Five-Year Review Report

Second Five-Year Review Report
For
Gallup's Quarry Superfund Site
Town Of Plainfield
Windham County, Connecticut

September 2007

Prepared by:
U.S. Army Corps of Engineers
New England District

For:

U.S. Environmental Protection Agency
Region I
Boston, Massachusetts

Approved by: Date: 9-28-07

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Office of Site Remediation & Restoration,
Region 1, New England

EXECUTIVE SUMMARY

The remedy selected to address contamination at the Gallup's Quarry Superfund Site, located in Plainfield, Connecticut, includes long-term monitoring of soils, surface water, and groundwater in and near the Site, and five-year reviews. This second five-year review was performed to determine if the selected remedy continues to be protective of human health and the environment.

The Record of Decision (ROD) describes the source monitoring remedy for the Site as specified in Section X of the ROD. The following are the components of the remedy:

- Institutional controls, including land-use restrictions to limit the use and disturbance of contaminated soils at the Site and to prevent the use of impacted groundwater;
- Posting of warning signs and periodic maintenance of them;
- Sampling and analysis of contaminated unsaturated soils for contaminants of concern; and
- Conducting long-term sampling and analysis of groundwater, surface water, and soil to assess compliance with the groundwater cleanup levels through natural attenuation and to ensure the surface water has not been adversely impacted (cleanup levels were estimated to be attained after 27 years).

The Site achieved construction completion with the signing of the ROD on September 30, 1997, which was the trigger date for the first five-year review. The first five-year review was completed in August 2002. The trigger date for the second five-year review (this report) was completion of the first five-year review.

Site access by trespassers and unimplemented institutional controls continue as issues identified in the last five-year review.

The remedy at the Gallup's Quarry Site currently protects human health and the environment because there is no current use of or exposure to Site media containing contaminant concentrations exceeding applicable criteria. The Site media include soils, surface water, and groundwater.

For soils at the former primary disposal area, ethylbenzene, total xylenes, PCE, TCE, and bis(2-ethyl hexyl) phthalate (DEHP) persist at concentrations above cleanup levels. The cleanup levels were established to prevent long-term leaching of chemicals to ground water.

For surface water, chlorinated volatile organic compounds (CVOCs) are consistently detected at concentrations below 1 microgram per liter (µg/L) (below levels of concern) in Fry Brook upstream of its confluence with Mill Brook and in Mill Brook downstream from Fry Brook. Contaminants typically are not detected in Mill Brook immediately downstream from the plume discharge area. As stated in the ROD, it is unlikely that the contaminants in surface water result from discharge of the Gallup's Quarry groundwater plume. The need for stream-water monitoring is questionable and should be reviewed.

Vinyl chloride and PCE persist in three monitoring wells above cleanup levels. In November 2006, concentrations of vinyl chloride exceeded the cleanup level of 2 µg/L in water from three monitoring wells. The maximum concentration on that date was 8 µg/L in water from well MW-102TT.

Concentrations have been declining steadily in well MW-102TT since November 2001 when long-term monitoring began, but trends are not obvious at other wells where vinyl chloride has been detected.

In November 2006, concentrations of PCE exceeded the cleanup level of 5 µg/L in water from three monitoring wells. The maximum concentration on that date was 8 µg/L in water from wells MW-101T and MW-107TT. Concentrations have been declining steadily to near or below cleanup levels in water from well MW-101TT, but trends are not obvious at other wells where PCE has been detected.

Long-term monitoring data do not clearly demonstrate that the 27-year cleanup goal stated in the ROD will be accomplished. A numerical transport model calibrated on the basis of data from long-term monitoring could help determine if the projected 27-year cleanup time is still a reasonable goal.

The plume of contaminants in groundwater has not changed noticeably in the last 10 years, and it is reasonable to assume that the plume has reached its maximum extent. Thus, the need for several monitoring wells where chlorinated volatile organic compounds (CVOCs) have not been detected is questionable. A network review would be appropriate to assess the number of wells and sampling frequency needed to confidently monitor the fate of contaminants. Pore-water sampling along Mill Brook could provide supporting data for a network review.

EPA and CTDEP should review all plans for Site reuse that might cause changes in recharge rates and, in turn, affect the configuration of the plume and projected cleanup times. Also, vapor intrusion is a potential issue for proposed occupied structures on Site.

Five-Year Review Summary Form

Site name: Gallup's Quarry Superfund Site		
EPA ID: CTD108960972		
Region: 1	**State: CT**	**City/County: Plainfield/Windham**
NPL status: **X** Final Deleted Other (specify)		
Remediation status (choose all that apply): Under Construction **X** Operating Complete		
Multiple OUs?* YES **X** NO	**Construction completion date:** 9/30 /1997	
Has Site been put into reuse? YES **X** NO		
Lead agency: **X** EPA State Tribe Other Federal Agency _____		
Author name: U.S. Army Corps of Engineers, New England District		
Author title:	**Author affiliation:**	
Review period: 09/ 30 / 2002 to 09 / 30 / 2007		
Date(s) of Site inspection: 3/27/2007		
Type of review: **X** Post-SARA Pre-SARA NPL-Removal only Non-NPL Remedial Action Site NPL State/Tribe-lead Regional Discretion		
Review number: 1 (first) **X** 2 (second) 3 (third) Other (specify) _____		
Triggering action: Actual RA OnSite Construction at OU #_____ Actual RA Start at OU#____ Construction Completion **X** Previous Five-Year Review Report Other (specify)		
Triggering action date: 09 / 30 / 2002		
Due date ***(five years after triggering action date)*****:** 09 / 30 / 2007		

* ["OU" refers to operable unit.]

Five-Year Review Summary Form, cont'd.

Issues:

-In accordance with the ROD, institutional controls were to be implemented as part of the selected remedy. To date the institutional controls for the Site have not been finalized.
-As reported by Town officials and confirmed during the Site walk, access to the Site by recreational trespassers appears to be an ongoing issue.
-The 27-year cleanup goal for groundwater may not be accomplished.
-Groundwater monitoring costs may be reduced using polyethylene diffusion bag samplers.
-Construction on the Site, such as the proposed biomass power plant, could, by altering recharge patterns, affect groundwater flow patterns near the plume and interpretation of water-quality trends.
-Vapor intrusion could be an issue for buildings that are constructed as part of the biomass power plant.

Recommendations and Follow-up Actions:

-Finalize institutional controls for the Site
-Reassess current Site access restrictions and the need to upgrade such features
-Recalibrate the numerical transport model used for the FS or construct a new transport model to reassess cleanup times.
-Review all aspects of Site reuse for changes in recharge patterns and rates that might affect groundwater flow patterns.
-Consider vapor intrusion mitigating measures for occupied structures on Site.

