Central Chemical Superfund Site
Community Open House
April 20, 2017
6:00 – 8:00 pm

Welcome!

The U.S. Environmental Protection Agency (USEPA) is hosting a community meeting for the Central Chemical Superfund Site located in Hagerstown, Washington County, Maryland.

The tables tonight are staffed by representatives from the USEPA and consultants working on behalf of the Central Chemical Site Group. The Central Chemical Site Group is a group of parties cooperating with the USEPA and the Maryland Department of the Environment (MDE) to successfully cleanup this Site.

USEPA Community Involvement Coordinators:

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USEPA Web Site: www.epa.gov/superfund/centralchemical

Each table provides a different overview or status update of the history, regulatory process, and various cleanup actions that are underway.

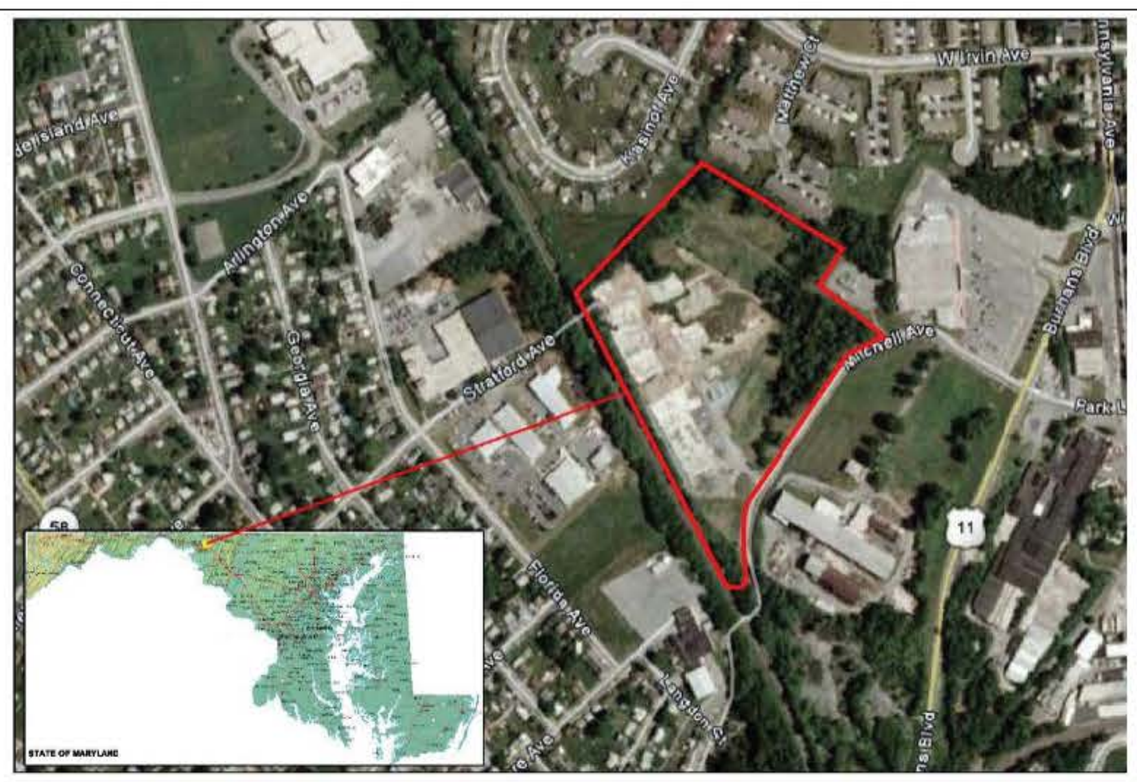
Please visit each table at your leisure, there is no defined order and you can set your own pace. Do not hesitate to engage table representatives, as they are here to answer your questions and concerns.

Helpful Tips

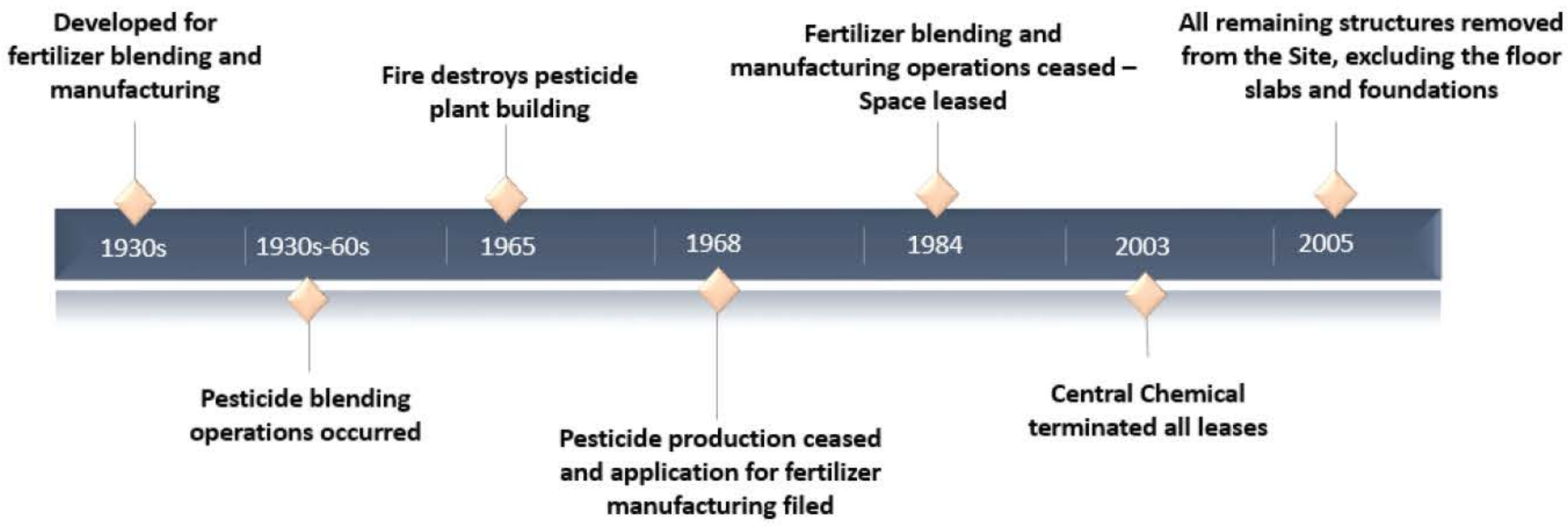
	Light refreshments are provided inside. Please help yourself. Trash cans are located inside the meeting space.
	Men's and women's restrooms are locate in the hallway off of the meeting space.
	If an emergency is identified, please proceed out the main entrance of the building.

STATION 1 - SITE LOCATION/HISTORICAL USE

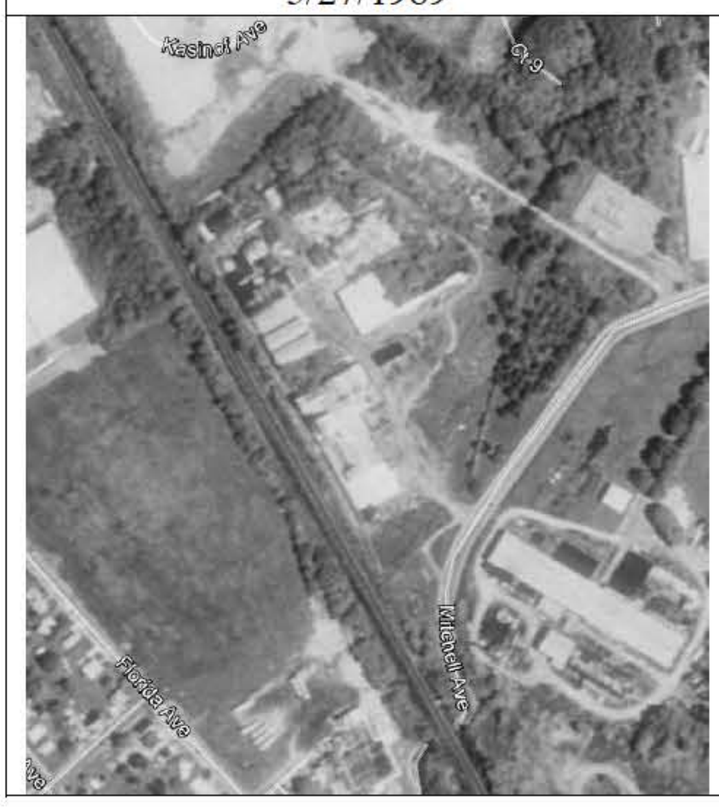
Site:	Central Chemical Superfund Site Mitchell Avenue Hagerstown, Washington County, Maryland
Land:	19.02 Acres
Site Use:	Commercial/Industrial
Area Use:	Mixed Industrial, Commercial, Residential, and Agricultural
Parties:	Companies performing the Site work were historic customers of Central Chemical and never owned or operated the facility.
Operable Units (OUs):	1 – Site Soils and Principal Threat Wastes 2 – Bedrock Groundwater



Property was originally developed to serve the local agricultural community (i.e., orchards). Significant Site use activities are presented below.



