES:	39.4342193 N -77.4607627 W
VERTICAL DEPTH:	18.64'
HORIZONTAL LENGTH:	22.21'
I.D.OF VAULT:	L5T
TYPE OF VAULT:	8" Diameter
DEPTH TO TOP OF CONCRETE:	0.6 ft
DEPTH TO TOP OF SAND:	0.4' - 0.6'
TYPE OF SAND:	M1 Clean Quartz Sand
DEPTH TO TOP OF SEAL:	0.6'
TYPE OF SEAL:	Cement & Bentonite Grout Mix
DEPTH TO TOP OF FILTER PACK:	No filter pack
DEPTH TO TOP OF FILTER PACK:	No filter pack
WIDTH OF CASING	4" OD
TYPE OF CASING	Schedule 40 PVC
TOP OF GROUT	10.0'
TYPE OF GROUT	3/8" Bentonite Hole Plug
BOTTOM OF GROUT	14.0'
TYPE OF SHALE TRAP:	4.25"
DEPTH OF SHALE TRAP:	14.0'
DEPTH TO TOP OF SCREEN:	14.0'
TYPE OF SCREEN:	2" slotted PVC Prepack
DEPTH TO BOTTOM OF SCREEN:	24.0'
DEPTH TO TOP OF SUMP:	24.0'
DEPTH TO BOTTOM OF SUMP:	29.0'
BOREHOLE DIAMETER:	4.25"
DEPTH TO BOTTOM OF HOLE:	29.0'

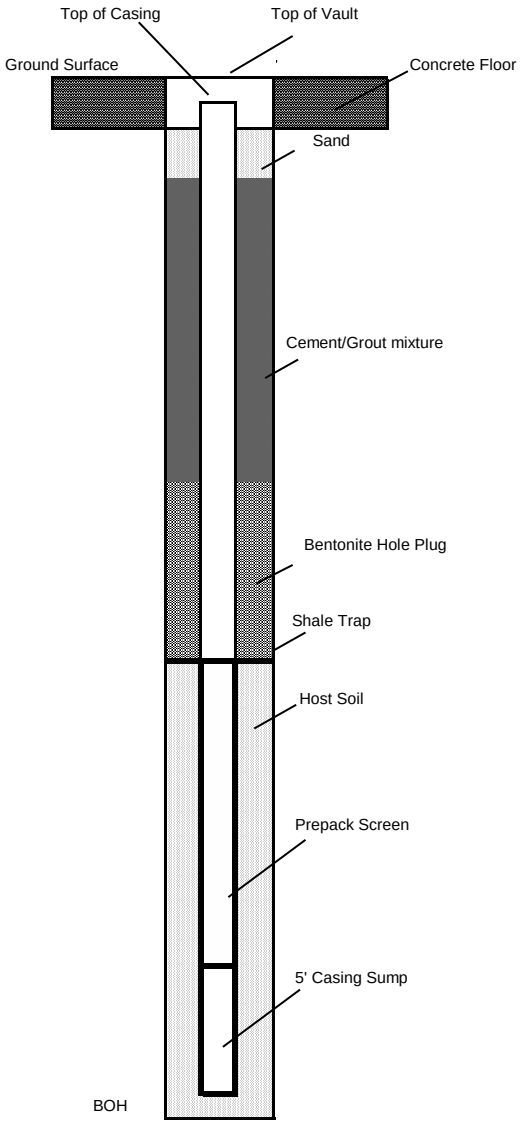
* Depth to groundwater measured relative to ground surface

USACE - Baltimore District

PROJECT: **Area B Landfill Lysimeters**	**HOLE NO.: L5-Towards**

AS BUILT LYSIMETER CONSTRUCTION

HOLE NUMBER: L6-Away	**LOCATION: Fort Detrick, MD**		**DRILLER: Justin Blackson**
PROJECT NAME: Area B Landfill Lysimeters	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: NA**
DATE LYSIMETER COMPLETED: 11/15/2016	**SURFACE:**		**DRILLING METHOD: Hollow Stem Auger**
DATE DEVELOPMENT COMPLETED: NA	**ANGLE OF BORING:**	**40°**	
INSPECTOR: Ashley Woods	**TOP OF PVC CASING:**	**0.2' bgs**	**DEVELOPMENT METHOD: NA**



COORDINATES:	39.4319159 A -77.455456 W
VERTICAL DEPTH:	19.28
HORIZONTAL LENGTH:	22.98
I.D.OF VAULT:	L6A
TYPE OF VAULT:	8" Diameter
DEPTH TO TOP OF CONCRETE:	0.6 ft
DEPTH TO TOP OF SAND:	0.4' - 0.6'
TYPE OF SAND:	M1 Clean Quartz Sand
DEPTH TO TOP OF SEAL:	0.6'
TYPE OF SEAL:	Cement & Bentonite Grout Mix
DEPTH TO TOP OF FILTER PACK:	No filter pack
DEPTH TO TOP OF FILTER PACK:	No filter pack
WIDTH OF CASING	4" OD
TYPE OF CASING	Schedule 40 PVC
TOP OF GROUT	10.0'
TYPE OF GROUT	3/8" Bentonite Hole Plug
BOTTOM OF GROUT	20.0'
TYPE OF SHALE TRAP:	4.25"
DEPTH OF SHALE TRAP:	20.0'
DEPTH TO TOP OF SCREEN:	20.0'
TYPE OF SCREEN:	2" slotted PVC Prepack
DEPTH TO BOTTOM OF SCREEN:	25.0'
DEPTH TO TOP OF SUMP:	25.0'
DEPTH TO BOTTOM OF SUMP:	30.0'
BOREHOLE DIAMETER:	4.25"
DEPTH TO BOTTOM OF HOLE:	30.0'

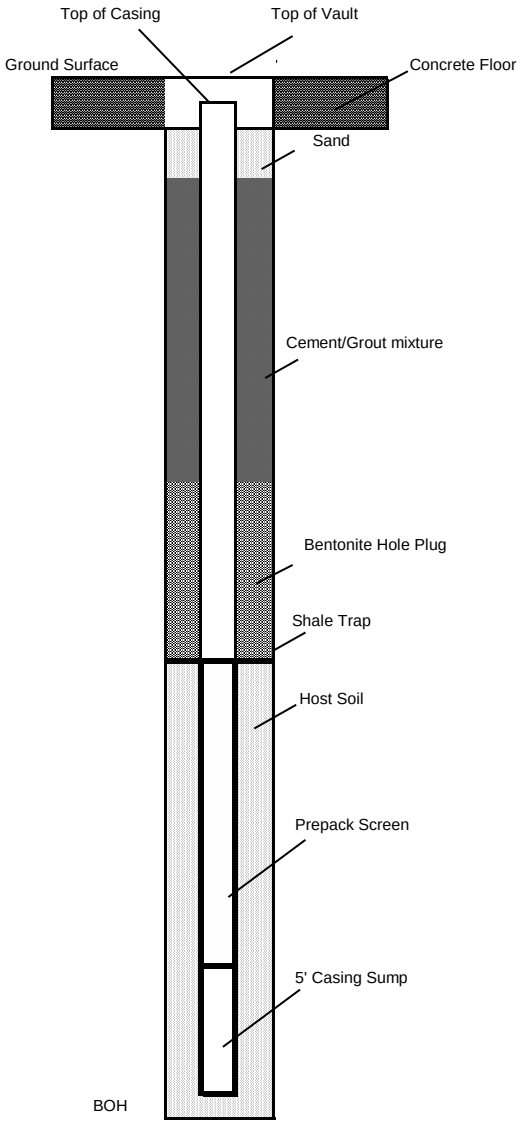
* Depth to groundwater measured relative to ground surface

USACE - Baltimore District

PROJECT: **Area B Landfill Lysimeters**	**HOLE NO.: L6-Away**

AS BUILT LYSIMETER CONSTRUCTION

HOLE NUMBER: L6-Towards	**LOCATION: Fort Detrick, MD**		**DRILLER: Justin Blackson**
PROJECT NAME: Area B Landfill Lysimeters	**ELEVATIONS (FT MSL)**		**DEPTH TO GW (FT)*: NA**
DATE LYSIMETER COMPLETED: 11/16/2016	**SURFACE:**		**DRILLING METHOD: Hollow Stem Auger**
DATE DEVELOPMENT COMPLETED: NA	**ANGLE OF BORING:**	**40°**	
INSPECTOR: Ashley Woods	**TOP OF PVC CASING:**	**0.2' bgs**	**DEVELOPMENT METHOD: NA**



COORDINATES:	39.4319068 N 75° 42' 11.88" W
VERTICAL DEPTH:	19.28'
HORIZONTAL LENGTH:	22.98'
I.D.OF VAULT:	Lysimeter
TYPE OF VAULT:	8" Diameter
DEPTH TO TOP OF CONCRETE:	0.6 ft
DEPTH TO TOP OF SAND:	0.4' - 0.6'
TYPE OF SAND:	M1 Clean Quartz Sand
DEPTH TO TOP OF SEAL:	0.6'
TYPE OF SEAL:	Cement & Bentonite Grout Mix
DEPTH TO TOP OF FILTER PACK:	No filter pack
DEPTH TO TOP OF FILTER PACK:	No filter pack
WIDTH OF CASING	4" OD
TYPE OF CASING	Schedule 40 PVC
TOP OF GROUT	10.0'
TYPE OF GROUT	3/8" Bentonite Hole Plug
BOTTOM OF GROUT	20.0'
TYPE OF SHALE TRAP:	4.25"
DEPTH OF SHALE TRAP:	20.0'
DEPTH TO TOP OF SCREEN:	20.0'
TYPE OF SCREEN:	2" slotted PVC Prepack
DEPTH TO BOTTOM OF SCREEN:	25.0'
DEPTH TO TOP OF SUMP:	25.0'
DEPTH TO BOTTOM OF SUMP:	30.0'
BOREHOLE DIAMETER:	4.25"
DEPTH TO BOTTOM OF HOLE:	30.0'

* Depth to groundwater measured relative to ground surface

USACE - Baltimore District

PROJECT: **Area B Landfill Lysimeters**	**HOLE NO.: L6-Towards**

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ATTACHMENT 8

Site Inspection Checklist and Photographic Record

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Five-Year Review Site Inspection Checklist
Fort Detrick Area B Landfills

I. SITE INFORMATION

Site name: Fort Detrick Area B Landfills	**Date of inspection:** 10 September 2018
Location and Region: Frederick, Maryland	**EPA ID:** N/A
Agency, office, or company leading the five-year review: US Army Corps of Engineers, Buffalo District	**Weather/temperature:** Overcast, Rainy/mid to low 60s (ºF)

Remedy Includes: (Check all that apply)

- ☒ Landfill cover/containment
- ☐ Access controls
- ☒ Institutional controls
- ☐ Groundwater pump and treatment
- ☐ Surface water collection and treatment
- ☐ Monitored natural attenuation
- ☐ Groundwater containment
- ☐ Vertical barrier walls
- ☐ Other _____

Attachments: ☐ Inspection team roster attached ☐ Site map attached

II. INTERVIEWS (See FYR for all interview documentation)

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)

1. **O&M Documents**

☒ O&M manual	☒ Readily available	☒ Up to date	☐ N/A
☒ As-built drawings	☒ Readily available	☒ Up to date	☐ N/A
☒ Maintenance logs	☒ Readily available	☒ Up to date	☐ N/A

Remarks: _____

2. **Site-Specific Health and Safety Plan** ☐ Readily available ☐ Up to date ☒ N/A
   ☐ Contingency plan/emergency response plan ☐ Readily available ☐ Up to date ☒ N/A
   Remarks: Remedy implementation is complete and O&M is underway. Site maintenance, inspections, and monitoring are subject to contractor plans for safety and emergencies.