Protectiveness Statement:

The remedy at the Gallup's Quarry Site currently protects human health and the environment because there is little potential for exposure to Site media containing contaminant concentrations exceeding applicable criteria. To ensure protectiveness in the long term, the following actions need to be taken:

-Finalize the institutional controls.
-Reassess Site access control features to reduce recreational use of the Site.
-Review proposed construction activities that might affect recharge rates and groundwater flow patterns.
- Consider the need for vapor intrusion control measures for future proposed building at or near the site.

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LIST OF ABBREVIATIONS AND ACRONYMS

ARARs	Applicable or Relevant and Appropriate Requirements
ATVs	All-Terrain Vehicles
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COCs	Contaminants of Concern
COPCs	Contaminants of Potential Concern
CTDEP	Connecticut Department of Environmental Protection
CVOC	Chlorinated Volatile Organic Compound
CWA	Clean Water Act
CWR	Chemical Waste Removal, Inc.
DEHP	Bis(2-ethyl hexyl) phthalate
DOT	Connecticut Department of Transportation
EPA	United States Environmental Protection Agency
FPDA	Former Primary Disposal Area
FSB	Former Seepage Bed
FSDA	Former Secondary Disposal Area
M&E	Metcalf & Eddy, Inc.
MCLs	Federal Maximum Contaminant Levels
mg/kg	milligrams per kilogram
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
NUS/FIT	EPA contractor
PCB	Polychlorinated biphenyl
PCE	Tetrachloroethene
POTW	Publicly Owned Treatment Works
PRPs	Potentially Responsible Parties
QST	PRP contractor
RA	Remedial Action
RAO	Remedial Action Objective
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act
SVOC	Semi-volatile Organic Compound
TBC	To be considered
TCE	Trichloroethene
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey
VOC	Volatile Organic Compound
µg/L	Micrograms per liter

1.0 INTRODUCTION

The United States Environmental Protection Agency (EPA) must implement five-year reviews consistent with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This is the second five-year review for the Gallup's Quarry Site. This review is required by statute because the selected natural attenuation remedy for Site contaminants results in contaminants remaining at concentrations exceeding those associated with unrestricted exposure to Site media. The trigger for this statutory review was the completion of the first five-year review on September 30, 2002.

CERCLA §121(c), as amended, 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 NCP part 300.430(f)(4)(ii) of the Code of Federal Regulations (CFR) 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.*

The Site was visited on March 27, 2007. Participants in the Site visit included Gary Wilson, Principal Consultant for Kleinfelder, a contractor for the potentially responsible parties (PRPs); Tricia Foley, Attorney at Law, attorney for the PRPs; Mark Lewis, Environmental Analyst III, State of Connecticut Department of Environmental Protection (CTDEP); and three U.S. Army Corps of Engineers (USACE) personnel: Forest Lyford, Geologist, Ian Osgerby, Chemical Engineer, and Lawrence Cain, Risk Assessor.

The purpose of this five-year review is to determine whether the remedy for the Gallup's Quarry Superfund Site (the Site, Figure 1) is protective of human health and the environment. Specifically, the report addresses the following 3 questions stated in EPA's Five-Year Review Guidance Document:

Question A: Is the remedy functioning as intended by the decision documents?

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of remedy selection still valid?

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

The findings and conclusions of this review are documented in this report. The report also identifies issues found during the five-year review process and offers recommendations to address such issues.

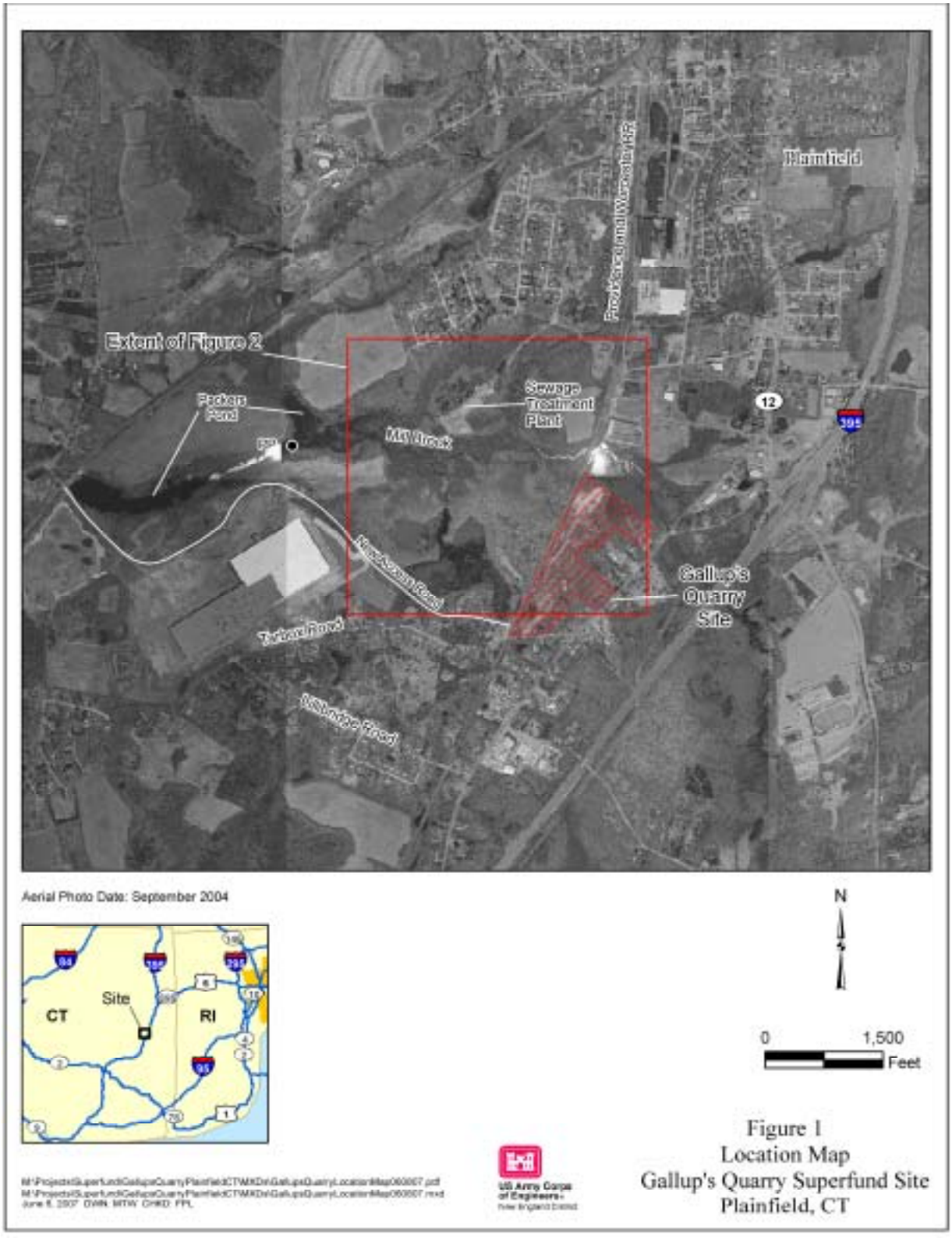


Figure 1. Location map Gallup's Quarry Superfund Site, Plainfield, Connecticut.