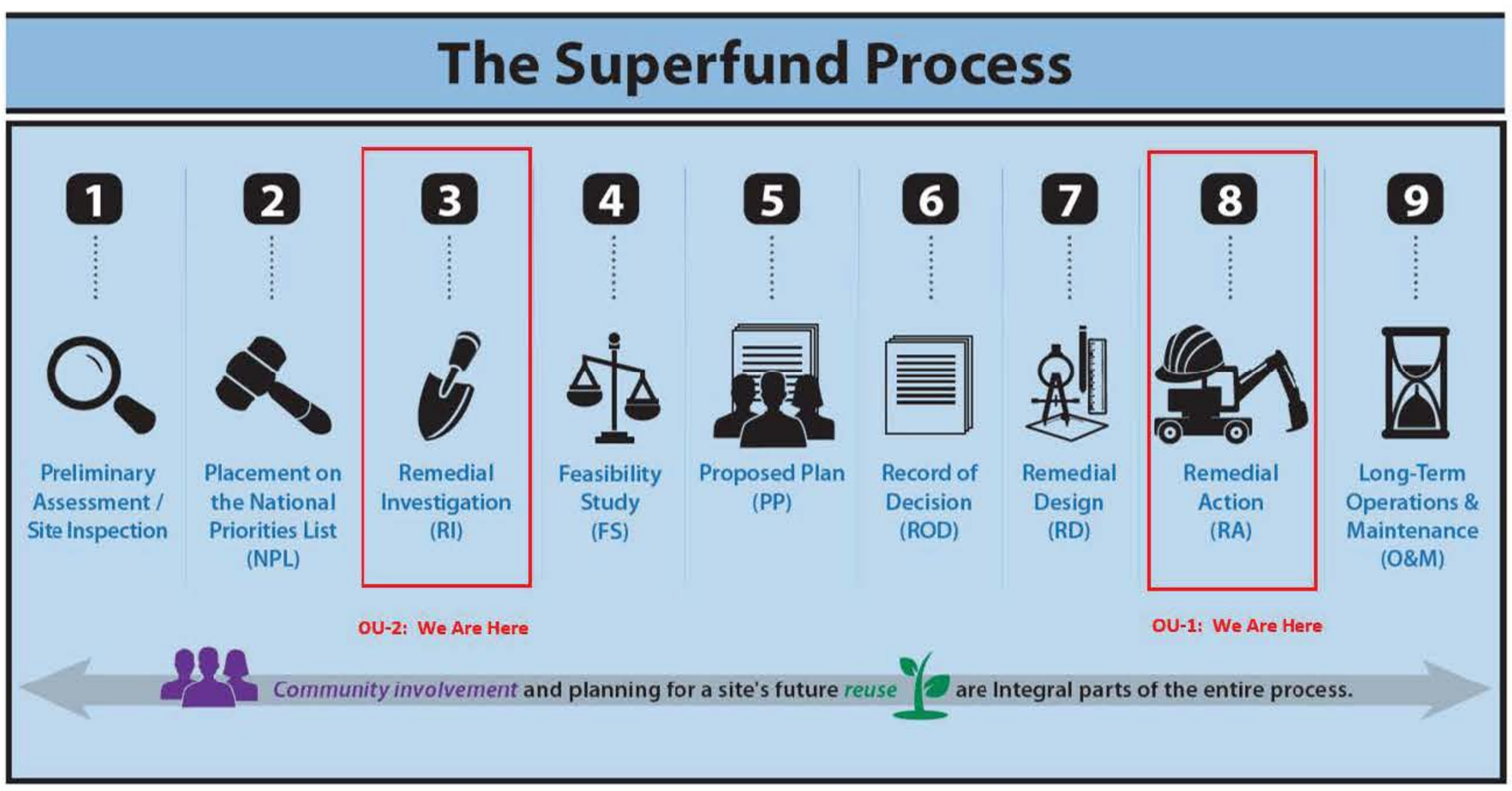
1937	1956	1968
		

5/27/1989	3/19/1999	9/10/2015
		

STATION 2 – SITE MILESTONES

Date	Activity Description
1976	State of Maryland began monitoring the Site for DDT contamination.
1977	Complaint and Order was issued to Central Chemical by Maryland Water Resource Administration (WRA).
3/1987	Maryland Department of the Environment (MDE) directed Central Chemical to conduct an environmental investigation.
1989-96	MDE and USEPA performed site investigation activities.
10/1992	Central Chemical installed a fence.
6/17/1996	Site was proposed to the CERCLA NPL (i.e., "Superfund Site").
2/1997	USEPA and Central Chemical entered into an Administrative Order on Consent for Removal Response Action.
9/12/1997	Administrative Order on Consent No. 97-105-DC (Consent Order).
9/25/1997	Site was listed as Final on the NPL (i.e., "Superfund Site").
2000	USEPA grants Hagerstown $100,000 to implement a 12-month community based reuse assessment of the Site.
2002	Two areas were excavated and shipped off-site for disposal.
3/2003	USEPA entered into an Administrative Order on Consent for Remedial Investigation/Feasibility Study, Docket No. 97-105-DC ("RI/FS AOC").
2003	Interim remedial measure included installation of silt fencing along the Mitchell Avenue frontage and a clean gravel driveway area at the Site entrance.
4/2003	Community Liaison Panel was formed to serve as a communication bridge between the community, the regulatory agencies, and the responsible parties.
2005	Interim remedial action removed all remaining structures from the Site, excluding the floor slabs and foundations which remain at the Site.
2008	RI/FS completed.
4/25/2009	USEPA issued Proposed Remedial Action Plan (PRAP).
9/30/2009	USEPA issued ROD for OU-1.
2010	USEPA divides Site into Operable Unit 1 (OU-1) for Site soils, principal threat wastes, and shallow groundwater; and OU-2 for bedrock groundwater.
8/23/2013	USEPA entered into an Administrative Settlement Agreement and Order on Consent for Remedial Design, Docket No. CERC-03-2013-0044, as amended on September 8, 2014 ("Settlement Agreement"), with the Respondents Group.
2/2017	Respondents group Submit OU-1 100% RD package.