3. **O&M and OSHA Training Records** ☐ Readily available ☐ Up to date ☒ N/A
   Remarks: Contractors are required to maintain O&M and OSHA Training Records

4. **Permits and Service Agreements**

☐ Air discharge permit	☐ Readily available	☐ Up to date	☒ N/A
☐ Effluent discharge	☐ Readily available	☐ Up to date	☒ N/A
☐ Waste disposal, POTW	☐ Readily available	☐ Up to date	☒ N/A
☐ Other permits_____	☐ Readily available	☐ Up to date	☒ N/A

   Remarks: No permits are required for the landfills or land use controls. IDW is generated during monitoring events and disposed of by contractors.

5. **Gas Generation Records** ☐ Readily available ☐ Up to date ☒ N/A
   Remarks: _____

Five-Year Review Site Inspection Checklist
Fort Detrick Area B Landfills

6.	**Settlement Monument Records**	☐ Readily available	☐ Up to date	☒ N/A
	Remarks: No settlement monuments are present.			
7.	**Groundwater Monitoring Records**	☒ Readily available	☒ Up to date	☐ N/A
	Remarks: Monitoring reports through April 2017 were available for review.			
8.	**Leachate Extraction Records**	☐ Readily available	☐ Up to date	☒ N/A
	Remarks: _____			
9.	**Discharge Compliance Records**			
	☐ Air	☐ Readily available	☐ Up to date	☒ N/A
	☐ Water (effluent)	☐ Readily available	☐ Up to date	☒ N/A
	Remarks: _____			
10.	**Daily Access/Security Logs**	☐ Readily available	☐ Up to date	☒ N/A
	Remarks: The Area B Landfills are secured by a locked gate accessed via card.			

IV. O&M COSTS

1. **O&M Organization**

☐ State in-house ☐ Contractor for State
☐ PRP in-house ☐ Contractor for PRP
☐ Federal Facility in-house ☒ Contractor for Federal Facility
☐ Other: The Area B Landfills are not subject to an operating system.

2. **O&M Cost Records** (N/A)

3. **Unanticipated or Unusually High O&M Costs During Review Period** (N/A)

V. ACCESS AND INSTITUTIONAL CONTROLS ☒ Applicable ☐ N/A

A. Fencing

1. **Fencing damaged** ☐ Location shown on site map ☒ Gates secured ☐ N/A

Remarks: _____

Five-Year Review Site Inspection Checklist
Fort Detrick Area B Landfills

B. Other Access Restrictions

1. **Signs and other security measures** ☐ Location shown on site map ☐ N/A

Remarks: LUC signage is present at the boundaries of each landfill. Restricted access signs are posted on the Area B fencing and access gate.

C. Institutional Controls (ICs)

1. **Implementation and enforcement**

Site conditions imply ICs not properly implemented ☐ Yes ☒ No ☐ N/A
Site conditions imply ICs not being fully enforced ☐ Yes ☒ No ☐ N/A

Type of monitoring (*e.g.*, self-reporting, drive by)Contractor
FrequencySemi-annual
Responsible party/agency USEPA/MDE
Contact

Name	Title	Date	Phone no.

Reporting is up-to-date ☒ Yes ☐ No ☐ N/A
Reports are verified by the lead agency ☒ Yes ☐ No ☐ N/A

Specific requirements in deed or decision documents have been met ☒ Yes ☐ No ☐ N/A
Violations have been reported ☐ Yes ☒ No ☐ N/A
Other problems or suggestions: ☐ Report attached

2. **Adequacy** ☒ ICs are adequate ☐ ICs are inadequate ☐ N/A

D. General

1. **Vandalism/trespassing** ☐ Location shown on site map ☒ No vandalism evident
Remarks:

2. **Land use changes on site** ☐ N/A
Remarks: Solar panels have been installed on Area B but the panels do not interfere with the Area B Landfills.

3. **Land use changes off site** ☒ N/A
Remarks:

VI. GENERAL SITE CONDITIONS

A. Roads ☒ Applicable ☐ N/A

1. **Roads damaged** ☐ Location shown on site map ☒ Roads adequate ☐ N/A
Remarks: Road conditions are variable from paved to gravel and vary in condition. The installation indicated that the roads are maintained for access to the active landfill and other locations within Area B.

B. Other Site Conditions

Five-Year Review Site Inspection Checklist
Fort Detrick Area B Landfills

Remarks: _____

VII. LANDFILL COVERS ☒ Applicable ☐ N/A

A. Landfill Surface ☒ Applicable ☐ N/A

1. **Settlement** (Low spots) ☐ Location shown on site map ☒ Settlement not evident
   Areal extent _____ Depth _____
   Remarks: Note that vegetative growth made inspection of many of the landfill covers difficult to impossible.

2. **Cracks** ☐ Location shown on site map ☒ Cracking not evident
   Lengths _____ Widths _____ Depths _____
   Remarks: Note that vegetative growth made inspection of many of the landfill covers difficult to impossible.

3. **Erosion** ☐ Location shown on site map ☒ Erosion not evident
   Areal extent _____ Depth _____
   Remarks: Note that vegetative growth made inspection of many of the landfill covers difficult to impossible.

4. **Holes** ☐ Location shown on site map ☒ Holes not evident
   Areal extent _____ Depth _____
   Remarks: Note that vegetative growth made inspection of many of the landfill covers difficult to impossible.

5. **Vegetative Cover** ☒ Grass ☒ Cover properly established ☒ No signs of stress
   ☐ Trees/Shrubs (indicate size and locations on a diagram)
   Remarks: _____

6. **Alternative Cover (armored rock, concrete, etc.)** ☒ N/A
   Remarks: _____

7. **Bulges** ☐ Location shown on site map ☒ Bulges not evident
   Areal extent _____ Height _____
   Remarks: Note that vegetative growth made inspection of many of the landfill covers difficult to impossible.

8. **Wet Areas/Water Damage** ☒ Wet areas/water damage not evident
   ☐ Wet areas ☐ Location shown on site map Areal extent _____
   ☐ Ponding ☐ Location shown on site map Areal extent _____
   ☐ Seeps ☐ Location shown on site map Areal extent _____
   ☐ Soft subgrade ☐ Location shown on site map Areal extent _____
   Remarks: _____

9. **Slope Instability** ☐ Slides ☐ Location shown on site map ☒ No evidence of slope instability
   Areal extent _____
   Remarks: _____

Five-Year Review Site Inspection Checklist
Fort Detrick Area B Landfills

B. Benches ☐ Applicable ☒ N/A

(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)

C. Letdown Channels ☐ Applicable ☒ N/A

(Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)

D. Cover Penetrations ☒ Applicable ☐ N/A

1. **Gas Vents** ☐ Active ☒ Passive
   ☐ Properly secured/locked ☒ Functioning ☐ Routinely sampled ☒ Good condition
   ☐ Evidence of leakage at penetration ☐ Needs maintenance
   ☐ N/A
   Remarks: _____

2. **Gas Monitoring Probes**
   ☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
   ☐ Evidence of leakage at penetration ☐ Needs maintenance ☒ N/A
   Remarks: _____

3. **Monitoring Wells** (within surface area of landfill)
   ☒ Properly secured/locked ☒ Functioning ☒ Routinely sampled ☒ Good condition
   ☐ Evidence of leakage at penetration ☐ Needs maintenance ☐ N/A
   Remarks: _____

4. **Leachate Extraction Wells**
   ☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
   ☐ Evidence of leakage at penetration ☐ Needs maintenance ☒ N/A
   Remarks: _____

5. **Settlement Monuments** ☐ Located ☐ Routinely surveyed ☒ N/A
   Remarks: _____

E. Gas Collection and Treatment ☐ Applicable ☒N/A

F. Cover Drainage Layer ☒ Applicable ☐ N/A

1. **Outlet Pipes Inspected** ☐ Functioning ☐ N/A
   Remarks: Note that vegetative growth made inspection of many of the landfill covers difficult to impossible. No outlet pipes were inspected.

2. **Outlet Rock Inspected** ☐ Functioning ☐ N/A
   Remarks: Note that vegetative growth made inspection of many of the landfill covers difficult to impossible. No outlet rock was inspected.

G. Detention/Sedimentation Ponds ☐ Applicable ☒ N/A

H. Retaining Walls ☐ Applicable ☒ N/A

Five-Year Review Site Inspection Checklist
Fort Detrick Area B Landfills

I. Perimeter Ditches/Off-Site Discharge ☐ Applicable ☒ N/A	
VIII. VERTICAL BARRIER WALLS ☐ Applicable ☒ N/A	
IX. GROUNDWATER/SURFACE WATER REMEDIES ☐ Applicable ☒ N/A	
A. Groundwater Extraction Wells, Pumps, and Pipelines ☐ Applicable ☒ N/A	
B. Surface Water Collection Structures, Pumps, and Pipelines ☐ Applicable ☒ N/A	
C. Treatment System ☐ Applicable ☒ N/A	
D. Monitoring Data ☒ Applicable ☐ N/A	
1. Monitoring Data	☒ Is routinely submitted on time ☒ Is of acceptable quality
2. Monitoring Data Suggests:	☐ Groundwater plume is effectively contained ☒ Contaminant concentrations are declining
E. Monitored Natural Attenuation ☐ Applicable ☒ N/A	
X. OTHER REMEDIES	
If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction. Remarks: N/A	
XI. OVERALL OBSERVATIONS	
A. Implementation of the Remedy	
Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.). The remedy for the Area B Landfills includes landfill caps and land use controls. The vegetation on many of the caps made inspection of the cap surfaces difficult to impossible. Inspection of the visible caps did not identify any issues with the integrity of the remedy. Land use control signage was present.	
B. Adequacy of O&M	
Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy. As noted above, the maintenance of the vegetative cover should be performed prior to site inspections to allow for improved visibility of the caps. Groundwater monitoring wells were observed in good, secured condition. Bollards associated with at least one monitoring well were observed damaged.	
C. Early Indicators of Potential Remedy Problems	
Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future. No early indicators of potential remedy problems were observed.	

Five-Year Review Site Inspection Checklist
Fort Detrick Area B Landfills

D.	Opportunities for Optimization
	Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy. No opportunities for optimization were identified