2.0 SITE CHRONOLOGY

The chronology of the Site, including all significant Site events and dates is included in Table 1.

Table 1. Chronology of Site events.

Event	Date
Unlicensed Waste Disposal at Site	Summer 1977 through December 1977
Initial Site Investigation by CT DEP	January 1978
Initial Cleanup Efforts by Chem-Trol, Inc.	Summer 1978
Hydrogeologic Investigation (including the installation of 22 groundwater monitoring wells) by Fuss & O'Neill	June 6 to October 30, 1978
Hydrogeologic Report (Evaluation of a Chemical Waste Disposal Area) by Fuss & O'Neill	January 29, 1979
Periodic Monitoring by CT DEP	1979 to 1983
BioDiversity Study by CT DEP	November 4, 1985
EPA's Preliminary Assessment by NUS/FIT	July 1986
Hazard Ranking System Study by NUS/FIT	September 15, 1987
Proposed NPL listing date	June 24, 1988
NPL listing date	October 4, 1989
Residential Well Sampling by Roy F. Weston	1989
Historical Aerial Photo Site Analysis by Bionetics Corp.	November 1990
Health Assessment by US Department of Health and Human Services	January 30, 1991
Residential Well and Surficial Soil Sampling by Roy F. Weston	January to February 1993
Groundwater Monitoring and Well Survey by M&E	February 1993
Draft report on Geohydrology of the Gallup's Quarry Area by USGS	1993
Habitat Characterization by US Fish & Wildlife	June 1993
Administrative Order by Consent, U.S. EPA, Region I, for performance of a remedial investigation and feasibility study	September 7, 1993
Administrative Order by Consent, U.S. EPA, Region I, recovery of past costs	1993
Installation of Site access controls	August 1994
Remedial Investigation / Feasibility Study by QST	June 1997
ROD Signature (Construction Completion Date)	September 30, 1997
Administrative Order by Consent, U.S. EPA, Region I, to perform the cleanup action	November 1999
Remedial Action Work Plan by Harding ESE	January 22, 2001
First Five-Year Review	September 2002
Quarterly and Semi-Annual Groundwater Monitoring Reports	November 2001-November 2006
Second Five-Year Review (this report)	September 2007

3.0 BACKGROUND

The Gallup's Quarry Superfund Site is located one mile southwest of Plainfield Center at 86 Tarbox Road in the town of Plainfield, Windham County, Connecticut. It is approximately 1,800 feet southeast of Plainfield's sewage treatment plant at the junction of Mill Brook and Fry Brook (Figure 1). An industrial park approximately 700 feet north of the Site on the opposite side of Mill Brook includes the Intermark Fabric Corporation facility and the Safety Kleen Corporation. The Site is bounded by Mill Brook and its associated wetlands to the north, single family residences and Route 12 to the east, an active railroad (Providence and Worcester Railroad) and woodlands to the west, and single family residences and Tarbox Road to the south.

The Site encompasses approximately 29 acres of vacant land, much of it heavily vegetated (Figure 2). There are numerous overgrown mounds and excavations throughout the Site that resulted from former sand and gravel quarry activities. There are no structures on the Site. Currently there is no active use of the property. The nearest water-supply wells are at private residences along Route 12 and Tarbox Road near but upgradient of the Site. Public supply wells owned and operated by the Connecticut Water Company are located approximately 1 mile north of the Site. Groundwater at the Site is classified by the state of Connecticut as GA, meaning the groundwater is presumed to be suitable for direct human consumption without treatment.

Currently (2007) there are no known human or ecological receptors for Site contamination. Surface-water bodies located within or near the Site include Mill Brook, Fry Brook, and Packers Pond. Mill Brook flows from east to west-southwest along the northern and western edges of the Site. Mill Brook and Fry Brook ultimately discharge to Packers Pond. The north section of Mill Brook has been classified as B/A by the State of Connecticut, indicating the water body may not be meeting Class A water-quality criteria, while the lower portion of Mill Brook has been classified as Bc, indicating that the water body meets Class B and is suitable for cold water fisheries.

3.1 Operational and Regulatory History

In 1951, the Gallup's Quarry Superfund Site operated as a sand and gravel quarry. Records indicate that the Site was once used as a source of aggregate and was occupied by the Connecticut Department of Transportation (DOT) to operate an asphalt batching plant.

Beginning in the summer of 1977 and continuing until December 1977, drummed and bulk waste materials were illegally disposed at the Site. During that time period, disposal occurred in three locations: a buried seepage system [the Former Seepage Bed (FSB)] in the elevated central part of the Site and at two separate pits at the north end of the Site [the Former Primary Disposal Area (FPDA) and the Former Secondary Disposal Area (FSDA)] where barrels of waste chemicals and free liquid chemical wastes were dumped. The largest disposal area was the FPDA drum pit in the north-central part of the Site. Locations of disposal areas are shown in Figure 2.

In January 1978, the Connecticut Department of Environmental Protection (CTDEP) and the Connecticut State Police initiated an investigation and concluded that the Site was used from summer 1977 until December 1977 for unlicensed waste disposal. Chemical Waste Removal, Inc. (CWR) of Bridgeport, CT, was discovered to have transported drummed and bulk liquid waste material to the Site, as concluded by the evidence collected by CTDEP.