CERCLA (SUPERFUND) PROCESS



AGENCY CONTACTS

USEPA Contacts:

OU-1 Remedial Project Manager:
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OU-2 Remedial Project Manager:
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Community Involvement Coordinators:
Gina Soscia and Lavar Thomas
Contact Information Provided at Welcome Table

MDE Contact:

Remedial Project Manager:
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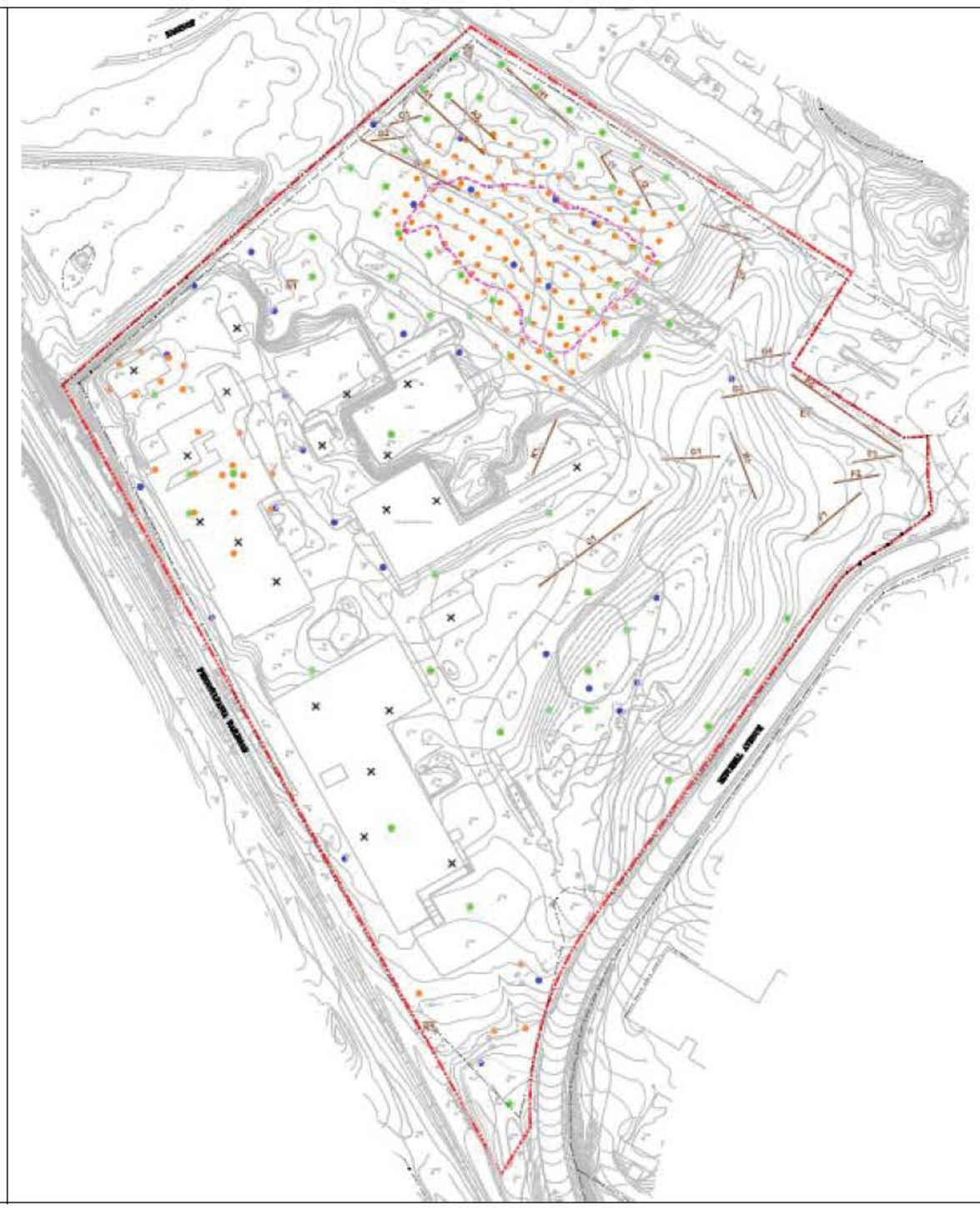
STATION 3 – OU-1 SITE INVESTIGATION/RISK ASSESSMENT

Site investigation activities included the following:

242 Soil Testing Locations
51 Groundwater Monitor Wells
24 Soil Test Pits/Trenches
4 Sub-Slab Vapor Testing Locations

Chemicals of Concern:

- 2,4-DDD
- 2,4-DDT
- 4,4-DDD
- 4,4-DDT
- Aldrin
- Alpha-BHC
- Alpha-Chlordane
- Beta-BHC
- Delta-BHC
- Dieldrin
- Gamma-BHC
- Gamma-Chlordane
- Heptachlor
- Heptachlor Epoxide
- Toxaphene
- Benzo(a)pyrene
- Arsenic
- Endrin Ketone
- Manganese
- Thallium
- Atrazine



- The Human Health Risk Assessment, for current Site use, identified the following:
  - ***Potential risk for frequent trespassers and Site workers***.
  - Off-Site Adjacent Residential Areas - ***No risks to small children or adults***.
  - Off-Site Surface Water, Sediment, and Fish Tissue - ***No risk for swimming, wading, or fish consumption for users of Antietam Cree***k.

- The Ecological Risk Assessment identified the following:
  - Site contaminants may pose a risk to wildlife inhabiting the Central Chemical property.









STATION 4 – OU-1 REMEDY COMPONENTS

OU-1 Remedial Action Objectives

- Prevent exposure to contaminated soils
- Prevent migration of contaminants from soils to groundwater
- Solidify contaminated materials/soils

OU-1 Remedy Cleanup Work Timeline

2017: Site Preparation, Foundation Removal and Crushing, Groundwater Hydraulic Containment System, Monitor Well Closing
2018: In-Situ Soil Solidification and Stabilization, Groundwater Containment System Startup
2019: Excavation and Backfilling, Consolidation Area Cap, Site Restoration
2020+: Monitoring

2017 - Site Preparation

Construct Access Road	Remove Vegetation	Erosion Control
		
Construct Decontamination Pad	**Secured Entrance**	**Temporary Seeding**
		

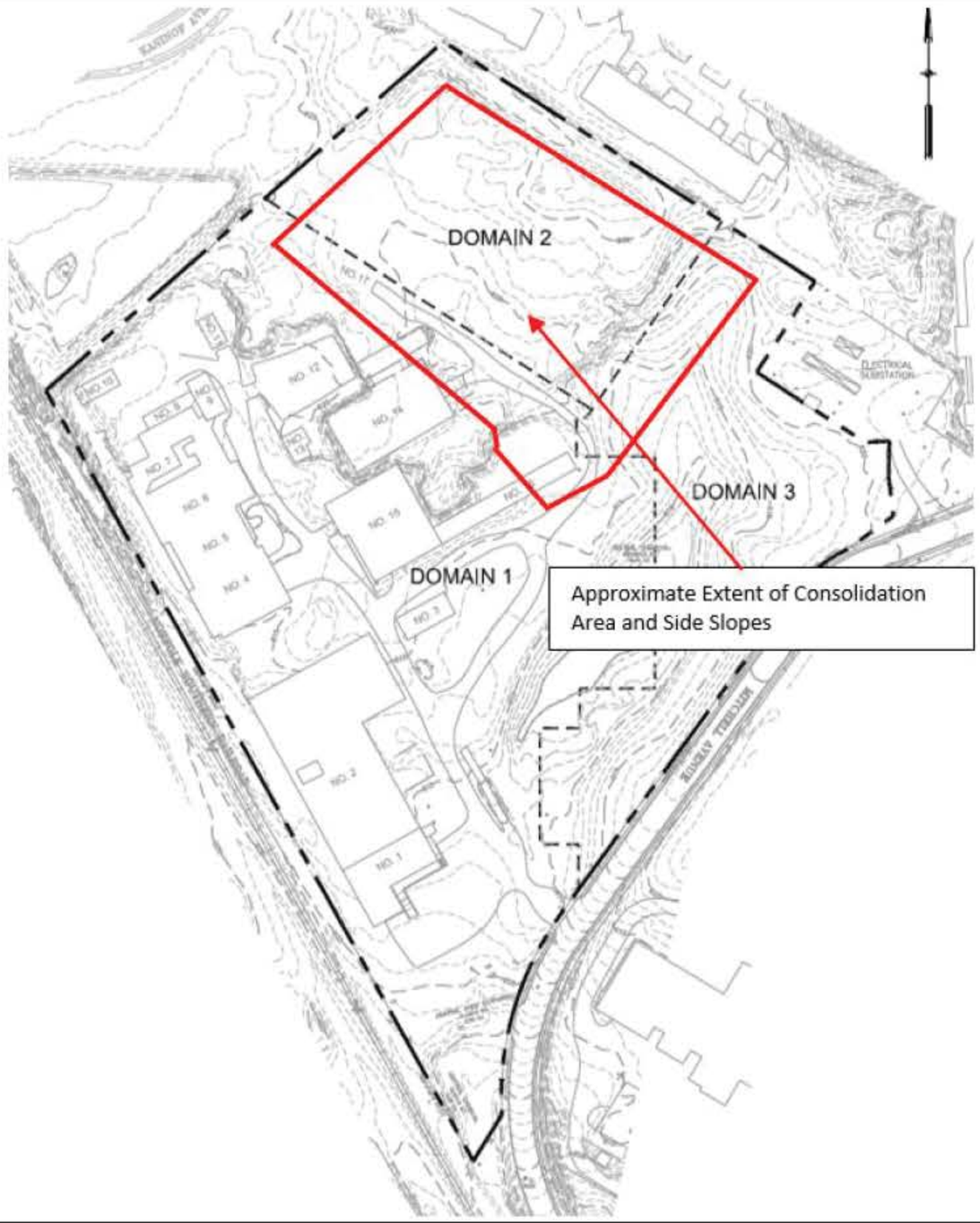
2017 - Foundation Removal and Crushing

Foundations will be removed and crushed to prepare the Site for excavation of soils and incorporated into the Consolidation Area as part of Soil Solidification activities.