Five-Year Review Site Inspection Checklist
Fort Detrick Area B Landfills

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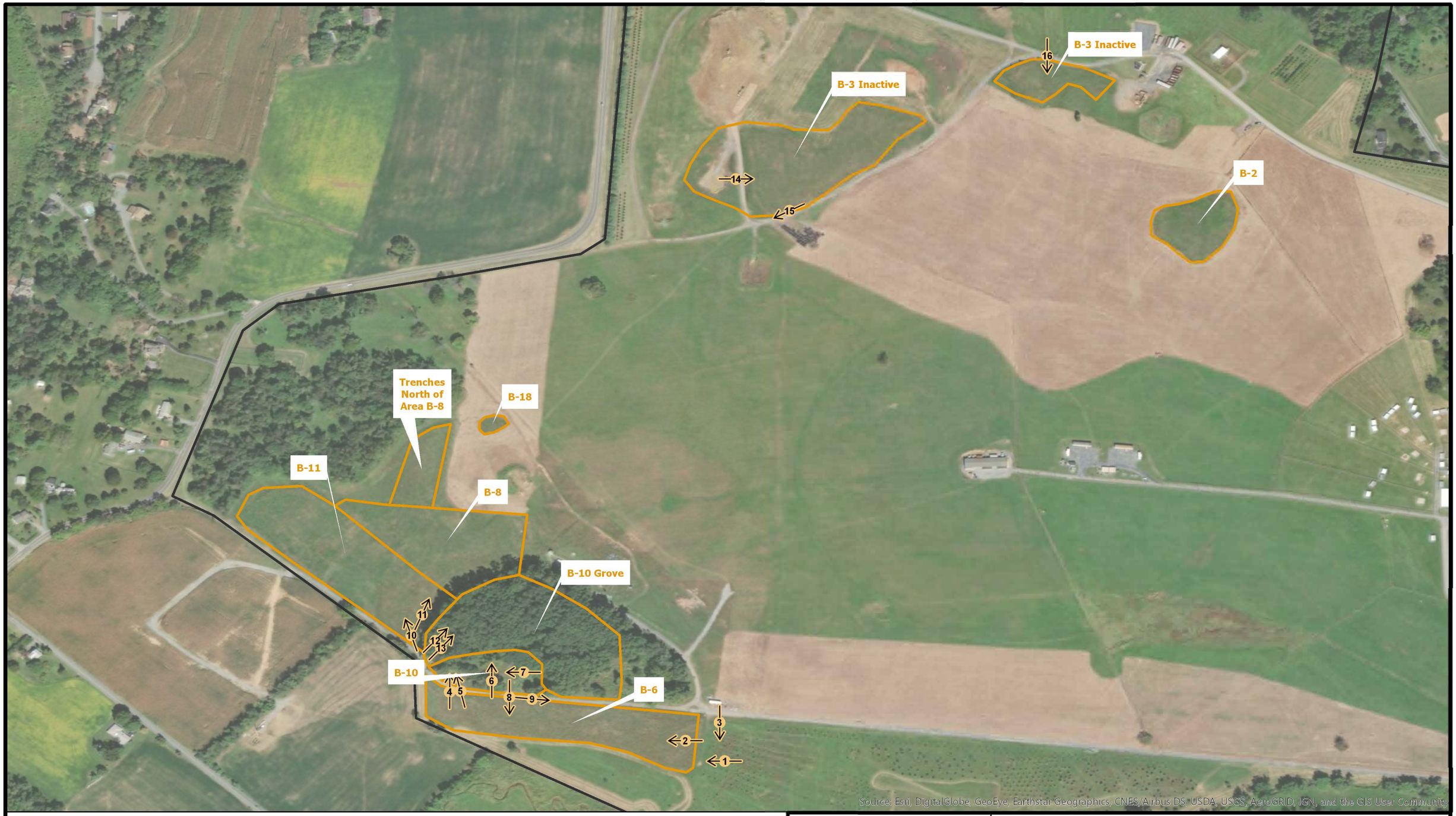

Photo Location & Direction

Area B Boundary

Environmental Sites

N
W E
S

0 150 300 600
Feet

US Army Corps of Engineers
Buffalo District

U.S. Army Corps of Engineers
Buffalo District
Buffalo, New York

Area B Landfill Photo Locations

Document Name: FYR_19_Detrick.mxd
Drawn By: H5TDEEMP

Five Year Review
Fort Detrick
Frederick, Maryland

Figure A8-1

PHOTOGRAPHIC RECORD
Fort Detrick

Area B

Photo No. 1
(10-Sept-2018)

Description: View of the B-6 area LUC sign at the east end of the landfill.

Photo No. 2
(10-Sept-2018)

Description: View looking west across the top of area B-6.

PHOTOGRAPHIC RECORD
Fort Detrick

Area B

Photo No. 3
(10-Sept-2018)

Description: View looking south at a typical monitoring well in Area C (BMW74)

Photo No. 4
(10-Sept-2018)

Description: View looking north at LUC signage across the western most portion of area B-10.

PHOTOGRAPHIC RECORD
Fort Detrick

Area B

Photo No. 5
(10-Sept-2018)

Description: Close up of LUC signage at the western portion of area B-10.

Photo No. 6
(10-Sept-2018)

Description: View looking north across the eastern portion of area B-10.

PHOTOGRAPHIC RECORD
Fort Detrick

Area B

Photo No. 7
(10-Sept-2018)

Description: View of LUC signage at the eastern portion of area B-10.

Photo No. 8
(10-Sept-2018)

Description: View of LUC signage at B-6 in the western disposal area.

PHOTOGRAPHIC RECORD
Fort Detrick

Area B

Photo No. 9
(10-Sept-2018)

Description: View looking southeast across the western end of area B-6.

Photo No. 10
(10-Sept-2018)

Description: View looking northwest across the Western Disposal Area from the access road at the southern extent of the landfill.

PHOTOGRAPHIC RECORD
Fort Detrick

Area B

Photo No. 11
(10-Sept-2018)

Description: View looking north across the Western Disposal Area with solar panels in the distance.

Photo No. 12
(10-Sept-2018)

Description: View of a monitoring well with damaged bollards.

PHOTOGRAPHIC RECORD
Fort Detrick

Area B

Photo No. 13
(10-Sept-2018)

Description: View of a monitoring well label.

Photo No. 14
(10-Sept-2018)

Description: View of area B-3 west LUC sign.

PHOTOGRAPHIC RECORD
Fort Detrick

Area C

Photo No. 15
(10-Sept-2018)

Description: View looking west at the area B-3 west landfill and stormwater feature.

Photo No. 16
(10-Sept-2018)

Description: View of the area B-3 east LUC sign and landfill vegetation.

PHOTOGRAPHIC RECORD
Fort Detrick

Area C

Photo No. 17
(10-Sept-2018)

Description: View looking southwest across the area B-3 east landfill.

Photo No. 18
(10-Sept-2018)

Description: View of typical site fencing at Area C.

ATTACHMENT 9

Interview Records

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INTERVIEW RECORD

Site Name:	**Fort Detrick**	**EPA ID No.:** N/A	
Subject:	**Area B Landfills (Area B-2, Area B-3 Inactive, Area B-6, and the Western Disposal Areas)**	**Time:** 10:00	**Date:** 09/10/2018
Type: ☐ Telephone ☒ Visit ☐ Other **Location of Visit:** Fort Detrick		☐ Incoming ☐ Outgoing	

Contact Made By:

Name: Holly Akers	**Title:** Project Engineer	**Organization:** US Army Corps of Engineers, Buffalo District

Individual Contacted:

Name: Shelly K. Morris	**Title:** Onsite Contractor, ERG	**Organization:** Fort Detrick
Telephone No: (301) 619-3152 **Fax No:** **E-Mail Address:** shelly.k.kolbmorris.ctr@mail.mil		**Street Address:** 262 Beasley Drive **City, State, Zip:** Frederick, MD 21702

The following interview is specific to the remedies (landfill caps and land use controls) performed at the Fort Detrick Area B Landfills (Area B-2, Area B-3 Inactive, Area B-6, and the Western Disposal Areas). The Fort Detrick Areas A and C remedies are reviewed under separate cover. Please provide comment on these remedies on the site specific interview records. This review is not specific to the Area B Groundwater unit which does not have a remedy selected.

Summary Of Conversation

1. How long and in what capacity have you been associated with the Fort Detrick Area B Landfills?
   Contractor to Environmental Management Office for approximately 3 years with direct management of the Area B Landfills. Prior experience as an environmental consultant to Fort Detrick.
2. Do you believe the Area B Landfills are functioning as intended?
   Yes, the landfill covers are in place, maintained, and monitored. Land use controls are enforced.
3. How are land use controls enforced?
   Any intrusive activities planned on Fort Detrick are subject to a permitting requirement. The permit applications are reviewed by several departments including environmental. We have GIS layers with the extents of the Area B Landfills included in the installation Master Plan and these are referenced to prevent any activities within their boundaries. Groundwater use is not permitted in Area B. Development of any kind is not permitted on the landfill caps.
4. Are you aware of any complaints, violations, or other incidents related to the Area B Landfills? If so, please give details of the event(s).
   No complaints, violations, or other incidents. Some RAB members have expressed concern over a proposed road included in the Frederick planning documents to extend across Area B.However, the project is still in the planning phase and the City will complete an Environmental Assessment for review by Fort Detrick Environmental Division, EPA and MDE prior to a making a final decision on the project. Protecting the integrity of the Area B remedy and the protection of human health and the environment will be ensured with any and all projects at Area B.
5. Are there any other land use changes at or in the immediate vicinity of Area B?
   There are several new solar panel arrays across Area B. Care was taken to ensure these panels did not impact the Area B Landfills upon installation and maintenance.

INTERVIEW RECORD

Site Name:	**Fort Detrick**	**EPA ID No.:** N/A	
Subject:	**Area B Landfills (Area B-2, Area B-3 Inactive, Area B-6, and the Western Disposal Areas)**	**Time:** 10:00	**Date:** 09/10/2018

6. What maintenance/monitoring plans are currently in place for the Area B Landfills?
Groundwater has been monitored on a semi-annual basis since 2016. Prior to this time, groundwater monitoring was subject to the Area B Groundwater programs only which are quarterly monitoring. The monitoring contracts include inspection and as-needed maintenance of the landfills. Sixteen new monitoring wells and lysimeters were recently installed as part of the Area B Landfill program but data from these activities is not yet available. Routine animal control for burrowing animals is performed to reduce the number of burrows in the caps.

7. Is there any other data collected in association with the Area B Landfill remedies?
Yes, vapor intrusion monitoring was conducted as part of the Area B Groundwater RI. Data under this program was collected in 2013 and 2016. A human health risk assessment was drafted using the 2013 and 2016 data and is currently in the regulatory review and revision process. Significant work is planned for the Area B Groundwater unit including pilot study to evaluate remedial technologies. The Area B Groundwater RI is currently under internal Army Review.

8. Do you have any comments, suggestions, or recommendations regarding the management or operation of the Area B Landfills?

ATTACHMENT 10

ARARs

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ARAR EVALUATION

BACKGROUND

Section 121(d)(2)(A) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) [42 U.S. Code § 9621] specifies that remedial actions must meet standards, criteria, or limitations promulgated under federal environmental law, which are determined to be legally applicable to the hazardous substance or pollutant or contaminant concerned or are relevant and appropriate under the circumstances of the release or threatened release of such hazardous substance or pollutant or contaminant.

OBJECTIVE

This ARAR evaluation was prepared to address Question B of the CERCLA five-year review, "Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives used at the time of the remedy selection still valid?"

This is the second five-year review of the Area B Landfills located at Fort Detrick, Frederick County, City of Frederick, Maryland. The remedies at the Area B Landfills are not on the National Priorities List (NPL); however, Area B Groundwater is listed on the NPL as United States Environmental Protection Agency (USEPA) ID MD985397249. This operable unit is addressed separately from the Area B Landfills. No remedy has been selected for the Area B Groundwater.

AREA B LANDFILLS

Evaluation

Currently, Area B of Fort Detrick is primarily used for animal farming by the USAMRIID and for landfill operating under State of Maryland Permit number 2005-WMF-0327. There are no residential areas within Area B. The area surrounding Area B consists of agricultural, residential, and small commercial and government areas.

The Area B Inactive Landfills are collectively identified as the following sites for the purposes of this five-year review:

1. Area B-11 (FTD 49)
2. Area B-2 (FTD 50)
3. Area B-3 Inactive (FTD 51)
4. Area B-6 (FTD 69)
5. Area B-8, the Trenches North of Area B-8, and Area B-18 (FTD 70)
6. Area B-10 and B-Grove (FTD 71)

Remedies were selected for the Area B Landfills in two Decision Documents (DDs):

- DD for Area B-2 (FTD 50) [Shaw Environmental, Inc., 2008]
- DD for Area B-3 Inactive (FTD-51), Area B-6 (FTD-69), and the Western Disposal Areas (FTDs-70, 71, 49) [Shaw Environmental, Inc., 2009]

Area B-2

The DD for Area B-2 (FTD-50) [Shaw Environmental, Inc., 2008] remedy addressed the potential for site worker, visitor, and off-site resident exposure to contaminated soil/waste by requiring a landfill cap, meeting State of Maryland regulations for industrial waste landfill closure, and land use controls (LUCs) to prevent land use that would compromise the integrity of the closure cap. Future land use in Area B-2 is expected to remain agricultural fields.