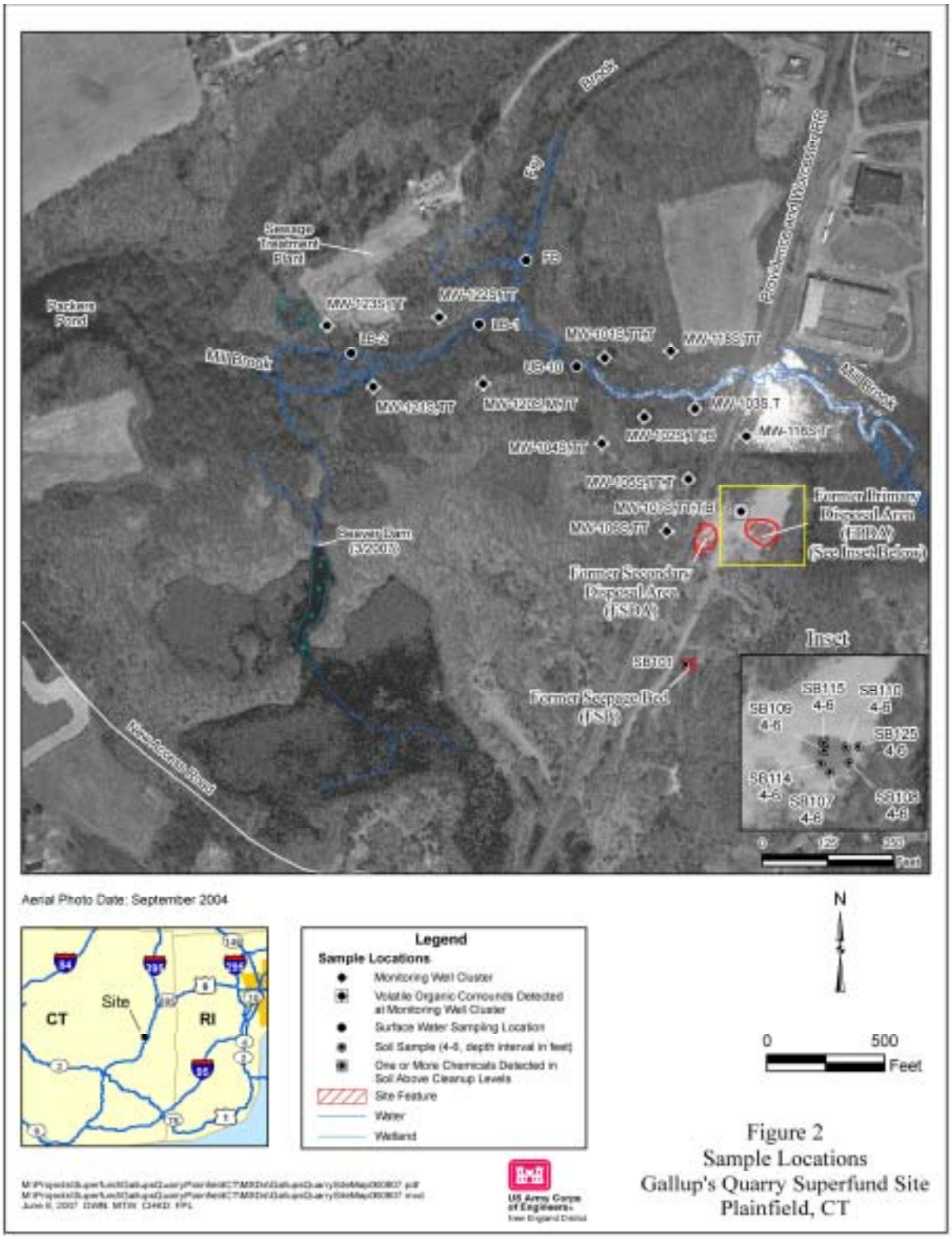


Figure 2. Sample locations, Gallup's Quarry Superfund Site, Plainfield, Connecticut.

Disposal activities ceased in January 1978. Investigations and removal activities directed by the CTDEP and the Connecticut State Police between January and August 1978 included sampling and analysis of soil, groundwater, and surface water/sediments from nearby Mill Brook, and the removal of buried drums and contaminated soil. Wastes disposed of at the Site in drums and as free liquid waste included volatile organic compounds (VOCs) and metals. Over 1,600 drums, 5,000 gallons of bulk liquid waste, and 3,500 tons of contaminated soil were removed from the ground by the CTDEP.

All drums were presumably recovered during the cleanup efforts. Soil and groundwater were monitored periodically by the CTDEP, the Connecticut Department of Health, and EPA after the 1978 clean-up operations. In May 1988, EPA initiated a limited Site Investigation to evaluate the Site with respect to conditions for additional removal actions under the National Contingency Plan (NCP). Soil samples collected by EPA confirmed the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals. On June 24, 1988, the Site was proposed for placement on EPA's National Priorities List (NPL). On October 4, 1989, the Site was added to the NPL.

Between 1993 and 1997, the PRPs' consultant, QST, completed and performed the Remedial Investigation/Feasibility Study (RI/FS) at the Site. On the basis of information from the RI/FS, the Record of Decision (ROD) established groundwater cleanup levels for the following chemicals: benzene, 1,2-dichloroethane, methylene chloride, tetrachloroethene (PCE), trichloroethene (TCE), vinyl chloride, 1,1,1-trichloroethane, xylene (total), 1,2-dechloroethene, bis (2-ethyl hexyl) phthalate, lead, chromium and vanadium. Unsaturated soil cleanup levels were established for ethylbenzene, PCE, TCE, chloromethane, bis(2-ethyl hexyl) phthalate, and xylene (total). There were no changes in land use identified on or near the site that would affect the appropriateness of exposures evaluated in the RI/FS risk assessment.

4.0 REMEDIAL ACTIONS

4.1 Remedy Selection

The remedy selected to address contamination at the Gallup's Quarry Superfund Site included installation of groundwater monitoring wells, long-term monitoring of contaminants in soils at disposal areas, long-term monitoring of groundwater and surface water near the Site, and five-year reviews.

Section X of the ROD describes the remedy for the Site. The following are the components of the remedy:

- Institutional controls, including land use restrictions to limit the use and disturbance of contaminated soils at the Site and to prevent the use of impacted groundwater;
- Posting of warning signs and periodic maintenance of them;
- Sampling and analysis of contaminated unsaturated soils for contaminants of concern; and
- Conducting long-term sampling and analysis of groundwater, surface water and soil to assess compliance with the groundwater cleanup levels through natural attenuation and to ensure the surface water has not been adversely impacted (cleanup levels for VOCs in groundwater were estimated to be attained in a 27-year period, for VOCs in soils in an 11-year period, and for bis(2-ethyl hexyl) phthalate in soils in a 15-year period).

4.2 Remedy Implementation

The remedy involves the development of a long-term monitoring program to document that natural attenuation is occurring over time and that the surface water is not being affected. The PRPs installed additional monitoring wells and implemented long-term sampling and analysis of groundwater and surface water to evaluate the effectiveness of the remedy and to check that the contaminant plume is not spreading to previously uncontaminated areas or into the river at unacceptable levels. Soils are sampled every five years in two disposal areas at approximate locations shown in Figure 2.

The post-ROD long-term monitoring of surface water and groundwater was initiated in November 2001. Monitoring wells were sampled quarterly until November of 2003 when semiannual sampling began as agreed to by EPA and CTDEP. In November 2006, twenty seven monitoring wells were sampled. Surface water was sampled at five locations as part of an annual sampling program. Monitoring wells and surface-water sites are shown in Figure 2.

Groundwater monitoring will continue until interim cleanup levels specified in the ROD have not been exceeded for a period of three consecutive years, at which time a risk assessment of the residual groundwater contamination shall follow EPA procedures. The revised risk assessment will include a sufficient number of new samples of VOCs, SVOC, pesticides/PCBs (polychlorinated biphenyls), and metals with the intent to demonstrate that the remedy is protective. The Contaminants of Potential Concern (COPCs) considered and any COCs (Contaminants of Concern) identified in the revised risk assessment may thus differ from those of the original risk assessment. The ROD clearly states that both "ARARs (Applicable or Relevant and Appropriate Requirements), which call into question the protectiveness of the remedy, and the protective levels determined as a consequence of the risk assessment of residual contamination, must be met at the completion of the remedial action at every point in the Site groundwater." Soil cleanup levels must be attained at every point throughout the contaminated unsaturated zone in the FPDA and the Seepage Bed. Although no cleanup levels were specified for the

surface water, the ROD states that surface water will be sampled and analyzed for COCs until interim (groundwater) cleanup levels are attained.