Foundation Removal

Foundation Crushing

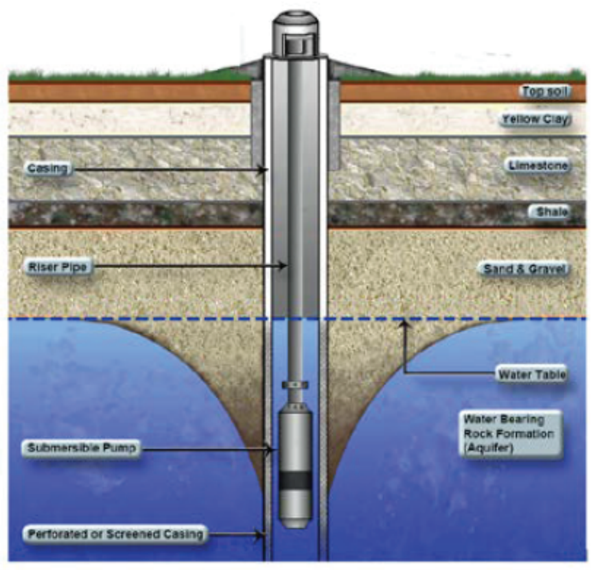
Stockpiling



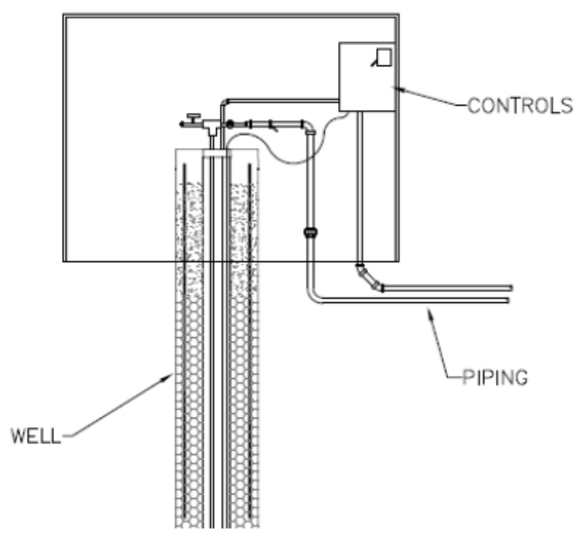
2017 - Groundwater Hydraulic Containment System Construction

Groundwater hydraulic containment system will control the movement of contaminated groundwater and will include four wells and treatment building.