Chemicals of potential concern in soil/waste at Area B-2, identified in Section 2.7 of the DD for Area B-2 (FTD-50) [Shaw Environmental, Inc., 2008], were arsenic, chromium, iron, manganese, thallium, vanadium, aldrin, Aroclor-1254, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and heptachlor epoxide.

There were no chemical- or location-specific ARARs identified for Area B-2. Section 2.12.1 of the DD for Area B-2 (FTD-50) [Shaw Environmental, Inc., 2008] required that the landfill cap design meet State of Maryland regulations for industrial waste landfill closure defined in COMAR 26.04.07.21(H). This design would "minimize infiltration into the landfill and include a low permeability cap, drainage layer, final earthen cover, and vegetative stabilization. The cap would be sloped at a minimum of 4 percent to induce water runoff."

The State of Maryland regulations for industrial waste landfill closure [COMAR 26.04.07.21(H)] have not changed since the DD for Area B-2 (FTD-50) [Shaw Environmental, Inc., 2008] was issued.

Area B-3 Inactive, Area B-6, and the Western Disposal Areas

The DD for Area B-3 Inactive (FTD-51), Area B-6 (FTD-69), and the Western Disposal Areas (FTDs-70, 71, 49) [Shaw Environmental, Inc., 2009] remedy addressed the potential for site worker, visitor, and off-site resident exposure to contaminated soil/waste by requiring a landfill cap, meeting State of Maryland regulations for industrial waste landfill closure, and land use controls (LUCs) to prevent land use that would compromise the integrity of the closure cap. Future land use at the former disposal sites is expected to remain open space.
Chemicals of potential concern in soil/waste at the former disposal sites, identified in Section 2.5 of the DD for Area B-3 Inactive (FTD-51), Area B-6 (FTD-69), and the Western Disposal Areas (FTDs-70, 71, 49) [Shaw Environmental, Inc., 2009], were as follows:

- Area B-3 Inactive (FTD 51) – arsenic, chromium, iron, manganese, vanadium, and 4,4'-DDT

- Area B-6 (FTD 69) - arsenic, chromium, iron, vanadium, 2-methylnaphthalene, 3,3'-dichlorobenzidine, benzo(a)pyrene, chloroform, naphthalene, tetrachloroethene (PCE), and trichloroethene (TCE

- Area B-8 (FTD 70) - arsenic, chromium, iron, vanadium, benz(a)anthracene, alpha-BHC, and delta-BHC.

- Trenches North of Area B-8 (FTD 70) - arsenic, chromium, iron, thallium, and chloroform

- Area B-18 (FTD 70) - aluminum, iron, thallium, and vanadium.

- Area B-10 (FTD 71) - arsenic, iron, manganese, and vanadium.

- Area B-Grove (FTD 71) – no hazardous materials were found.

- Area B-11 (FTD 49) – arsenic, chromium, iron, lead, thallium, vanadium, 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, 1,2-dibromo-3-chloropropane, EDB, 1,2-dichloroethane, benzene, bromomethane, carbon tetrachloride, chloroform, methylene chloride, PCE, TCE, xylenes (total), 1,2,4-trichlorobenzene, 3,3'-dichlorobenzidine, bis(2-chloroethyl)ether, hexachlorobenzene, naphthalene, nitrobenzene, N-nitrosodi-n-propylamine, N-nitrosodiphenylamine, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, aldrin, delta-BHC, dieldrin, endrin, heptachlor epoxide, heptachlor, and lindane.

There were no chemical- or location-specific ARARs identified for the former disposal sites. Section 2.12.2 of the DD for Area B-3 Inactive (FTD-51), Area B-6 (FTD-69), and the Western Disposal Areas (FTDs-70, 71, 49) [Shaw Environmental, Inc., 2009] required that the landfill cap design meet State of Maryland regulations for industrial waste landfill closure defined in COMAR 26.04.07.21(H). This design would "minimize infiltration into the landfill and include a low permeability cap, drainage layer, final earthen cover, and vegetative stabilization. The cap would be sloped at a minimum of 4 percent to induce water runoff."

The State of Maryland regulations for industrial waste landfill closure [COMAR 26.04.07.21(H)] have not changed since the DD for Area B-3 Inactive (FTD-51), Area B-6 (FTD-69), and the Western Disposal Areas (FTDs-70, 71, 49) [Shaw Environmental, Inc., 2009] was issued.

Conclusion

There are no newly promulgated or modified requirements of federal or state environmental laws that would change the protectiveness of the remedy implemented at Area B Landfills.

Capping contaminated soil/waste at Area B Landfills prevents unacceptable exposure to site workers, visitors, and off-site residents and LUCs prevent land use that would compromise the integrity of the closure cap.

REFERENCES

Shaw Environmental, Inc., 2009. *Decision Document for Area B-3 Inactive (FTD 51), Area B-6 (FTD 69), and the Western Disposal Areas (FTDs 70, 71, 49), Fort Detrick, Maryland*, February.

Shaw Environmental, Inc., 2008. *Decision Document for Area B-2 (FTD 50), Fort Detrick, Maryland,* December.

ATTACHMENT 11

Risk Assessment and Toxicology Evaluation

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Risk Assessment and Toxicology Evaluation

This evaluation was prepared to address Question B in assessing the protectiveness of the remedy (OSWER No. 9355.7-03B-P), *"Are the exposure assumptions, toxicity data, cleanup levels and remedial action objectives (RAOs) used at the time of the remedy selection still valid?"* It summarizes the exposure assumptions, toxicity data, risk-based cleanup goals (RBGs), and remedial action objectives (RAOs) at Fort Detrick Area B in Frederick, Maryland. Area B consists of two review areas—the Area B-2 landfill and the five remaining Area B landfills that were assessed together in a single decision document. Both review areas followed the presumptive remedy approach for municipal landfills and thus did not have quantitative cleanup goals. The evaluation of exposure pathways was therefore the primary component of the streamlined risk assessments.

Fort Detrick Area B

OVERVIEW

Fort Detrick Area B consists of six (6) landfills, designated as Areas B-2 (Installation Restoration Program Site FTD-50), B-3 Inactive (FTD-51), B-6 (FTD-69), and Areas B-11, B-8, and B-10—collectively known as the Western Disposal Areas (FTD-49, -70, and -71). The remedy for Area B-2 was documented in a 2007 decision document (Shaw 2007) and the remedies for the remaining sites were documented in a 2009 decision document (Shaw 2009).

The selected remedies for all six sites were landfill capping and land use controls, in accordance with the USEPA (1993) presumptive remedy guidance for municipal landfills. Groundwater in Area B that is potentially impacted by waste disposal is being addressed in a separate remedial investigation and is considered a separate operable unit with a decision document forthcoming. However, any impacts to groundwater and associated risk from Area B groundwater were considered as part of the current review, insofar as they relate to the remedial action objectives of the landfill remedies.

All six landfill sites are inactive and were included in the previous five-year review (USACE 2017), which concluded the remedies to be protective in the short-term and prescribed additional lines of evidence to better evaluate remedy performance. This entails additional monitoring activities beyond visual inspection, including semiannual groundwater monitoring in the vicinity of the landfill caps and the installation and monitoring of lysimeters to assess the potential water infiltration.

Constituents of potential concern (COPCs) for each landfill were identified in the remedial investigations (Shaw 2006 for Area B-2, Shaw 2008 for Area B-3, U.S. Army 2007 for Area B-6, and U.S. Army 2008b for the WDA) based on observed concentrations exceeding screening values. COPCs for each landfill are shown in Table A.7-1. Area B-11 has been identified as the primary source of trichloroethylene (TCE) and tetrachloroethylene (PCE) contamination in Area B groundwater and surface water. A hot spot removal action occurred from 2001 to 2004 to remove the TCE and PCE waste source.

The previous five-year review (USACE 2017) indicated that potential exposure pathways had not changed, which was the key determination of the Technical Assessment Question B because no quantitative risk assessment was performed due to the USEPA (1993) presumptive remedy approach that was taken. However, a new potential exposure pathway has since been identified via vapor intrusion, which could pose risk to human health. The vapor intrusion pathway is assessed in a section below.

SURFACE WATER

As part of the Area B groundwater investigations, surface water monitoring results from 2012 (ARCADIS/Malcolm Pirnie 2014) were compared to USEPA ambient water quality criteria

(AWQC) for the protection of human health. Two sets of criteria were used—one based on the consumption of both water and organisms (e.g. fish), and one based on the consumption of organisms only.

USEPA (2015) has updated the AQWC since the 2012 results were screened (ARCADIS/Malcolm Pirnie 2014). Both AWQC criteria increased for seven Area B landfill COPCs (3,3'-dichlorobenzidine, chloroform, tetrachloroethylene, 1,2-dichloroethane, carbon tetrachloride, methylene chloride, and bis(2-chloroethyl)ether). Several other COPCs had their AWQC decrease, but all monitoring results were below detection limits. Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, benzene, 1,2,4-trichlorobenzene, and hexachlorobenzene results were all below the reporting limit of 0.5 µg/L. Nitrobenzene results were all below the reporting limit of 1.0 µg/L. Aldrin, heptachlor, and heptachlor epoxide results were all below the reporting limit of 0.01 µg/L. Dieldrin, endrin, 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT results were all below the reporting limit of 0.02 µg/L.

These detection limits were above screening levels for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, 1,1,2,2-tetrachloroethane (drinking water criterion only), hexachlorobenzene, aldrin, 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT, dieldrin, heptachlor, and heptachlor epoxide. Uncertainty therefore exists as to whether or not these constituents are present in surface water above relevant AWQC.

Only three COPCs had detected exceedances of the current USEPA AWQC—arsenic, manganese, and trichloroethylene (Table A.11-2). These exceedances occurred at sampling locations SW-111 (arsenic and manganese) and SW-112 (Robinson Pond) (TCE), which are downgradient of the Area B landfills. These surface water bodies are not drinking water sources, and thus the fish ingestion only AWQC would apply. The fish ingestion AWQCs for some chemicals integrate relative source contribution factors to account for other possible exposure routes, such as dermal and inhalation. Arsenic, manganese, and trichloroethylene each exceeded the fish ingestion only AWQC, by maximum factors of 12.1, 2.5, and 1.6, respectively. The State of Maryland has its own AWQC (COMAR 26.08.02.03-2), which tend to be greater than the USEPA (2015) criteria (Table A.11-2). When compared to Maryland criteria, only arsenic exceeded either AWQC, with two exceedances of the fish ingestion only criteria by factors of just 1.1 and 1.2 (Table A.11-2).

SEDIMENT

As part of the Area B groundwater investigations, sediment monitoring results (ARCADIS/Malcolm Pirnie 2014) were compared to USEPA regional screening levels (RSLs) for residential exposure (Table A.11-3). A target cancer risk of 1E-05 was used for carcinogenic screening levels. Several updates to these RSLs are available since the 2014 screening occurred (USEPA 2018). These updates are not reviewed in detail here because the use of residential RSLs is very conservative with respect to a stream sediment exposure scenario.

Thallium, manganese, and arsenic were the only COPCs that exceeded RSLs, with thallium having the greatest exceedance (6.53x greater) (Table A.11-3). This sample was taken at RISP-3 (Robinson Box Spring) which is downgradient of the Area B landfills.

The residential RSLs for arsenic have increased since the 2014 screening (USEPA 2018). The residential RSL for arsenic at a target cancer risk of 1E-05 has increased from 3.9 mg/kg to 6.8 mg/kg, based on the implementation of the default relative bioavailability factor of 0.6. The residential RSLs for several polycyclic aromatic hydrocarbons (PAHs) have also increased, largely due to an update to the oral cancer slope factor by the USEPA (2017) Integrated Risk Information System that is now approximately seven (7) times less potent than previously considered. This downward adjustment in carcinogenicity applies equally to six PAHs detected in sediment at this site—benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-c,d)pyrene. With this update, concentrations of PAHs in sediment did not exceed RSLs.[1] The bioavailability of both metals and PAHs in stream sediments is likely to be considerably different than what is assumed by the soil RSLs.