4.3 System Operation and Maintenance

Gary Wilson, Kleinfelder Project Manager (consultant for the Gallup's Quarry Settling Defendants), stated during the Site visit that costs for the remedial action are consistent with costs stated in the ROD. Actual cost figures were not provided.

5.0 PROGRESS SINCE LAST FIVE-YEAR REVIEW

5.1 Protectiveness Statements from Last Review

The last five-year review provided the following protectiveness statement:

"The remedy at the Gallup's Quarry Site currently protects human health and the environment because there is little potential for exposure to Site media containing contaminant concentrations exceeding applicable criteria. However, in order for the remedy to be protective in the long-term, the following actions need to be taken:

- Finalize the institutional controls;
- Improve Site access control features to reduce recreational use of the Site; and
- Determine the reason for the lack of contaminant concentration reduction at MW-107TT and consider actions to initiate contaminant reduction."

5.2 Status of Recommendations and Follow-Up Actions from Last Review

Progress on each issue determined during the first five-year review is summarized below.

Institutional Controls

The Site Access and Institutional Controls Plan in Appendix B lists 5 properties that require institutional controls. According to Mark Lewis, CTDEP, Environmental Land Use Restrictions have been implemented for all but lot 8 (Tilcon property); shown on Figure 1 of Appendix B.

Recreational Trespassers

Recreational trespassers are a continuing issue. During an interview, Mr. Kevin Cunningham, First Selectman, Town of Plainfield, stated that recreational trespassers have been accessing the property with all-terrain vehicles (ATVs) from the adjoining property to the west. The area near the FPDA and FSDA provides an attractive area for ATV use. Access is apparently gained over the railroad tracks from the property to the west. He is concerned about the physical safety of ATV usage, particularly while crossing the railroad tracks. No specific measures have been taken to limit access by recreational vehicles from properties west of the railroad tracks.

Elevated Concentrations of Vinyl Chloride

A concentration of 200 µg/L (micrograms per liter) for vinyl chloride in groundwater at well MW-107TT was identified as a concern. No specific action was implemented except to continue monitoring. Groundwater monitoring has shown a decline to levels below 10 µg/L for samples collected in 2006.

6.0 FIVE YEAR REVIEW PROCESS

This five-year review was conducted in accordance with EPA's guidance document "Comprehensive Five-Year Review Guidance," EPA 540-R-01-007, dated June 2001. Tasks completed as part of this five-year review include review of pertinent Site-related documents, interviews with parties associated or familiar with the Site, an inspection of the Site, and a review of the current status of regulatory or other relevant standards.

6.1 Administrative components

A team of USACE reviewers was formed in March 2007, and selected members met with Leslie McVickar, EPA Remedial Project Manager, on March 16, 2007, to get an overview of the Site, discuss the Five-Year Review process, and obtain appropriate supporting documents. EPA then notified the PRPs, state, and local officials that the Five-Year Review was proceeding.

6.2 Community Involvement

Leslie McVickar, EPA Project Manager, stated that there is currently no citizens review group. Interviews with town officials indicated that the public has little interest and concern about the Site.

6.3 Document review

Site-related documents reviewed as part of this effort are listed as follows:

- *Remedial Investigation Report*, prepared by QST Environmental, dated June 1997.
- *Feasibility Study*, prepared by QST Environmental, dated June 1997.
- *Record of Decision*, dated September 30, 1997.
- *Site Access and Institutional Controls (Plan*, March 19, 2001 (Appendix B of this report).
- *Groundwater Monitoring Report*, May 2006, prepared by Kleinfelder, August 18, 2006.
- Plainfield Renewable Energy, *Presentation to Environmental Protection Agency*, April 18, 2006.
- *Groundwater Monitoring Report*, November 2006, prepared by Kleinfelder, January 31, 2007.

6.4 Interviews

As required in the EPA Five-Year Review Guidance Document, interviews were conducted with representatives of the EPA, the Connecticut Department of Environmental Protection (CTDEP), the Town of Plainfield, and representatives of the Potentially Responsible Parties (PRPs). Interview Record forms are provided in Appendix A.

Generally, based on the results of the interviews conducted, implementation of the selected remedy has proceeded without significant issue or concern. Representatives of the Town stated there have essentially been no complaints regarding the Site and the associated activities. Town representatives feel information pertaining to the Site is readily available in town files to those who may be interested. The Librarian for the Plainfield Public Library confirmed that Site-related documents are available in the library.

From the interviews, the main issues were the finalization of institutional controls for the property, recreational trespassers, and the proposed construction of a biomass energy plant on the Site (Appendix C, Figure C-2).

6.5 Site Inspection

A Site inspection was conducted on March 27, 2007, which included visual inspection of the former source areas, fencing, and Site groundwater monitoring wells. The Site inspection was performed by Forest Lyford, Ian Osgerby, and Lawrence Cain, USACE. USACE personnel were accompanied on this Site inspection by Gary Wilson, Principal Professional for Kleinfelder, and Tricia Foley, Attorney, on behalf of the PRPs, and by Mark Lewis, Environmental Analyst for Connecticut DEP. The current conditions of the former source areas, monitoring wells, and surface-water stations were observed during the Site Inspection.

Overall, the Site appears in good condition. The fencing and access gate were in good condition and required signage was present. All monitoring wells were located and found to be in good condition. Broken locks on two wells were noted by Gary Wilson who said the locks would be replaced soon.

The Former Seepage Bed (FSB) area was observed to be heavily overgrown with no obvious evidence of stressed vegetation. The Former Primary Disposal Area (FPDA) and the Former Secondary Disposal Area (FSDA) were observed to be barren of vegetation and covered by sand. All Terrain Vehicle (ATV) tracks were noted over both areas, confirming the reports of the Town officials regarding recreational trespassers. ATV tracks were only observed in the vicinity of the FPDA and FSDA. The remainder of the Site and adjoining property to the west was found to be heavily overgrown with vegetation. Much of the area along Mill Brook and Fry Brook was flooded by normal spring runoff. Beaver activity was observed in a tributary of Mill Brook west of the Site but not near the area of the plume.

6.6 Standards Review

6.6.1 ARARs

This second five year review for the Gallup's Quarry Site includes a check of the list of chemicals with interim cleanup goals for changes in Applicable or Relevant and Appropriate Requirements (ARARs) as identified in the ROD (Sept. 1997), which includes the following:

- Clean Water Act (CWA)
- Safe Drinking Water Act (SDWA)
- Federal Executive Order 11990 (Protection of Wetlands)
- Connecticut Groundwater Quality Standards
- Connecticut Standards for Public Drinking Water Quality
- Connecticut Remediation Standard Regulations
- Connecticut Surface Water and Wetlands Regulations
- Resource Conservation and Recovery Act (RCRA)
- Closure/Post Closure Requirements for Hazardous Waste Facilities
- Connecticut Hazardous Waste Management Requirements
- Connecticut Control of Noise Regulations
- Connecticut Regulations for the Well Drilling Industry
- Federal Clean Water Regulations governing activities in Wetlands

Additionally, the ROD identifies the following as "To-Be-Considered" criteria:

- Federal Drinking Water Health Advisories
- Federal Groundwater Protection Strategy
- Federal Groundwater Use and Value Determination

Table 2 lists the interim cleanup goals and confirmed that the ARARs remain valid. Table 2 is closely analogous to the table presented in the ROD. Different ARARs are assigned for bis(2-ethyl hexyl) phthalate in soils for FPDA and FSB.