Containment Well

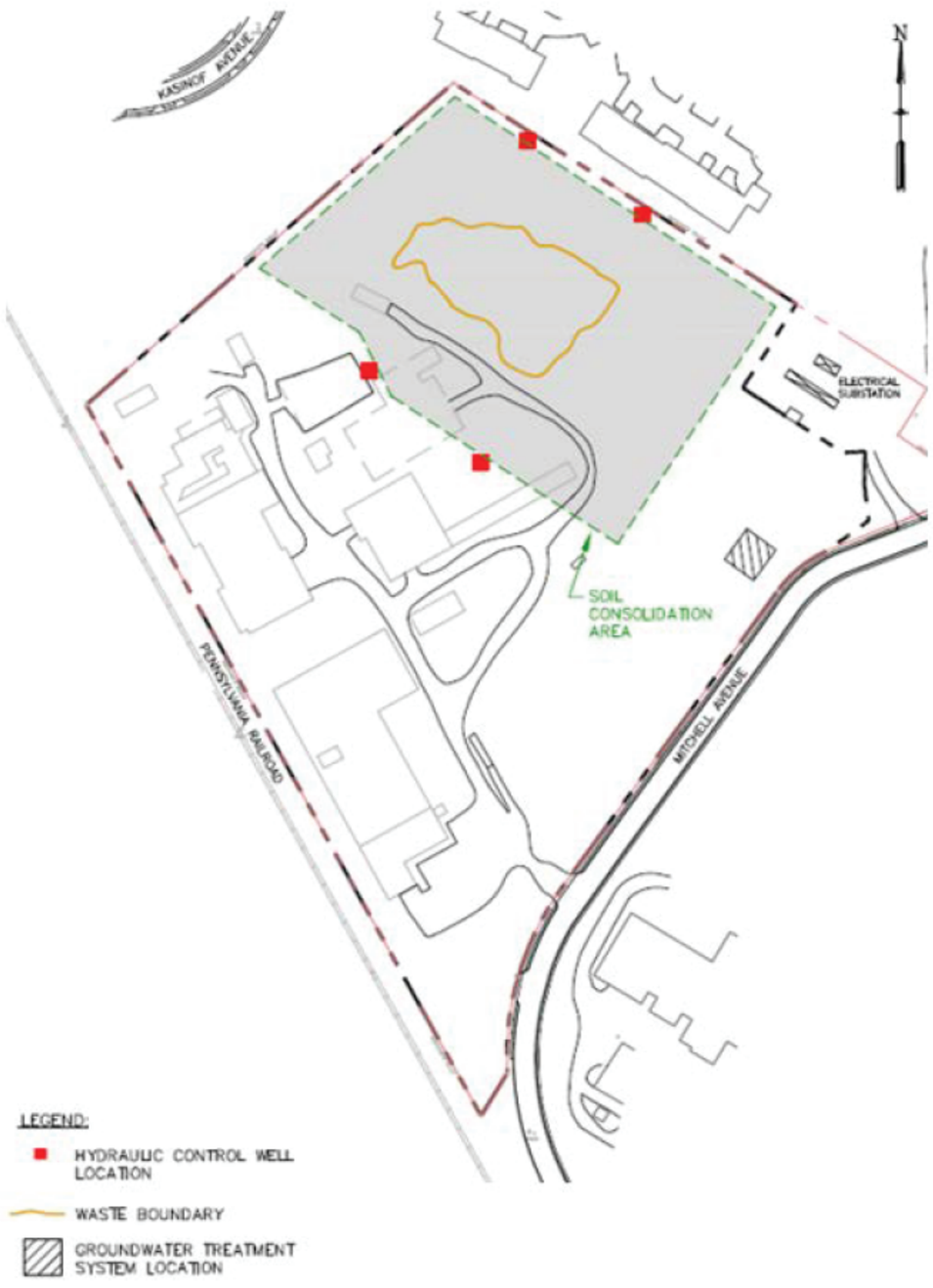


Well Surface Equipment

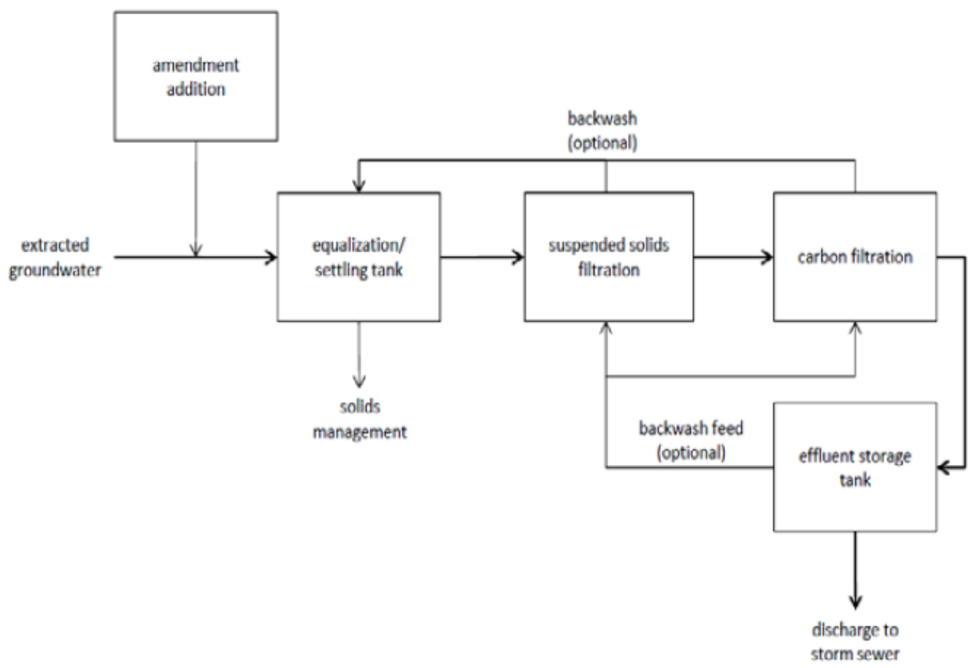


Treatment Building

Hydraulic Control Well/Treatment Building Location



Groundwater Treatment Process



2017 - Monitor Well Status Modification

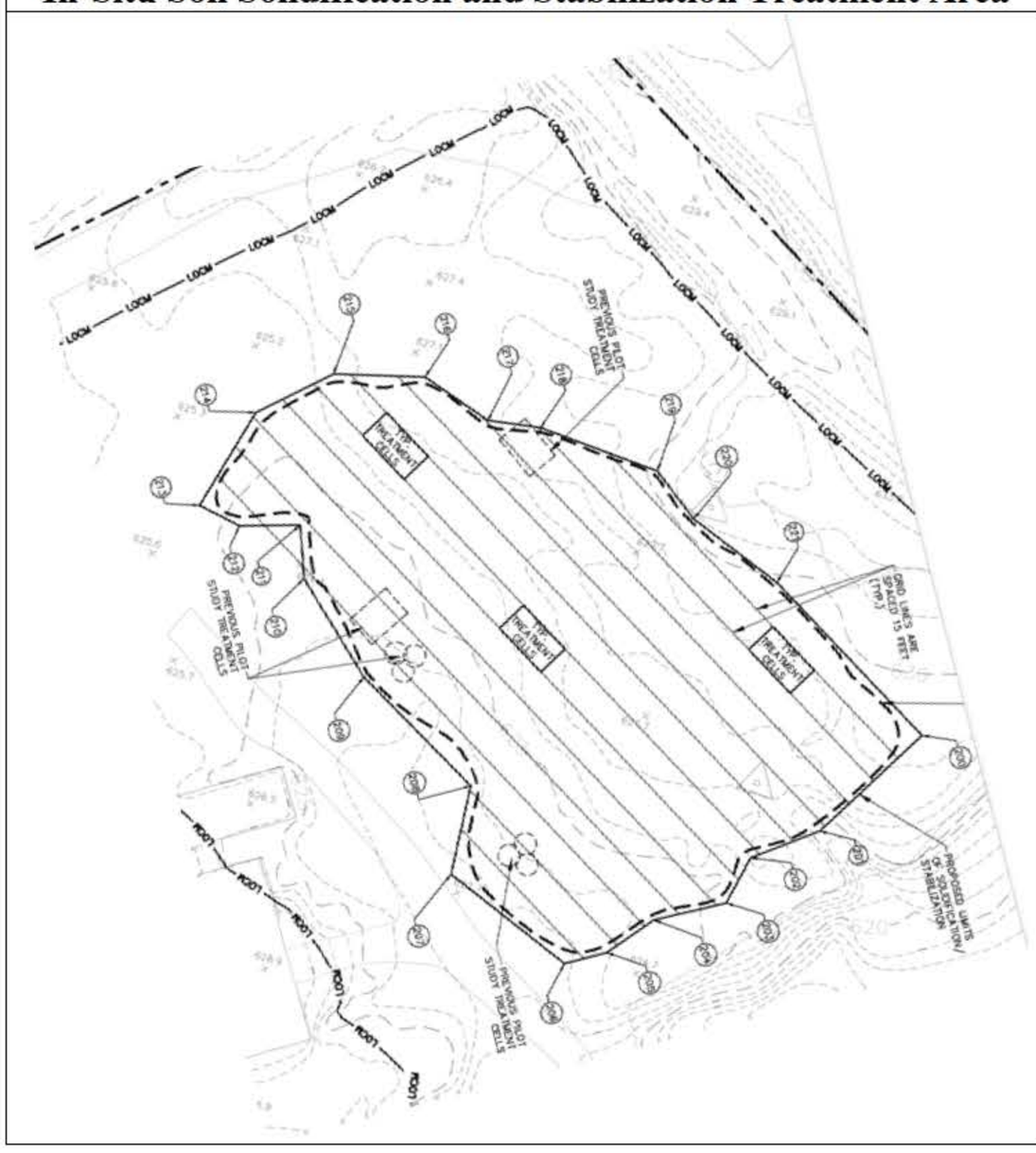
- 22 existing monitoring wells will be closed due to future remediation activities.
- 13 wells will be protected
- A monitor well network will remain in place to monitor groundwater throughout the process.

2018 - Groundwater Containment System Startup

Prior to initiation of Soil Solidification, the groundwater containment system will be placed into operation.

2018 Activities – In-Situ Soil Solidification and Stabilization Work

An excavator will be used to mix Portland cement, blast furnace slag, and activated carbon (2%) for Soil Solidification to immobilize chemicals of concern.

In-Situ Soil Solidification and Stabilization Treatment Area	Process – Adding Stabilization Slurry
	
Process - Excavator Mixing	**Process – Mixing Complete**
	

2019 - Excavation

Excavate Area: 11.5 Acres (45,100 cubic yards)

Yellow: 0-1 feet below ground surface (bgs)