VAPOR INTRUSION INVESTIGATION

Vapor intrusion sampling occurred in 2013, 2015, and 2016, which included the collection of sub-slab vapor and indoor air samples. The contaminants of interest for the vapor intrusion investigation were the principal contaminants in groundwater beneath Area B, including TCE, PCE, chloroform, and several other related volatile organic compounds. Initial vapor intrusion sampling occurred in 2013 and 2015 at five structures (one on-post and four off-post) (ARCADIS 2015). Additional vapor intrusion sampling occurred in January 2016 at five structures (one on-post and four off-post, one of which was a different structure than was sampled previously) (Burns & McDonnell 2017).

Area B landfill COPCs include the following volatile or semi-volatile organic compounds (VOCs or SVOCs) that were assessed for the vapor intrusion pathway: benz[a]anthracene; 2-methylnaphthalene; naphthalene; chloroform; PCE; TCE; 1,1,2,2-tetrachloroethane; 1,1,2-trichloroethane; 1,2-dichloroethane; benzene; 1,2-dibromo-3-chloropropane; bromomethane; carbon tetrachloride; methylene chloride; xylenes (total); 1,2,4-trichlorobenzene; bis(2-chloroethyl)ether; hexachlorobenzene; nitrobenzene; 4,4'-DDE; aldrin; heptachlor; heptachlor epoxide.

As part of the initial vapor intrusion investigation (ARCADIS 2015), one off-post structure (Montevue A) was sampled for indoor air and sub-slab vapors and four structures (three off-post and one on-post) were sampled for sub-slab vapors only. Indoor air samples at Montevue A exceeded USEPA vapor intrusion screening levels (VISLs) (based on an incremental lifetime cancer risk [ILCR] of 1E-06 and a hazard quotient [HQ] of 1) for commercial exposure to benzene, 1,4-dichlorobenzene, and chloroform. Benzene and chloroform are both COPCs for Area B landfills. No indoor air samples exceeded Maryland Department of Environment (MDE 2012) indoor air commercial screening levels (based on an ILCR of 1E-05 and an HQ of 1). Chloroform had one detection in sub-slab vapors and it was slightly greater than the concentration detected in indoor air (1.8 vs. 1.6 $\mu g\ m^{-3}$)[2]. Benzene and 1,4-dichlorobenze both

[1] Previously, concentrations of benzo(a)pyrene exceeded the RSL.
[2] Note, however, that the reporting limit for non-detections of chloroform was 4.9 $\mu g\ m^{-3}$, indicating some non-detections could have had slightly greater concentrations in sub-slab vapors.

had maximum detections in sub-slab vapors below the concentrations detected in indoor air[3]. Collectively, this suggests there may be indoor sources of these chemicals and the vapor intrusion pathway may not be complete for Montevue A.

Sub-slab vapor samples exceeded USEPA vapor intrusion screening levels (ILCR = 1E-06 and HQ = 1) for commercial exposure for acrolein, bromodichloromethane, chloroform, and hexachlorobutadiene. Of these constituents, only chloroform is a COPC for Area B landfills. Chloroform is also the only constituent that had a sub-slab vapor sample exceeding MDE sub-slab vapor Tier I commercial screening levels. One structure (Montevue B) had a single sub-slab vapor chloroform concentration (620 $\mu g\ m^{-3}$) exceeding the Tier I screening level (540 $\mu g\ m^{-3}$) in January 2013. One of four follow-up sub-slab vapor samples for this structure (one taken in 2013 and three taken in 2016) had a measured chloroform concentration (25 $\mu g\ m^{-3}$) that exceeded the USEPA screening level, but it did not exceed the MDE screening level. A single indoor air sample was taken in January 2016 (Burns & McDonnell 2017), which had a detected concentration of chloroform (0.68 $\mu g\ m^{-3}$) that exceeded the USEPA commercial indoor air VISL (0.53 $\mu g\ m^{-3}$). This indoor air concentration of chloroform does not exceed the MDE screening level (5.4 $\mu g\ m^{-3}$), which is based on an ILCR of 1E-05. In accordance with MDE (2012) guidance, however, even if indoor air samples do not exceed screening levels, the exceedance of the Tier I sub-slab screening level may require additional sampling to determine if long-term monitoring or source reduction is necessary.

Two other primary COPCs based on the groundwater investigation that were also the target of vapor intrusion sampling—PCE and TCE—did not have any indoor air or sub-slab vapor samples exceeding USEPA or MDE commercial screening levels. The maximum detected concentration of PCE in indoor air was 1.1 $\mu g\ m^{-3}$, which is below both the USEPA and MDE commercial screening levels. The maximum detected concentration of PCE in sub-slab vapors at any structure sampled was 180 $\mu g\ m^{-3}$, which is 100 times lower than the MDE Tier I screening level. This occurred at Montevue D, which was not sampled for indoor air in the initial investigation and was not included in the 2016 investigation. The maximum detected sub-slab concentration of PCE at structures that also had indoor air samples was 2 $\mu g\ m^{-3}$, which is orders of magnitude below both USEPA and MDE sub-slab screening levels.

The maximum detected concentration of TCE in indoor air was 2.9 $\mu g\ m^{-3}$ at Montevue A, which is equal to the USEPA commercial screening level and below the MDE commercial screening level (8.8 $\mu g\ m^{-3}$). Three other indoor air samples at Montevue A between 2013 and 2015 did not have detections of TCE, with reporting limits of 5.4 $\mu g\ m^{-3}$. One additional indoor air sample from this structure taken in 2016 measured a TCE concentration of 0.18 $\mu g\ m^{-3}$. TCE was not detected in sub-slab vapors at this structure (reporting limits of 5.4 $\mu g\ m^{-3}$), again leaving uncertainty as to whether or not there is a completed vapor intrusion pathway at Montevue A. The maximum detected concentration of TCE in sub-slab vapors at any structure sampled was 13 $\mu g\ m^{-3}$, which is ~68 times less than the MDE Tier I screening level.

[3] Note, however, that the reporting limits for non-detections of benzene and 1,4-dichlorobenzene (3.2 and 6 $\mu g\ m^{-3}$, respectively) were both greater than the maximum detected concentrations of these constituents in indoor air (1.8 and 4.1 $\mu g\ m^{-3}$, respectively), indicating that some non-detections could have had slightly greater concentrations in sub-slab vapors.

The 2016 vapor intrusion investigation (Burns & McDonnell 2017) included a draft human health risk assessment. Cancer and non-cancer toxicity criteria used in the draft HHRA were reviewed and all toxicity criteria remain current with respect to current guidance (USEPA 2003, 2018). Although this risk assessment identified COPCs based on the Area B groundwater operable unit (VOCs detected in groundwater and also detected in indoor air above VISLs were retained as COPCs; Table A.11-4), several Area B landfill COPCs were determined to contribute to current vapor intrusion-related risk. PCE was not identified as a COPC, but indoor air concentrations of PCE were reviewed here against a lower VISL (4.2 µg/L) based on an HQ = 0.1 (Table A.11-4)—due to the shift from carcinogenic to non-carcinogenic endpoints when considering the more conservative HQ—and no exceedances were observed (maximum detected concentration = 0.23 µg/L). No structures were determined to have unacceptable non-cancer hazard for current or hypothetical future receptors (total hazard index for all structures < 1; maximum = 0.3). Four of the five structures assessed were determined to have cancer risk within the USEPA risk management range (1E-06 to 1E-04) for current receptors. Montevue A has a cancer risk of 8E-06 for current indoor workers; Montevue B has a cancer risk of 1E-05 for current indoor workers, 1699 Shookstown Rd. has a cancer risk of 5E-06 for current (and future age-adjusted) residents, and Fort Detrick Bldg. 1261 has a cancer risk of 2E-06 for current indoor workers. The fifth structure—Montevue C—had an estimated cancer risk for current indoor workers (2E-07) below USEPA's risk management range.

Note that 1699 Shookstown Rd. is a mixed-use daycare and residence with assumed current resident receptors (Burns & McDonnell 2017). The draft HHRA summary (Section 8.0 and Table 6-26) specifies cancer risk for "future age-adjusted resident" when in fact current residents are exposed to Landfill B COPCs (benzene, carbon tetrachloride, and chloroform)—potentially via the vapor intrusion pathway—resulting in an elevated estimated future age-adjusted cancer risk (5E-06). This level of risk, however, as well as estimated risks for other current or potential future receptors, remains within the USEPA risk management range.

As with other structures, however, there remains uncertainty as to whether or not a complete vapor intrusion pathway exists. For the three COPCs at 1699 Shookstown Rd. (all of which are also Area B landfill COPCs), measured indoor air concentrations were less than (benzene) or slightly greater than (carbon tetrachloride and chloroform) outdoor ambient air concentrations measured at the same time, which also exceeded indoor air VISLs (Table B-4 in Burns & McDonnell 2017). Moreover, no COPCs exceeded sub-slab VISLs at any structures in the 2016 sampling.

ECOLOGICAL RISK

Streamlined ecological risk assessments were performed for Area B-2 and for Areas B-3, B-6, and the WDA. All ecological exposure pathways were interrupted due to the nature of the remedies (landfill capping and maintenance). No complete exposure pathways currently exist for ecological receptors on the landfills proper or in Area B, which is used for industrial/military purposes.

However, stream sediment monitoring occurs as part of the Area B groundwater investigations, in order to assess potential impacts to human or ecological receptors in streams on- and off-post. Sediment monitoring results (ARCADIS/Malcolm Pirnie 2014) were compared to USEPA Region III Biological Technical Assessment Group (BTAG) freshwater sediment benchmarks (USEPA 2006). Monitoring results have exceeded the screening benchmarks for seven metals (chromium, iron, lead, manganese, selenium, nickel, and zinc), seven pesticides (aldrin, beta-BHC, gamma-BHC [lindane], 4,4'-DDE, dieldrin, endrin, heptachlor epoxide), and nine volatile or semi-volatile organic compounds (acenaphthene, acenaphthylene, benzo[a]anthracene, carbon disulfide, chrysene, indeno[1,2,3-cd]pyrene, 2-methylnaphthalene, phenanthrene, and pyrene). Most exceedances were of small magnitudes, however, and only two COPCs—aldrin and heptachlor epoxide—exceeded their respective freshwater sediment benchmarks by an order of magnitude (19x and 24x greater in one sample each, respectively) (Table A.11-3).

The BTAG screening values were developed in 2006 by USEPA Region III for use in evaluating sampling data and ecological risk assessment at Superfund sites and have not been updated since. Sediment benchmarks are designed to be protective of sensitive species by focusing on non-lethal endpoint studies of chronic exposure. Equilibrium partitioning values were used if empirical values were unavailable.

Sediment concentrations of aldrin detected through monitoring exceeded the sediment benchmark (2 µg/kg), which for aldrin is based on the lowest effect level (LEL) that represents a level of sediment contamination that can be tolerated by the majority of benthic organisms. For comparison, the severe effect level (SEL) for aldrin is 80 µg/kg, which represents a concentration that is anticipated to have significant adverse impacts on the benthic community. The maximum detected concentration of aldrin during monitoring was 37 µg/kg, which is less than 50% of the SEL. Overall, 24 out of 32 sediment samples did not detect aldrin, with 5 of the remaining 8 detected samples measured below the screening benchmark (2 µg/kg).

Sediment concentrations of heptachlor epoxide detected through monitoring exceeded the sediment benchmark (2.5 µg/kg), which for heptachlor epoxide is based on the threshold effects concentration (TEC) that represents a consensus-based screening level (MacDonald et al. 2000) above which toxic effects may occur for sensitive species. The probable effects concentration (PEC), above which toxic effects are likely to occur, for heptachlor epoxide is 16 µg/kg. For comparison, the LEL and SEL for heptachlor epoxide are 5 and 50 µg/kg, respectively. The maximum detected concentration of heptachlor epoxide during monitoring was 59 µg/kg, which exceeds even the SEL. Overall, however, 25 out of 32 sediment samples did not detect heptachlor epoxide, with 3 of the remaining 7 detected samples measured below the screening benchmark (2.5 µg/kg).