Since the finalization of the ROD, no changes were implemented in the State of Connecticut water-quality regulations.

No pertinent technical changes to relevant and appropriate portions of RCRA (40 CFR 264 Subpart G) were implemented since the signing of the ROD. The only changes made to this subpart of the RCRA regulations include: (1) giving the governing agencies the ability to use a variety of authorities to impose requirements based on the particular facility; (2) modifications to the regulations to allow facilities to address certain units through the corrective action program; and (3) specification of Part B information submission requirements for facilities that receive post-closure permits.

State of Connecticut regulations governing well drilling industry and noise generation are applicable during the installation of additional monitoring wells. At this time there are no plans for such activities. Therefore, requirements associated with these regulations are not applicable at this time.

The SDWA was last amended in 2002. With respect to Site-related contaminants of concern (COCs) in groundwater, no changes have been promulgated since 1997 in the Federal Maximum Contaminant Levels (MCLs) under the SDWA.

Connecticut Hazardous Waste Management Requirements were subject to revisions finalized on June 25, 2002. None of these changes impact the remedy being implemented at the Site. Notable changes to the regulations include: (1) changes to the standards for used oil generators, transporters, processors, re-refiners, burners, and marketers; (2) the universal waste rule, which established reduced management requirements for hazardous waste batteries, thermostats, pesticides, and lamps; and (3) the addition of used electronics to the State's universal waste rule. None of these changes impact the remedy being implemented at the Site.

6.6.2 Toxicity and Chemical Characteristics

Examination of the EPA's Integrated Risk Information System (www.epa.gov/iris) indicates no changes to the toxicity values that would affect the interim cleanup goals as specified in the ROD. Because risk assessment will be performed upon reaching the interim cleanup, toxicity values assigned to the COCs identified in the 1997 Record of Decision were examined for changes. Chemicals appearing on Table 3 are only those for which a change has been identified in the toxicity value for a given chemical evaluated in the original risk assessment. The implications of changes to the toxicity values are noted with regard to the interim cleanup goals and the eventual risk assessment. Although final cleanup goals may be affected, none of the changes are believed to compromise the protectiveness of the remedy.

Note that the list of chemicals evaluated for ARARs is not identical to the list of chemicals evaluated for toxicity. Table 2 relates to substances with interim cleanup goals established in the ROD based on ARARs. Table 3 relates to the substances considered in the risk assessment, regardless of ARARs. If a chemical from Table 3 does not appear on Table 2, it is because there is no interim cleanup goal or ARAR for that substance. Under the terms of the decision, once the interim cleanup goals are reached for three consecutive years, the risk assessment will be revisited. The revised risk assessment will then include VOCs, SVOC, pesticides/PCBs, and metals, which may include all 95 COPCs originally evaluated.

Table 2. Verification that ARARs Have Not Changed Since the First Five Year Review of Gallups Quarry Superfund Site.

Medium	Contaminants of Concern with ARARs	ARAR per ROD	Basis of ARAR	Current CT Regulation	Additional or Alternative CT Criteria	Implication for ARAR
Groundwater (µg/l)	Benzene	1	CT GWPC	1		No change to ARAR
	Bis(2-ethylhexyl) phthalate	2	CT GWPC	2		No change to ARAR
	Chromium	50	CT GWPC	50		No change to ARAR
	1,1-Dichloroethene	6	CT Vol. Criteria (Industrial/Commercial)	6	190 (Residential)	"Res GWVC" criteria added 12/16/03 but original ARAR remains unchanged
	1,2-Dichloroethane	1	CT GWPC	1	6.5	"Res GWVC" criteria added 12/16/03 but original ARAR remains unchanged
	1,2-Dichloroethene	70	CT GWPC	70	830	"I/C GWVC" criteria added 3/6/03 for cis-12DCE but original ARAR remains unchanged
	Cis-1,2-Dichloroethene	-	No current ARAR	-	830	"Res GWVC" criteria added 12/16/03 but original ARAR remains unchanged
	Trans-1,2-Dichloroethene	-	No current ARAR	-	1000	"Res GWVC" criteria added 12/16/03 but original ARAR remains unchanged
	Lead	15	CT GWPC/EPA ACTION LEVEL	15		No change to ARAR
	Methylene chloride	5	CT GWPC & EPA MCL	5		No change to ARAR
	Tetrachloroethylene (PCE)	5	CT GWPC & EPA MCL	5		No change to ARAR
	1,1,1-Trichloroethane	200	CT GWPC & EPA MCL	200		No change to ARAR
	Trichloroethylene	5	CT GWPC & EPA MCL	5		No change to ARAR
	Vanadium	50	CT GWPC	50		No change to ARAR
	Vinyl chloride	2	CT GWPC & EPA MCL	2	1.6	Updated "Res GWVC" criteria added 12/16/03 but original ARAR remains unchanged
	Xylene (total)	530	CT GWPC	530		No change to ARAR
	Bis(2-ethyl hexyl) phthalate	2	CT GWPC	2		No change to ARAR
Soil (mg/kg)	Bis(2-ethyl hexyl) phthalate	10*	CT PMC (FPDA)	10*		No change to ARAR
	Bis(2-ethyl hexyl) phthalate	1	CT PMC (FSB)	1		No change to ARAR
	Chloromethane	0.01	CT PMC	Not found	0.054	Added "GA PMC" criteria 4/30/99 and cannot confirm original ARAR
	Ethylbenzene	10.1	CT PMC	10.1		No change to ARAR
	Tetrachloroethylene (PCE)	0.1	CT PMC	0.1		No change to ARAR
	Trichloroethylene	0.1	CT PMC	0.1		No change to ARAR
	Xylenes (total)	19.5	CT PMC	19.5		No change to ARAR

* Value for FPDA calculated by multiplying pollutant mobility criterion by 10X dilution factor, pursuant to Section 22a-133k-2(c)(2)(C) of Connecticut Remediation Standard Regulations
ARAR - Applicable or Relevant and Appropriate Requirement
ROD - Record of Decision
GWPC - Connecticut Groundwater Protection Criteria for drinking water
Additional or Alternative Criteria are published by CT in a list of revisions
GWVC and Vol. Criteria - Connecticut Volatilization Criteria for groundwater that is protective of indoor air quality
EPA MCL - Federal Maximum Contaminant Level for drinking water
PMC - Pollutant Mobility Criteria protective of soil leaching to groundwater

Table 3. Toxicity Values That Have Changed Since the First Five Year Review of Gallups Quarry Superfund Site.