Green: 0-2 feet bgs

Gray: 0-10 feet bgs

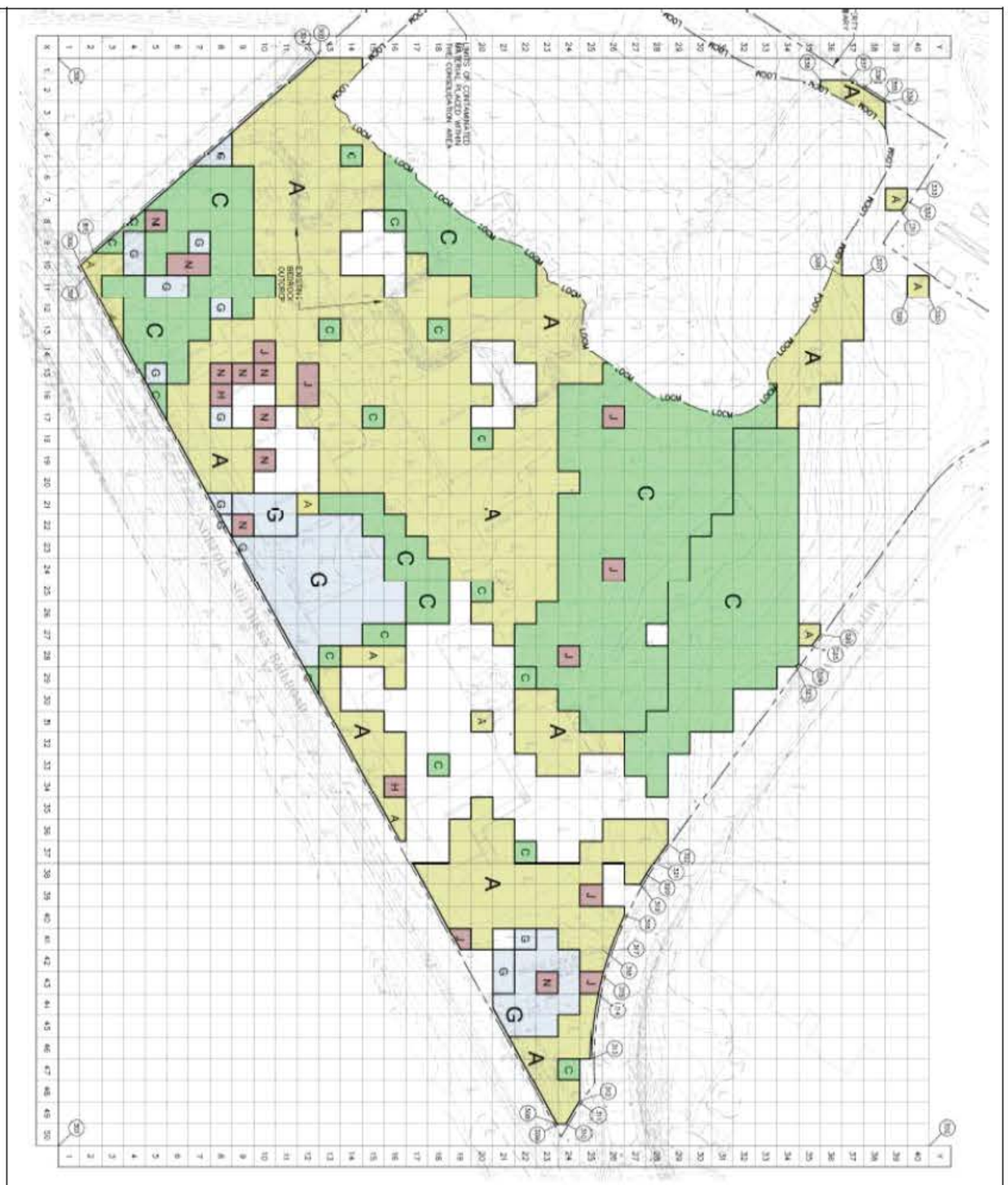
Maroon: 0-24 feet bgs

Challenges include:

- Surface water and groundwater management
- Maintain slopes and sheet pile support
- Proximity to Mitchell Avenue
- Proximity to the Norfolk Southern railroad right-of-way
- Sequencing/phasing of excavation/restoration activities
- Confirmation sampling across large excavation areas

Management activities associated with these challenges will be defined in future Open Houses.

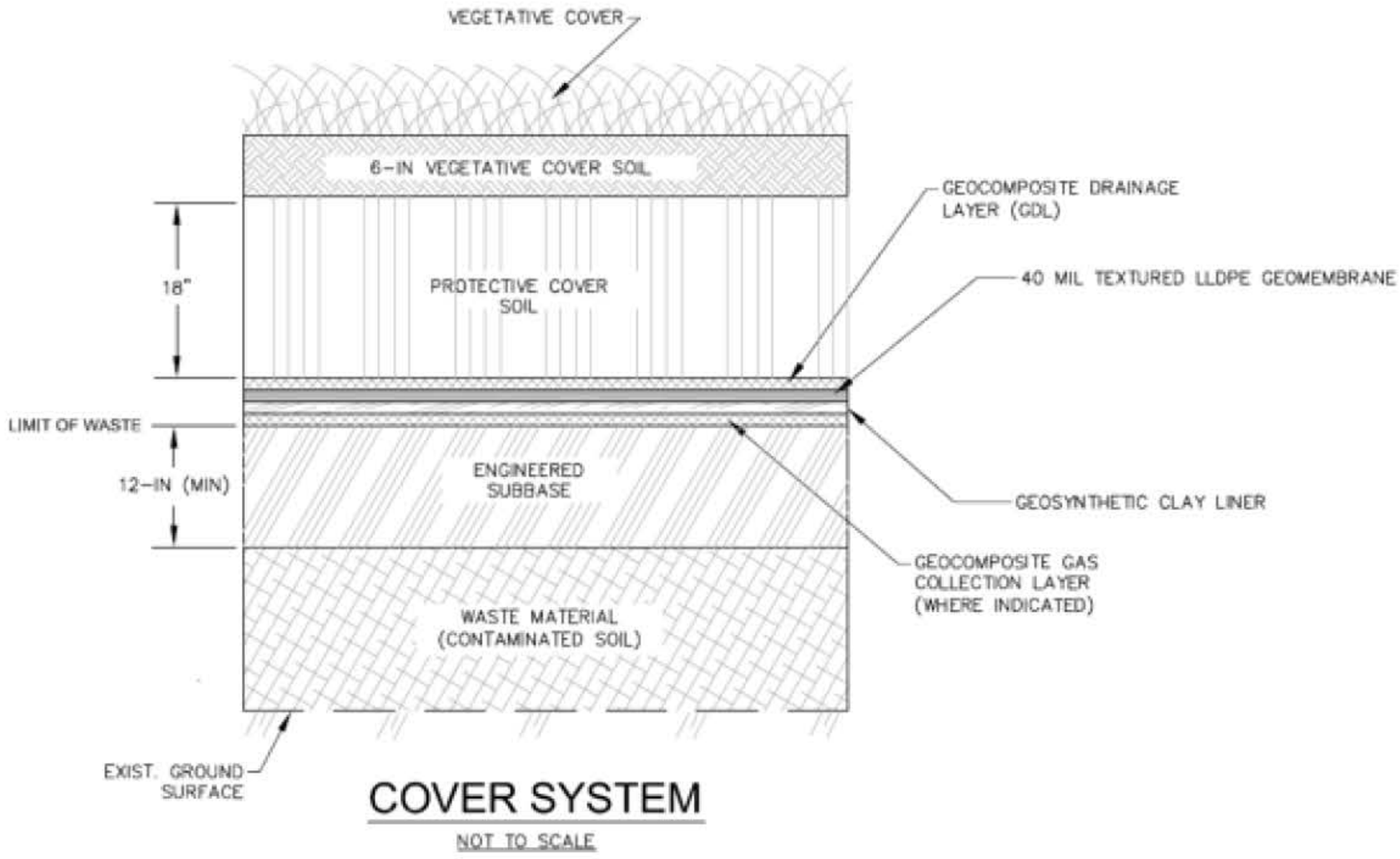
Confirmation sampling will be performed to confirm compliance with the standards outlined in USEPA's 2009 ROD.



2019 - Consolidation Area

Activities will include:

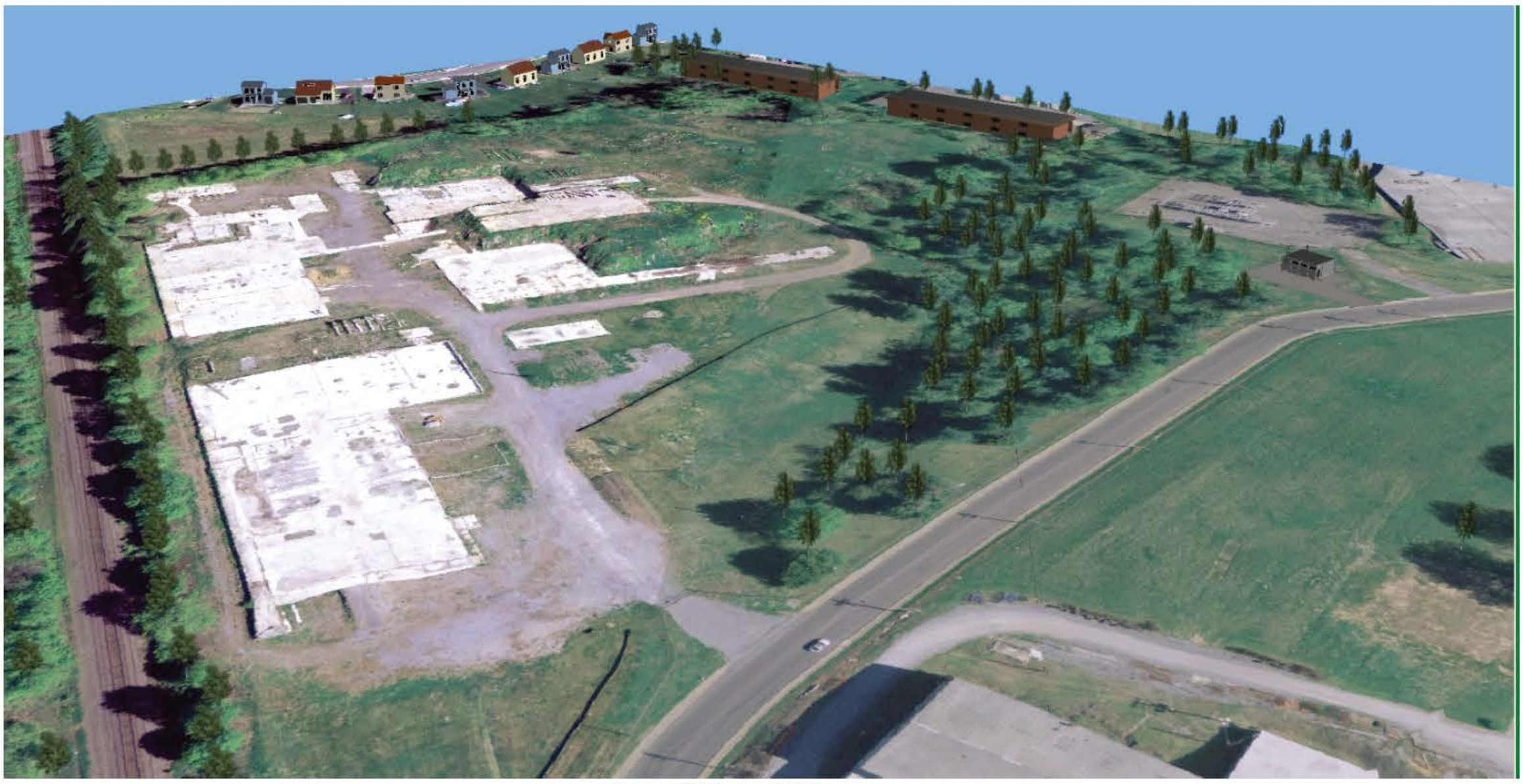
- Excavation Backfilling
- Surface Drainage Controls
- Topsoil Placement and Fine Grading
- Low Permeability Cover System
- Passive Venting System