RAOs did not address ecological exposures specifically, but did include objectives to reduce migration of contaminants via groundwater or surface water. Aldrin was also detected above its tapwater RSL in June 2018 in monitoring well BMW11, downgradient of Landfill B-2. Heptachlor epoxide was not detected in recent groundwater monitoring samples.

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Table A.11-1. Contaminants of potential concern (COPCs) for each sub-area of Ft. Detrick Area B.

COPC	Area B-2	Area B-3	Area B-6	Area B-8 [1]	Area B-10	Area B-11 [2]
Metals						
arsenic	x	x	x	x	x	x
chromium	x	x	x	x		x
iron	x	x	x	x	x	x
lead						x
manganese	x				x	
thallium	x			x		x
vanadium	x	x	x	x	x	x
Pesticides						
aldrin	x					x
alpha-BHC				x		
delta-BHC				x		x
gamma-BHC (lindane)						x
4,4'-DDD						x
4,4'-DDE						x
4,4'-DDT		x				x
dieldrin						x
endrin						x
heptachlor						x
heptachlor epoxide	x					x
Volatile or Semi-Volatile Organic Compounds						
Aroclor-1254	x					
benz(a)anthracene	x			x		
benzo(a)pyrene	x		x			
benzo(b)fluoranthene	x					
2-methylnaphthalene			x			
naphthalene			x			x
chloroform			x	x		x
tetrachloroethylene			x			x
trichloroethylene			x			x
1,1,2,2-tetrachloroethane						x
1,1,2-trichloroethane						x
1,2-dibromo-3-chloropropane						x
1,2-dibromoethane						x
1,2-dichloroethane						x
benzene						x
bromomethane						x
carbon tetrachloride						x
methylene chloride						x
xylenes (total)						x
1,2,4-trichlorobenzene						x
bis(2-chloroethyl)ether						x
hexachlorobenzene						x
nitrobenzene						x
Other Organic Compounds						
3,3-'dichlorobenzidine			x			x
N-nitrosodi-n-propylamine						x
N-nitrosodiphenylamine						x

[1] including trenches

[2] subsurface, following removal action between 2001 and 2004

Table A.11-2. Surface water monitoring samples with exceedances of Ambient Water Quality Criteria (AWQC).

Analyte	Surface water concentration (µg/L)	USEPA AWQC	USEPA AWQC - fish ingestion only	AWQC exceedance factor	AWQC FIO exceedance factor	COMAR AWQC	COMAR AWQC - fish ingestion only	AWQC exceedance factor	AWQC FIO exceedance factor
arsenic[1]	1.7	0.018	0.14	94.4	12.1	0.18	1.4	9.4	1.2
arsenic[2]	1.5	0.018	0.14	83.3	10.7	0.18	1.4	8.3	1.1
trichloroethene[3]	11	0.6	7	18.3	1.6	25	300		
trichloroethene[3]	5.5	0.6	7	9.2		25	300		
manganese[1]	248	50	100	5.0	2.5	N/A	N/A		
manganese[2]	186	50	100	3.7	1.9	N/A	N/A		
trichloroethene[3]	2.2	0.6	7	3.7		25	300		
trichloroethene[3]	2	0.6	7	3.3		25	300		
trichloroethene[3]	1.6	0.6	7	2.7		25	300		
trichloroethene[3]	1.5	0.6	7	2.5		25	300		
trichloroethene[3]	1.2	0.6	7	2.0		25	300		
trichloroethene[3]	1.2	0.6	7	2.0		25	300		
trichloroethene[3]	0.9	0.6	7	1.5		25	300		
manganese[1]	55.9	50	100	1.1		N/A	N/A		
manganese[2]	54.4	50	100	1.1		N/A	N/A		

AWQC	ambient water quality criteria
COMAR	Code of Maryland (26.08.02.03-2)
FIO	fish ingestion only

[1] unfiltered sample

[2] filtered sampled

[3] The USEPA AWQC for trichloroethylene was updated in 2015 from 2.5 to 0.6 µg/L, and from 30 to 7 µg/L for fish ingestion only.

Table A.11-3. Sediment monitoring samples with exceedances of regional screening levels (RSLs) for residential exposure and/or freshwater sediment benchmarks (FSB) for ecological receptors.

Analyte	Bulk sediment concentration	Units	Regional Screening Level	RSL exceedance factor	Freshwater Sediment Benchmark	FSB exceedance factor
thallium	5.09	mg/kg	0.78	6.53		
thallium	1.63	mg/kg	0.78	2.09		
manganese	3130	mg/kg	1800	1.74	460	6.8
thallium	1.09	mg/kg	0.78	1.40		
arsenic	9.12	mg/kg	6.8	1.34		
thallium	0.928	mg/kg	0.78	1.19		
thallium	0.924	mg/kg	0.78	1.18		
manganese	2030	mg/kg	1800	1.13	460	4.4
thallium	0.858	mg/kg	0.78	1.10		
arsenic	7.43	mg/kg	6.8	1.09		
heptachlor epoxide	59	ug/kg			2.47	23.9
aldrin	37	ug/kg			2	18.5
indeno(1,2,3-cd)pyrene	120	ug/kg			17	7.1
beta-BHC	30	ug/kg			5	6.0
indeno(1,2,3-cd)pyrene	83	ug/kg			17	4.9
carbon disulfide	4	ug/kg			0.851	4.7
carbon disulfide	4	ug/kg			0.851	4.7
aldrin	8.6	ug/kg			2	4.3
acenaphthylene	24	ug/kg			5.9	4.1
acenaphthylene	22	ug/kg			5.9	3.7
gamma-BHC (lindane)	8.5	ug/kg			2.37	3.6
carbon disulfide	3	ug/kg			0.851	3.5
indeno(1,2,3-cd)pyrene	55	ug/kg			17	3.2
heptachlor epoxide	7.7	ug/kg			2.47	3.1
indeno(1,2,3-cd)pyrene	52	ug/kg			17	3.1
acenaphthene	20	ug/kg			6.7	3.0
indeno(1,2,3-cd)pyrene	47	ug/kg			17	2.8
indeno(1,2,3-cd)pyrene	42	ug/kg			17	2.5
carbon disulfide	2	ug/kg			0.851	2.4
4,4'-DDE	7.4	ug/kg			3.16	2.3
endrin	5	ug/kg			2.22	2.3
acenaphthene	15	ug/kg			6.7	2.2
indeno(1,2,3-cd)pyrene	38	ug/kg			17	2.2
indeno(1,2,3-cd)pyrene	38	ug/kg			17	2.2
dieldrin	4.2	ug/kg			1.9	2.2
acenaphthylene	13	ug/kg			5.9	2.2
indeno(1,2,3-cd)pyrene	37	ug/kg			17	2.2
indeno(1,2,3-cd)pyrene	35	ug/kg			17	2.1
indeno(1,2,3-cd)pyrene	34	ug/kg			17	2.0
selenium	3.91	mg/kg			2	2.0
beta-BHC	9.7	ug/kg			5	1.9
dieldrin	3.6	ug/kg			1.9	1.9
selenium	3.64	mg/kg			2	1.8
selenium	3.57	mg/kg			2	1.8
iron	35300	mg/kg			20000	1.8
gamma-BHC (lindane)	4.1	ug/kg			2.37	1.7

Table A.11-3. Sediment monitoring samples with exceedances of regional screening levels (RSLs) for residential exposure and/or freshwater sediment benchmarks (FSB) for ecological receptors.

selenium	3.39	mg/kg	2	1.7
lead	60.3	mg/kg	35.8	1.7
iron	33200	mg/kg	20000	1.7
iron	33100	mg/kg	20000	1.7
indeno(1,2,3-cd)pyrene	28	ug/kg	17	1.6
acenaphthene	11	ug/kg	6.7	1.6
acenaphthene	11	ug/kg	6.7	1.6
beta-BHC	8.2	ug/kg	5	1.6
selenium	3.01	mg/kg	2	1.5
iron	30100	mg/kg	20000	1.5
heptachlor epoxide	3.6	ug/kg	2.47	1.5
anthracene	81	ug/kg	57.2	1.4
benzo(a)anthracene	150	ug/kg	108	1.4
selenium	2.68	mg/kg	2	1.3
phenanthrene	270	ug/kg	204	1.3
zinc	151	mg/kg	121	1.2
indeno(1,2,3-cd)pyrene	21	ug/kg	17	1.2
pyrene	240	ug/kg	195	1.2
iron	24300	mg/kg	20000	1.2
iron	24300	mg/kg	20000	1.2
heptachlor epoxide	3	ug/kg	2.47	1.2
lead	43.4	mg/kg	35.8	1.2
lead	42.8	mg/kg	35.8	1.2
acenaphthene	8	ug/kg	6.7	1.2
acenaphthene	8	ug/kg	6.7	1.2
indeno(1,2,3-cd)pyrene	20	ug/kg	17	1.2
carbon disulfide	1	ug/kg	0.851	1.2
dieldrin	2.2	ug/kg	1.9	1.2
aldrin	2.3	ug/kg	2	1.2
2-methylnaphthalene	23	ug/kg	20.2	1.1
indeno(1,2,3-cd)pyrene	19	ug/kg	17	1.1
indeno(1,2,3-cd)pyrene	19	ug/kg	17	1.1
chromium	48.5	mg/kg	43.4	1.1
benzo(a)anthracene	120	ug/kg	108	1.1
benzo(a)anthracene	120	ug/kg	108	1.1
chrysene	180	ug/kg	166	1.1
pyrene	210	ug/kg	195	1.1
selenium	2.14	mg/kg	2	1.1
indeno(1,2,3-cd)pyrene	18	ug/kg	17	1.1
gamma-BHC (lindane)	2.5	ug/kg	2.37	1.1
iron	20900	mg/kg	20000	1.0
benzo(a)anthracene	110	ug/kg	108	1.0
nickel	23.1	mg/kg	22.7	1.0
acenaphthylene	6	ug/kg	5.9	1.0
indeno(1,2,3-cd)pyrene	17	ug/kg	17	1.0

Table A.11-4. Vapor intrusion screening levels for COPCs identified in the draft vapor intrusion human health risk assessment.

	Indoor Air VISLs						Sub-Slab Vapors or Soil Gas VISLs					
	USEPA				Maryland		USEPA[a]		Maryland Tier I[b]		Maryland Tier II[c]	
	ILCR = 1E-06 / HQ = 0.1		ILCR = 1E-05 / HQ = 0.1		ILCR = 1E-05 / HQ = 1		ILCR = 1E-05 / HQ = 0.1		ILCR = 1E-05 / HQ = 1		ILCR = 1E-05 / HQ = 1	
Analyte (COPC)	Residential	Commercial	Residential	Commercial	Residential	Commercial	Residential	Commercial	Residential	Commercial	Residential	Commercial
1,2-dichloroethane	0.11	0.47	0.73	3.1	0.94	4.8	24	100	18.8	480	94	2400
1,4-dichlorobenzene	0.26	1.11	2.6	11	2.3	12	85	370	46	1200	230	6000
benzene	0.36	1.57	3.1	13	3.2	16	104	438	64	1600	320	8000
bromodichloromethane	0.076	0.33	0.76	3.3	0.66	3.4	25	110	13.2	340	66	1700
carbon tetrachloride	0.47	2	4.7	20	4.1	21	160	680	82	2100	410	10500
chloroform	0.12	0.53	1.2	5.3	1.1	5.4	41	180	22	540	110	2700
ethylbenzene	1.1	4.9	11	49	10	50	370	1640	200	5000	1000	25000
methylene chloride	63	263	63	263	630	2700	2090	8800	12600	270000	63000	1350000
tetrachloroethylene (PCE)[d]	4.2	17.5	4.2	17.5	42	180	140	580	840	18000	4200	90000
trichloroethylene (TCE)[d]	0.21	0.88	0.21	0.88	1.8	8.8	7	29	36	880	180	4400

[a] USEPA uses an attenuation factor of 0.03 for both residential and commercial exposures.