Substance	Date of Change	RfD_{oral} (mg/kg/day)		CSF_{oral} $(mg/kg/day)^{-1}$		Note	Implication for Interim Cleanup Goals	Consideration for Final Cleanup Goals
		Now	Formerly	Now	Formerly			
Aluminum	2/7/2007	1.0	1.0	NA	NA	Provisional RfD was reevaluated but not changed	None assigned	No change
Benzene	4/17/2003	0.004	0.005	0.055	0.055	RfD has changed	Slight change	More stringent
Iron	9/11/2006	0.7	None	NA	NA	Provisional RfD now assigned	None assigned	More stringent
Lead	7/8/2004	NA	NA	NA	NA	Toxicity values not used for lead	No change	No change
2-Methylnaphthalene	12/22/2003	0.004	None	NA	NA	RfD now assigned	None assigned	More stringent
Xylene	2/21/2003	0.2	2.0	NA	NA	RfD has changed	Remains protective	More stringent

Exposure routes included in the remedy are ingestion and dermal contact.
NA - not applicable
RfDoral - reference dose for noncancer health effects resulting from oral exposure.
CSForal - cancer slope factor for cancer health effects resulting from oral exposure.
Provisional RfDs values are temporarily assigned in lieu of formally-approved RfDs.
Interim Cleanup goals are ARARs to be attained for three consecutive years.
Upon attaining ARARs, risks will be reevaluated to derive final cleanup goals since the interim cleanup goals are not adequately protective.
The risk assessment will include a comprehensive list of target analytes including VOC, SVOCs, PCBs/Pesticides, and metals.
Final cleanup goals will be established following three consecutive years of attaining protective (presumably risk-based) cleanup goals.

6.7 Data Review

The Remedial Investigation (RI) determined that contaminants associated with the Site were present in soil (mainly within the FPDA), surface water, and groundwater. A long-term monitoring program has been implemented to monitor the natural attenuation of Site-related contamination, as required by the ROD. Data for each of the three media are summarized below.

6.7.1 Soils

Periodic sampling and analysis of soils was included in the selected remedy because concentrations of contaminants in unsaturated soils exceeded applicable criteria specified by the State for a leaching threat to groundwater. The ROD identified unsaturated soil cleanup levels for ethylbenzene, PCE, TCE, chloromethane, bis(2-ethyl hexyl) phthalate, and total xylenes. In accordance with the Remedial Action Work Plan, sampling of Site soils is to be performed once every five years to determine if concentrations of contaminants are declining. Since the completion of the RI in 1997, two rounds of soil sampling and analysis have been completed (November 2001 and June 2006) as part of the remedy implementation. Soils were sampled in the depth interval of 4-6 feet.

Soil samples collected as part of the long-term monitoring program were obtained from within the footprint of the FPDA and the FSB, and submitted to a laboratory for chemical analysis. Sample locations are shown in Figure 2. Concentrations were below the cleanup levels of 10.1 mg/kg for ethylbenzene and 19.5 mg/kg for total xylenes except at location SB109 (ethylbenzene, 47 mg/kg; total xylenes, 240 mg/kg). PCE was detected at concentrations greater than the 0.1 mg/kg cleanup level at SB109 (34 mg/kg) and at SB115 (0.48 mg/kg). TCE was detected above the cleanup level of 0.1 mg/kg at SB109 (12 mg/kg). Bis(2-ethyl hexyl) phthalate (DEHP) was detected above the cleanup level of 10 mg/kg at SB109 (16 mg/kg). Soil chemical analyses for samples collected in 1994, 1995, 2001 and 2006 are summarized in Appendix D.

In general, concentrations of contaminants in soils in June 2006 are less than concentrations measured in 1994. No clear trends are apparent, however, from the sets of samples collected in 1994, 2001, and 2006.

6.7.2 Surface Water

In accordance with the ROD, surface-water sampling and analysis is included in the long-term monitoring program for the Site. As specified in the Remedial Action Work Plan, surface-water samples were collected and analyzed during the first groundwater monitoring event and annually thereafter.

Surface water sample locations include the following:

- Mill Brook near MW 101 (UB-10)
- Fry Brook upstream of its confluence with Mill Brook (FB)
- Mill Brook downstream of Fry Brook (LB-1)
- Mill Brook downstream of Fry Brook near MW121 (LB-2)
- Packers Pond at the mouth of Mill Brook (PP) (see Figure 2 for location)

Locations for the Mill Brook and Fry Brook sampling sites are shown Figure 2, and for the Packers Pond site on Figure 1.

The analytical results presented in the November 2006 groundwater monitoring report (Kleinfelder, January 2007), indicate trace levels of VOCs in the surface waters of Mill Brook and Fry Brook. The VOCs 1,2-Dichloroethene and PCE have been detected consistently at the sampling point on Fry Brook (FB), and two sampling points on Mill Brook downstream of Fry Brook (LB-2 and PP). Concentrations are typically less than 4 µg/L. TCE also is typically detected at concentrations below 1 µg/L in Fry Brook, but TCE generally is below detection levels at other surface-water stations. The persistence of VOCs in Fry Brook, which does not appear to be a discharge point for groundwater from Gallup's Quarry, indicates an upstream source unrelated to the Site. Limited detections in Mill Brook near the discharge point for the plume (Site UB-10) indicate that VOCs in Mill Brook are largely from Fry Brook and probably are unrelated to the Site. This possibility was discussed in the RI/FS reports and by Kleinfelder (2007) in the latest groundwater sampling report. The limited detections of VOCs in Mill Brook may reflect low rates of contaminant discharge relative to stream flow and possibly enhanced biodegradation in organic-rich stream and wetland sediments.

Although the source for contaminants in surface water is not defined, all detections were found to be below applicable surface-water criteria. The low concentrations observed in surface water continue to support the remedy-protectiveness statement.

6.7.3 Groundwater

Periodic monitoring of groundwater quality at the Site was initiated during the RI in January 1995 and continued through May 1997. No groundwater sampling was conducted between June 1997 and October 2001 while the Remedial Action Work Plan was being developed. The long-term groundwater monitoring program was initiated in November 2001 in accordance with the Remedial Action Work Plan. Samples were collected quarterly from November 2001 to November 2003 and semiannually in May and November thereafter. The groundwater monitoring network currently (2007) consists of 27 wells. Results of groundwater monitoring were documented in reports submitted to EPA by contractors of the Gallup's Quarry Superfund Site PRP Committee. The current contractor is Kleinfelder. Chemical analytical results for VOCs in water from monitoring wells for the period of record are given in Appendix E.