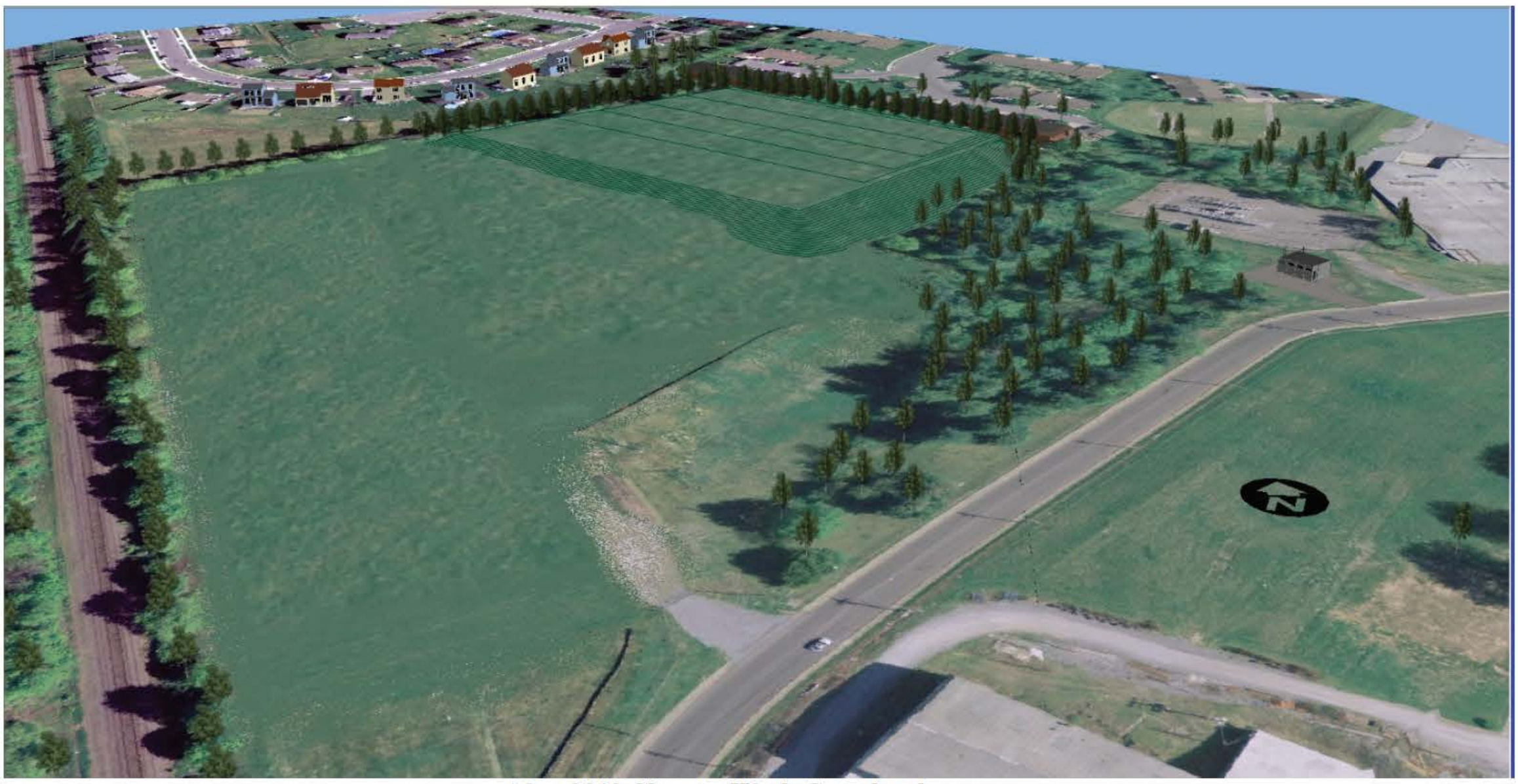
COVER SYSTEM

NOT TO SCALE

2019 Activities – Before and After



Present View of Site



After 2019 Cleanup Work Completed

STATION 5 – HEALTH & SAFETY / AIR MONITORING

Health & Safety

• Activities will be performed in a manner to protect workers, neighbors, and passersby. • On-Site activities will be conducted in accordance with a Site-specific Health & Safety Plan. • Workers will wear appropriate protective clothing while working on-Site.	Protective clothing may include the following, and will be used as appropriate: 1. Coveralls 2. Gloves (1) 3. Boots/shoes, chemical-resistant steel toe and shank 4. Boots, outer, chemical-resistant (disposable) (1) 5. Safety glasses or chemical splash goggles (1) 6. Hard hat (1) 8. Face shield (1) (1): Optional, as applicable.