[b] Maryland Department of Environment (2012) uses a Tier I attentuation factor of 0.01 for commercial and 0.05 for residential.

[c] Maryland Department of Environment (2012) uses a Tier II attentuation factor of 0.002 for commercial and 0.01 for residential.

[d] USEPA VISLs for PCE and TCE are based on the non-carcinogenic endpoint for HQ = 0.1 and/or ILCR of 1E-05, but are based on carcinogenic endpoints for HQ = 1.0 and ILCR of 1E-06; Maryland's VISLs are based on cancer (mutagenic) at 1E-05 for residential, but not for commercial exposure.

ILCR	incremental lifetime cancer risk
HQ	hazard quotient
USEPA	U.S. Environmental Protection Agency
COPC	constituent of potential concern
VISLs	vapor intrusion screening levels

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ATTACHMENT 12

Data Trends

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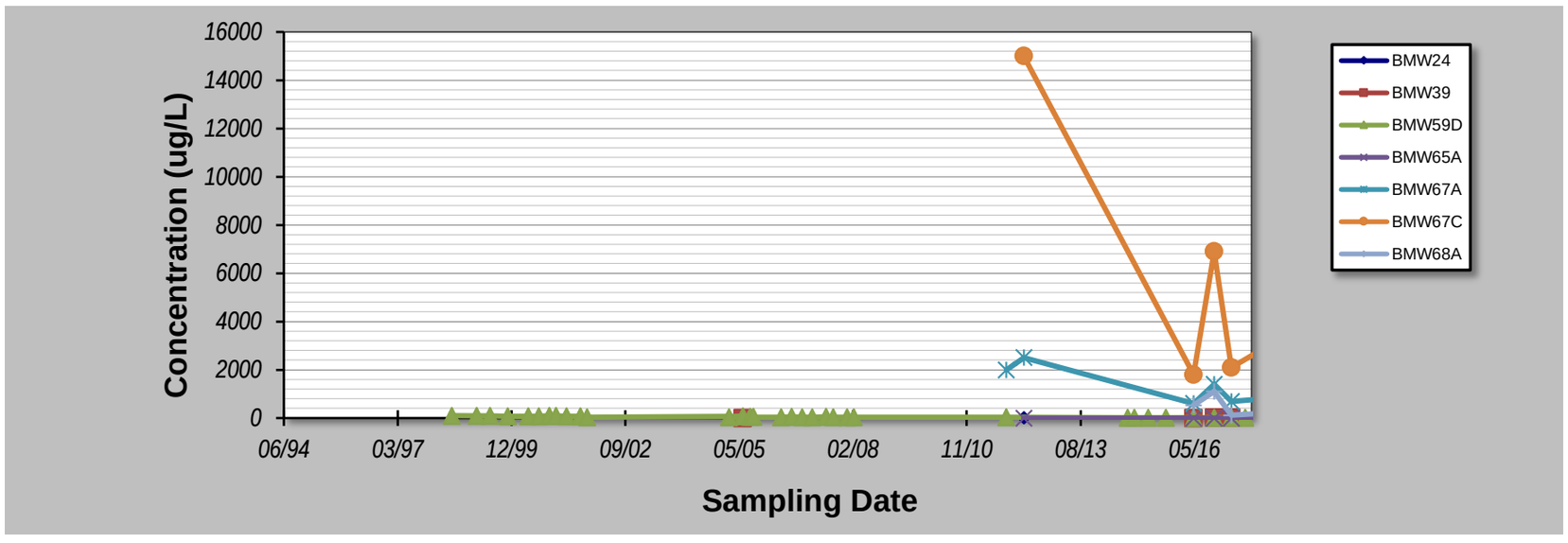
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date: **17-Oct-18**
Facility Name: **Fort Detrick Area B**
Conducted By: **H Akers, PE**

Job ID: **FYR**
Constituent: **TCE**
Concentration Units: **ug/L**

Sampling Point ID:	BMW24	BMW39	BMW59D	BMW65A	BMW67A	BMW67C	BMW68A
Sampling Event	Sampling Date	TCE CONCENTRATION (ug/L)						
1	01-Jul-98			100				
2	01-Feb-99			85				
3	01-Jun-99			90				
4	01-Nov-99			72				
5	01-May-00			82				
6	01-Aug-00			67				
7	01-Nov-00			100				
8	01-Jan-01			93				
9	01-Apr-01			65				
10	01-Aug-01			74				
11	01-Oct-01			40				
12	01-Jul-05		2.1	68				
13	01-Sep-05			48				
14	01-Oct-05			49				
15	01-Mar-05	1		38				
16	01-Jun-06			35				
17	01-Sep-06			52				
18	01-Dec-06			40				
19	01-Mar-07			36				
20	01-Jul-07			43.7				
21	01-Sep-07			38				
22	01-Jan-08			23.6				
23	01-Mar-08			37				
24	01-Nov-11			26		2000		
25	01-Apr-12	9.6			0.2	2500	15000	
26	01-Oct-14			20				
27	01-Dec-14			20				
28	01-Apr-15			19				
29	01-Sep-15			16				
30	01-May-16	0.9	1.4	16	1.2	600	1800	520
31	01-Nov-16	5.1	7.8	16	0.4	1400	6900	1100
32	01-Apr-17	0.9	3.3	14	0.2	690	2100	120
33	01-Aug-17			14				
34	01-Oct-17			13				
35	01-Dec-17			13				
36	01-May-18	0.5	4.6	13	0.1	850	3200	240
37								
38								
39								
40								
Coefficient of Variation:		1.22	0.66	0.63	1.07	0.58	0.95	0.88
Mann-Kendall Statistic (S):		-8	4	-504	-5	-5	-2	-2
Confidence Factor:		89.8%	75.8%	>99.9%	82.1%	76.5%	59.2%	62.5%
Concentration Trend:		No Trend	No Trend	Decreasing	No Trend	Stable	Stable	Stable



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

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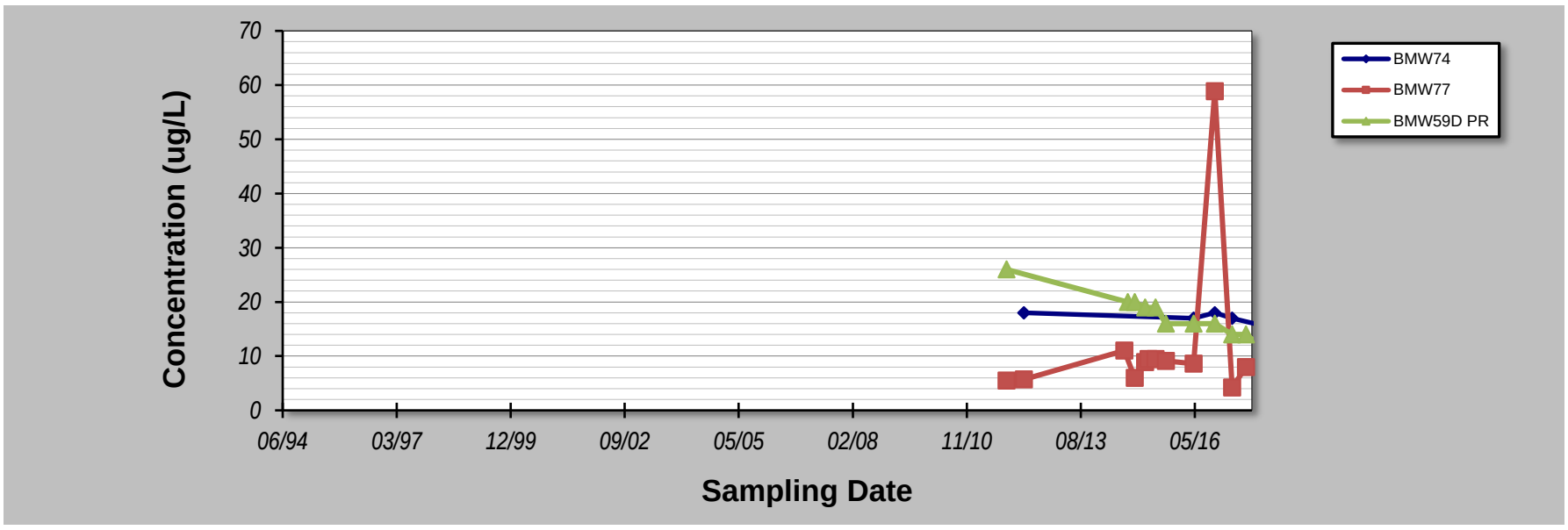
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date: **17-Oct-18**
Facility Name: **Fort Detrick Area B**
Conducted By: **H Akers, PE**

Job ID: **FYR**
Constituent: **TCE**
Concentration Units: **ug/L**

Sampling Point ID:	BMW74	BMW77	BMW59D PR				
Sampling Event	Sampling Date	TCE CONCENTRATION (ug/L)						
1	01-Nov-11		5.5	26				
2	01-Apr-12	18	5.7					
3	01-Sep-14		11					
4	01-Oct-14			20				
5	01-Dec-14		6	20				
6	01-Mar-15		8.9	19				
7	01-Apr-15		9.5					
8	01-Jun-15		9.5	19				
9	01-Sep-15		9.1	16				
10	01-May-16	17	8.6	16				
11	01-Nov-16	18	58.9	16				
12	01-Apr-17	17	4.2	14				
13	01-Aug-17		8	14				
14	01-Oct-17		8.2	13				
15	01-Dec-17		9.8	13				
16	01-May-18	15	1.9	13				
17								
18								
19								
20								
Coefficient of Variation:		**0.07**	**1.23**	**0.23**				
Mann-Kendall Statistic (S):		**-6**	**0**	**-69**				
Confidence Factor:		**88.3%**	**48.0%**	**>99.9%**				
Concentration Trend:		Stable	No Trend	Decreasing				



Notes:

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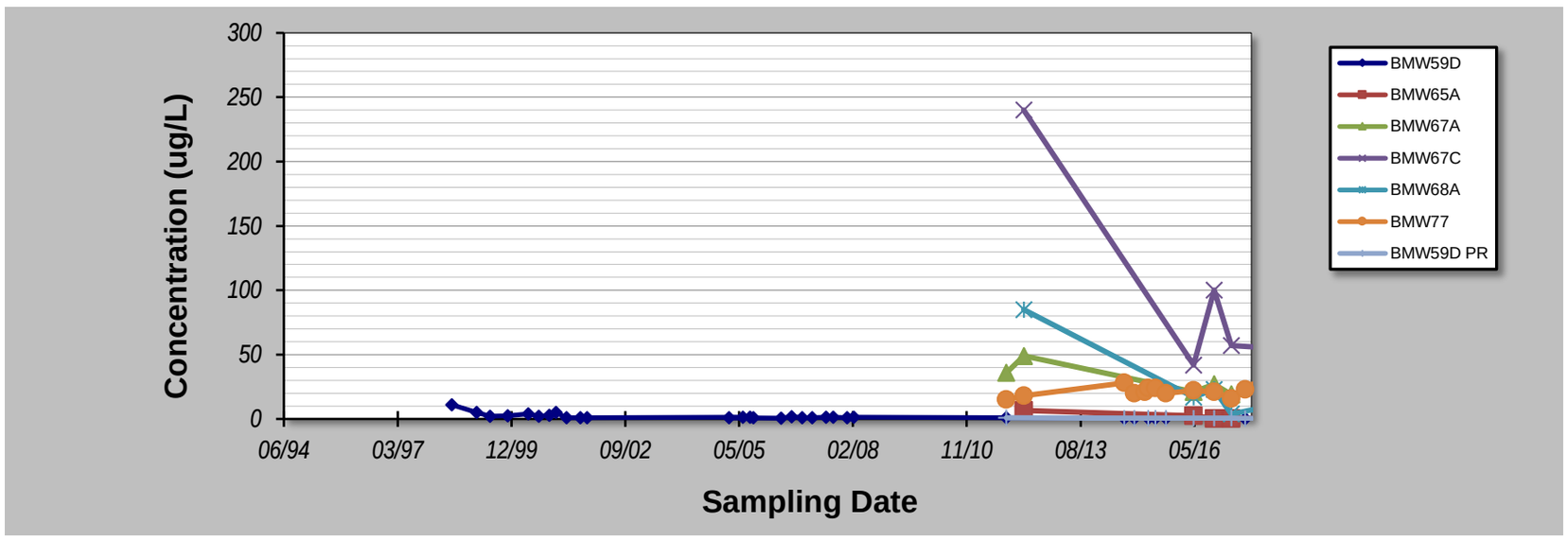
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date: **17-Oct-18**
Facility Name: **Fort Detrick Area B**
Conducted By: **H Akers, PE**