Air Monitoring

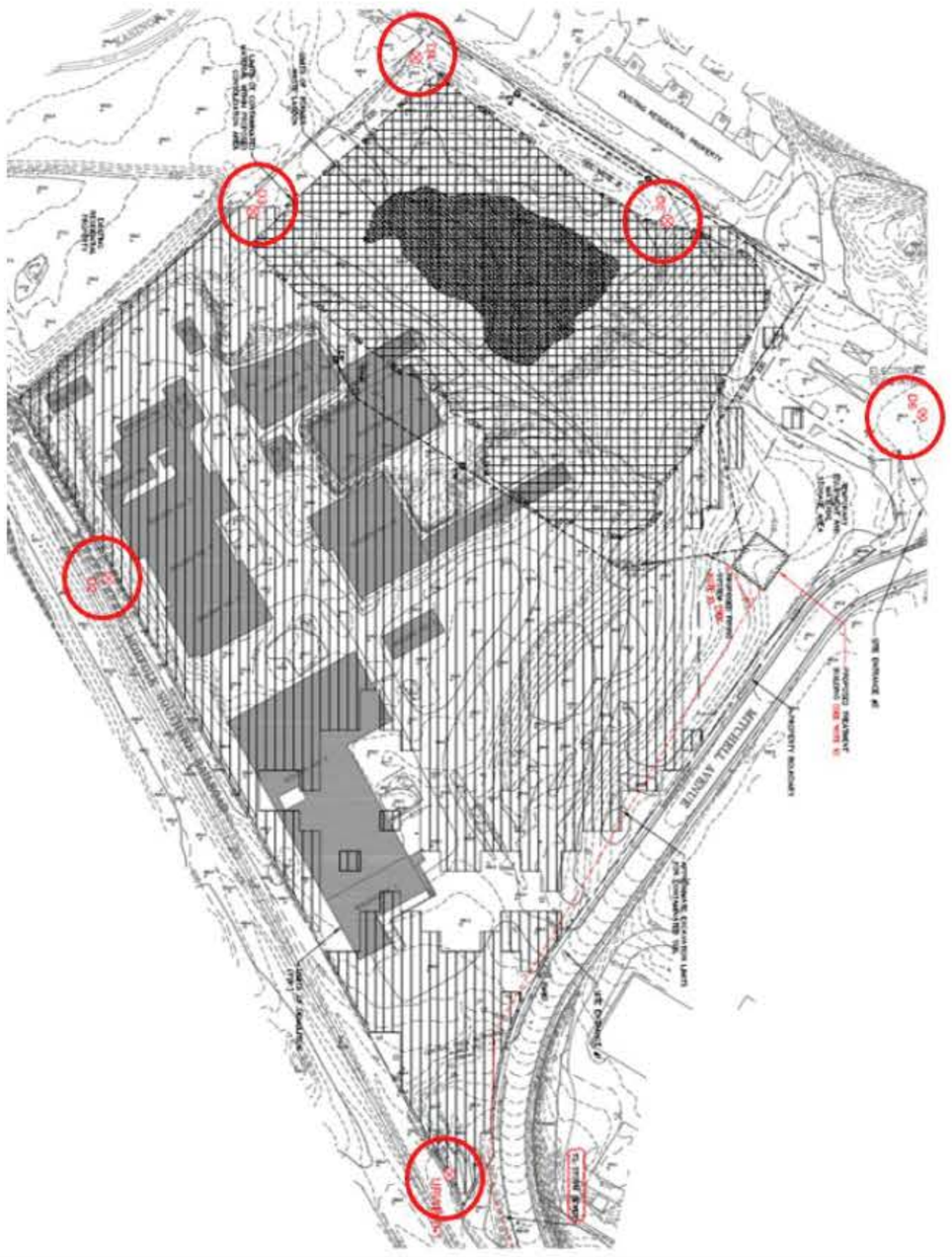
Air monitoring will include:

- Particulate matter
- Metals
- Pesticides

Samples will be collected near the fence line, based on predominant wind direction:

- One upwind
- Five downwind

In addition, portable continuous daily real-time field monitoring of dust levels will be performed.



Typical Air Monitoring Station

Upon completion of the above activities, the Site will enter long-term operation and maintenance, which will include the general property, cap/consolidation area, and groundwater hydraulic containment/treatment system.

STATION 6 – BEDROCK GROUNDWATER (OU-2) STATUS

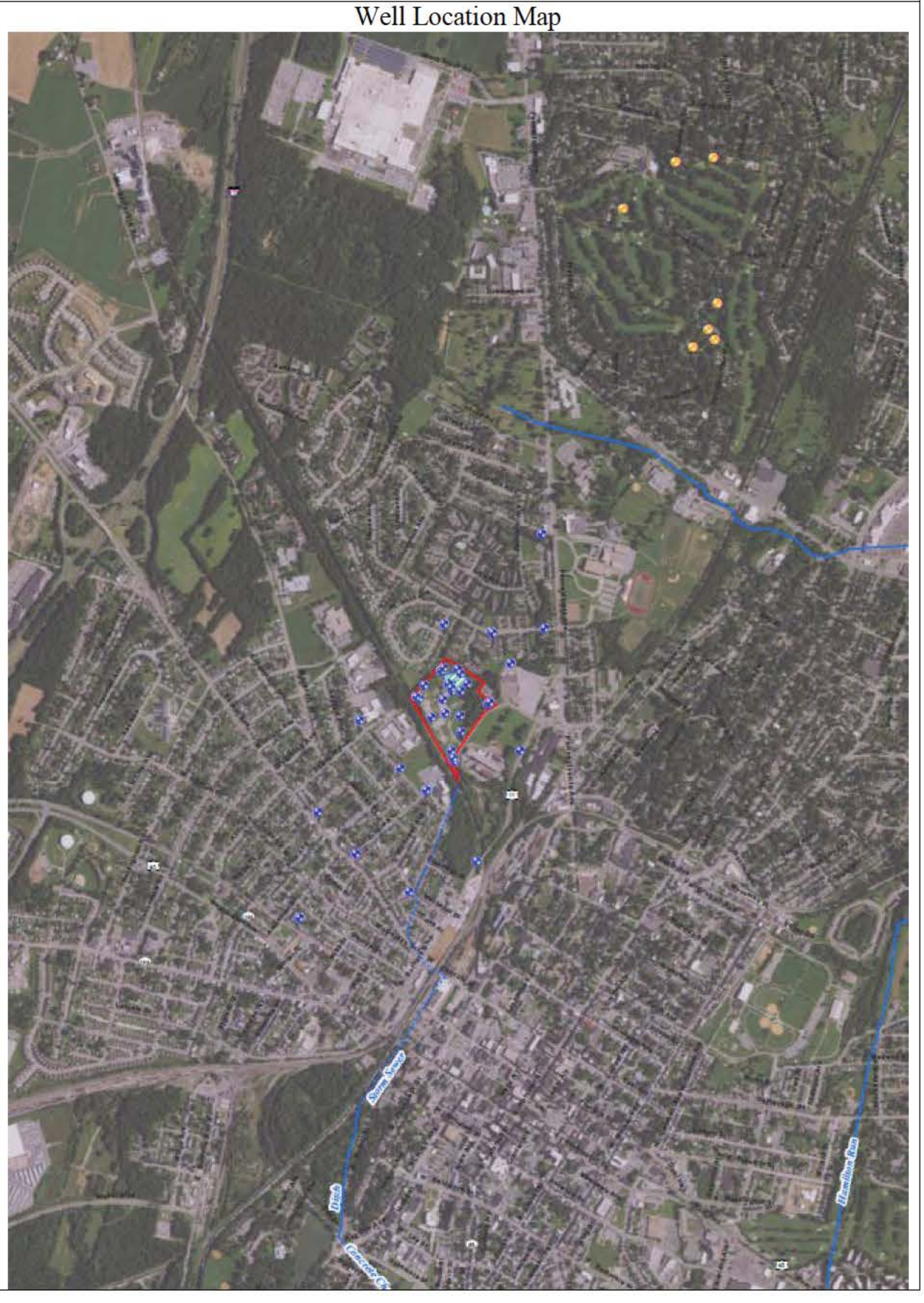
The objectives of the OU-2 Remedial Investigation (RI) are:

1. Define the nature and extent of Site-related chemicals of concern (COCs) in groundwater.
2. Evaluate risk to human health and the environment posed by Site-related COCs in groundwater.
3. Determine the areas impacted by Site-related COCs.
4. Determine the fate and transport of COCs and evaluate potential receptors.
5. Obtain the necessary geologic and hydrogeologic data to evaluate remedial alternatives as part of the Feasibility Study.

To accomplish these goals the following activities have been or are scheduled to be completed.

2002 – 2006:	34 monitor wells installed
2013 - 2014:	Sub-slab vapor sampling (4 nearby townhomes)
	Sampled 7 private irrigation wells
	Installed 8 monitor wells
2014 – 2015:	USEPA performed tracer study (i.e., typically used to map subsurface groundwater flow to surface water discharge locations)
2015:	Installed 7 monitor wells
	Performed 2nd round of private irrigation well sampling
2016:	Performed comprehensive groundwater monitoring
event	(October)
2017:	Performed comprehensive groundwater monitoring
event	(February)
2017:	RI Report (Parts 1 and 2)
2018:	Comprehensive RI Report
2018:	Feasibility Study

Well Location Map



Presented below is a depiction of the beta-Hexachlorocyclohexane (i.e., pesticide - BHC) groundwater plume with groundwater flow indications.

October 2016

Hagerstown City Drinking Water Supply

Drinking water for the City of Hagerstown comes from one of two City-owned treatment plants.

Main Plant: R.C. Willson Water Treatment Plant
Water Source - Potomac River

Second Plant: W. M. Breichner Water Treatment Plant
Water Source - Edgemont Reservoir fed by two streams, the Warner Hollow and the Raven Rock.

Hagerstown residents receive their drinking water from the municipal water system, which is not located in the vicinity of the Site and has not been impacted by the Site.