Job ID: **FYR**
Constituent: **PCE**
Concentration Units: **ug/L**

Sampling Point ID:	BMW59D	BMW65A	BMW67A	BMW67C	BMW68A	BMW77	BMW59D PR
Sampling Event	Sampling Date	PCE CONCENTRATION (ug/L)						
1	01-Jul-98	11						
2	01-Feb-99	5						
3	01-Jun-99	2.2						
4	01-Nov-99	2.6						
5	01-May-00	4						
6	01-Aug-00	2						
7	01-Nov-00	3						
8	01-Jan-01	5						
9	01-Apr-01	1						
10	01-Aug-01	1						
11	01-Oct-01	0.9						
12	01-Jul-05	1.3						
13	01-Sep-05	1.4						
14	01-Oct-05	0.8						
15	01-Mar-05	1.1						
16	01-Jun-06	0.76						
17	01-Sep-06	1.8						
18	01-Dec-06	0.93						
19	01-Mar-07	0.93						
20	01-Jul-07	1.4						
21	01-Sep-07	1.3						
22	01-Jan-08	1						
23	01-Mar-08	1.4						
24	01-Nov-11	0.9		36			15	0.9
25	01-Apr-12		6.6	49	240	85	18	
26	01-Sep-14	0.7					28	0.7
27	01-Dec-14	0.7					20	0.7
28	01-Mar-15						21	
29	01-Apr-15	0.7					24	0.7
30	01-Jun-15	0.6					24	0.6
31	01-Sep-15	0.5					20	0.5
32	01-May-16	0.6	2.3	21	42	17	22	0.6
33	01-Nov-16	0.5	0.4	27	100	23	21	0.5
34	01-Apr-17	0.5	0.4	19	57	3.8	16	0.5
35	01-Aug-17	0.4					23	0.4
36	01-Oct-17	0.4					27	0.4
37	01-Dec-17	0.4					28	0.4
38	01-May-18	0.4	0.4	29	55	11	7.1	0.4
39								
40								
Coefficient of Variation:		1.22	1.33	0.37	0.83	1.17	0.26	0.28
Mann-Kendall Statistic (S):		-463	-7	-5	-4	-6	17	-63
Confidence Factor:		>99.9%	92.1%	76.5%	75.8%	88.3%	78.2%	>99.9%
Concentration Trend:		Decreasing	Prob. Decreasing	Stable	Stable	No Trend	No Trend	Decreasing



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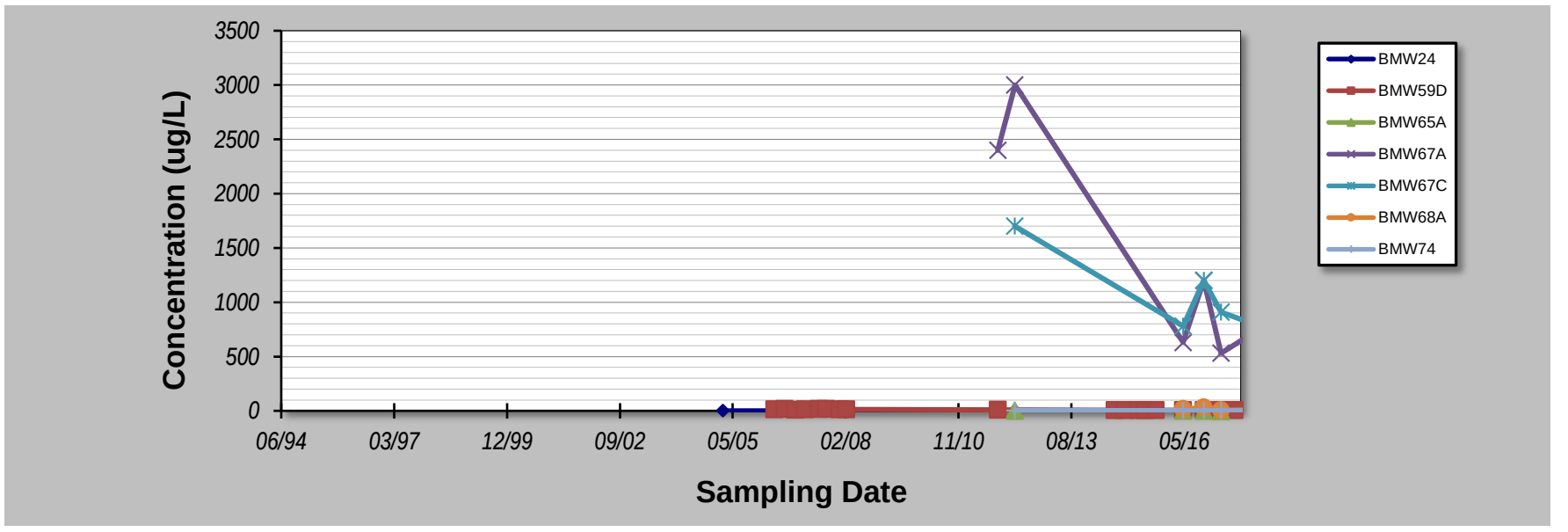
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date: **17-Oct-18**
Facility Name: **Fort Detrick Area B**
Conducted By: **H Akers, PE**

Job ID: **FYR**
Constituent: **Chloroform**
Concentration Units: **ug/L**

Sampling Point ID:	BMW24	BMW59D	BMW65A	BMW67A	BMW67C	BMW68A	BMW74
Sampling Event	Sampling Date	CHLOROFORM CONCENTRATION (ug/L)						
1	01-Mar-05	1						
2	01-Jun-06		13					
3	01-Sep-06		15					
4	01-Dec-06		11					
5	01-Mar-07		12					
6	01-Jul-07		16					
7	01-Sep-07		17					
8	01-Jan-08		12					
9	01-Mar-08		14					
10	01-Nov-11		9.9		2400			
11	01-Apr-12	3		1.6	3000	1700		1.9
12	01-Sep-14		6.7					
13	01-Dec-14		6.3					
14	01-Apr-15		6.1					
15	01-Jun-15		6					
16	01-Sep-15		5					
17	01-May-16	0.3	6.1	1.1	630	780	16	0.9
18	01-Nov-16	1.7	5.2	0.5	1200	1200	30	0.8
19	01-Apr-17	0.3	4.5	0.2	530	910	4.9	0.8
20	01-Aug-17		4.3					
21	01-Oct-17		3.6					
22	01-Dec-17		4.2					
23	01-May-18	0.2	3.8	0.1	790	760	8.5	0.8
24								
25								
Coefficient of Variation:		1.02	0.52	0.91	0.72	0.37	0.75	0.46
Mann-Kendall Statistic (S):		-8	-166	-10	-7	-6	-2	-7
Confidence Factor:		89.8%	>99.9%	99.2%	86.4%	88.3%	62.5%	92.1%
Concentration Trend:		No Trend	Decreasing	Decreasing	Stable	Stable	Stable	Prob. Decreasing



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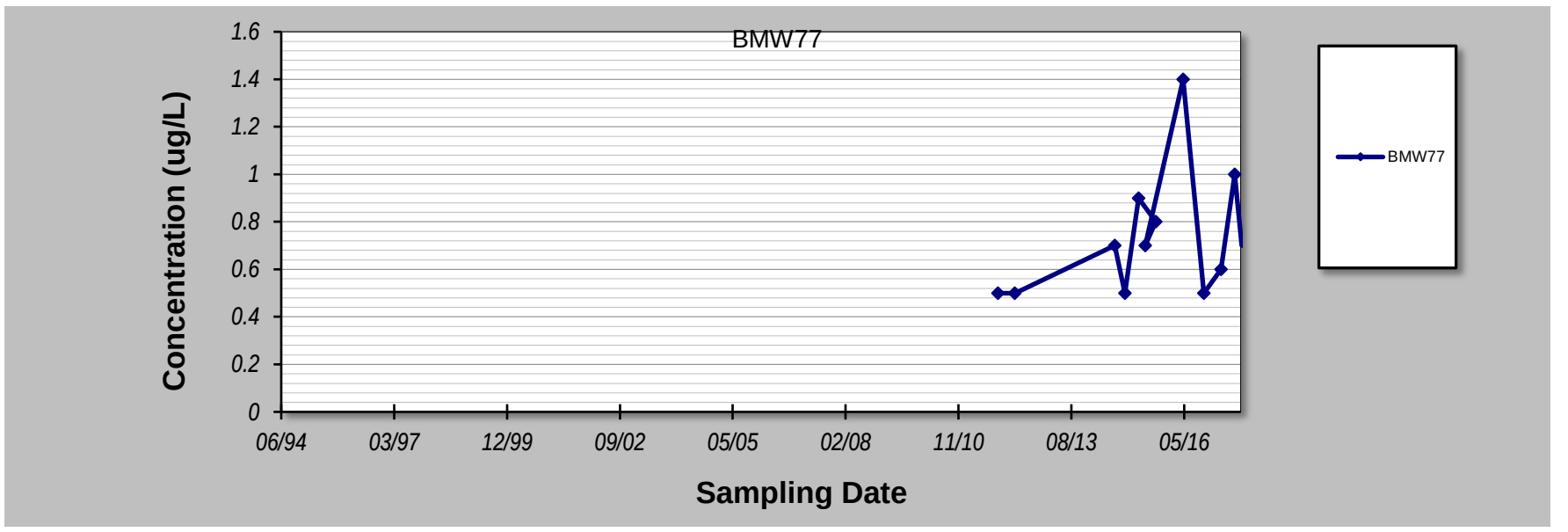
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date: **17-Oct-18**
Facility Name: **Fort Detrick Area B**
Conducted By: **H Akers, PE**

Job ID: **FYR**
Constituent: **Chloroform**
Concentration Units: **ug/L**

Sampling Point ID: **BMW77**

Sampling Event	Sampling Date	CHLOROFORM CONCENTRATION (ug/L)						
1	01-Nov-11	0.5						
2	01-Apr-12	0.5						
3	01-Sep-14	0.7						
4	01-Dec-14	0.5						
5	01-Apr-15	0.9						
6	01-Sep-15	0.8						
7	01-Jun-15	0.7						
8	01-May-16	1.4						
9	01-Nov-16	0.5						
10	01-Apr-17	0.6						
11	01-Aug-17	1						
12	01-Oct-17	0.7						
13	01-Dec-17	0.7						
14	01-May-18	0.3						
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		**0.39**						
Mann-Kendall Statistic (S):		**7**						
Confidence Factor:		**62.6%**						
Concentration Trend:		No Trend						



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