Each monitoring well is screened in one of three distinct zones within the overburden materials. Shallow monitoring wells with screened intervals intercepting the groundwater table have the suffix "S" after their location designation. Monitoring wells with screened intervals at the top of the till layer and within the till layer have the suffix "TT" and "T" respectively. Well MW-102B is completed in bedrock.

Of the 27 monitoring wells, seven have been found to contain contaminant concentrations exceeding ROD-specified cleanup levels during the five-year review period. These wells include MW-101TT, MW-101T, MW-102S, MW-102TT, MW-105TT, MW-105T, and MW-107TT. Table 4 summarizes ranges of concentrations for selected chemicals in water from monitoring wells where cleanup levels were exceeded at least once during November 2001-November 2006. Also shown are concentrations detected during the last sampling event in November 2006. Table 5 lists major VOCs detected in the seven wells for the period of record.

The concentration of PCE exceeded the cleanup level of 5 µg/L at least once in water from all seven wells. A general downward trend in PCE concentration during the five-year review period is apparent for well MW-101TT. In general PCE concentrations varied widely during 2001-2006 at the other 6 wells and trends are not obvious from visual review of data in Table 5.

Vinyl chloride exceeded the cleanup level of 2 µg/L at wells MW-102TT, MW-105TT, MW-105T, and MW-107TT. Although a steady downward trend in vinyl chloride concentrations are apparent at well MW-102TT, trends since 2001 for wells MW-105TT, MW-105T, and MW-107TT are not obvious from visual review of data in Table 5. Examples of trends for two wells for the period of record are shown in Figure 3. The graphs and Table 5 indicate that concentrations of vinyl chloride are commonly higher in May than in November for unknown reasons.

TCE exceeded the cleanup level of 5 µg/L at well MW-102S intermittently during the 5-year period but was below cleanup levels where detected at other monitoring wells.

The presence of ethene indicates microbial reduction of chlorinated compounds to nonhalogenated products. An apparent plateau level of concentration for some compounds in some wells may reflect a declining consumption rate by microbes as concentrations of VOCs decline.

Total Xylene exceeded a cleanup level of 530 µg/L on three occasions at well MW-105TT, and was consistently detected with ethene below cleanup levels at this well and wells MW-105T and MW-107TT.

In November 2006, DEHP was detected in water at well MW-105TT at the cleanup level of 2 µg/L. A concentration of 170 µg/L detected in water at well MW-102TT was not confirmed with a duplicate sample (not detected). The metals chromium, lead, and vanadium that have Site cleanup levels were not detected in groundwater samples.

The historical groundwater-quality data indicate that the plume is in a stable position and that the discharge area to Mill Brook has a limited lateral extent. The absence of contaminants at well clusters MW-120 to MW-123 indicates that a groundwater flow path along Mill Brook that was shown on Figure 1-5 of the FS is not present.

6.8 Proposed Biomass Power Plant

A biomass power plant has been proposed by Plainfield Renewable Energy LLC for reuse of the Site. The power plant would use mostly waste wood and a biomass gasification technology. The facility would occupy much of the 29-acre Site (as shown in the red shaded area of Figure 1), but no construction is planned for the former FPDA and FSDA disposal areas and the associated groundwater plume area at the north end of the Site. Process water is expected to be obtained from the Quinnebaug River, with no process water produced or disposed of on Site. A conceptual Site plan for the proposed plant is included in Appendix C, page C-2.

Table 4. Summary of VOC Concentrations (µg/L) in Groundwater during November 2001 to November 2006, Gallup's Quarry, Plainfield, Connecticut.

Chemical	Vinyl Chloride (VC)		1,2-Dichloroethene (total)		Trichloroethene (TCE)		Tetrachloroethene (PCE)		Total Xylenes	
Cleanup Goal	**2**		**70**		**5**		**5**		**530**	
Well Number	**Range**	**Most Recent**	**Range**	**Most Recent**	**Range**	**Most Recent**	**Range**	**Most Recent**	**Range**	**Most Recent**
MW-101TT	All ND	All ND	0.9-2	0.9	0.2-0.3	0.2	4-10	4	All ND	All ND
MW-101T	All ND	All ND	0.4-0.6	0.5	0.4-0.7	0.4	7-19	**8**	All ND	All ND
MW-102S	ND-4	All ND	ND-20	All ND	ND-35	All ND	1-34	1	All ND	All ND
MW-102TT	8-330	**8**	ND-6	1	ND-4	All ND	4-21	**6**	ND-74	11
MW-105TT	2-170	**3**	1-8	2	ND-2	All ND	ND-24	2	ND-1,300	87
MW-105T	ND-83	1	18-50	18	ND-11	All ND	ND-1	All ND	ND-210	35
MW-107TT	6-200	**6**	3-15	4	2-5	3	3.8-10	**8**	36-438	59

Concentrations in micrograms per liter
Cleanup Goals from Record of Decision
ND, Not detected
Most Recent, November 2006; bolded numbers exceed the cleanup goal.

Table 5. Concentrations of selected volatile organic compound at wells where cleanup levels have been exceeded, Gallup's Quarry, Plainfield, Connecticut.

Well Number	Volatile organic compound (VOC)	Date Sampled															
		May-97	Nov-01	Feb-02	May-02	Aug-02	Nov-02	Mar-03	May-03	Aug-03	Nov-03	May-04	Nov-04	May-05	Nov-05	May-06	Nov-06
MW-101TT	Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1,2-Dichloroethene	2	2	2	2	2	2	2	2	1	2	1	1	1	1	0.9	0.9
	Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.3	0.2	0.3	0.2
	Tetrachloroethene	ND	8	9	10	7	8	6	5	6	6	5	6	5	5	5	4
	Ethene	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-101T	Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1,2-Dichloroethene	3	3	2	3	2	3	2	2	2	2	2	2	2	ND	1.2	1
	Trichloroethene	ND	ND	0.7	0.5	0.6	0.6	0.6	0.5	0.6	0.6	ND	ND	0.4	0.4	ND	0.4
	Tetrachloroethene	ND	17	19	14	15	16	10	9	13	10	10	9	8	7	9	8
	Ethene	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-102S	Vinyl Chloride	8	1	ND	3.9	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1,2-Dichloroethene	110	8	6	9.5	21	29	17	17	7	2	2	2	6	ND	2	ND
	Trichloroethene	33	4	5	5	22	35	30	24	9	3	5	2	10	ND	1	ND
	Tetrachloroethene	ND	4	5	6.8	30	34	31	27	13	4	9	2	18	2	3	1
	Ethene	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-102TT	Vinyl Chloride	400	330	55	56	110	110	34	90	65	59	96	34	39	10	15	8
	1,2-Dichloroethene	340	2	1	ND	3	3	2	5	2	2	6	1	4	1	2	1
	Trichloroethene	ND	0.9	ND	ND	4	3	ND	3	2	ND	3	ND	2	ND	0.9	ND
	Tetrachloroethene	ND	18	3	2.1	7	12	4	14	10	8	21	12	12	8	9	6
	Ethene	NA	49	6	3.2	20	23	31	70	27	37	ND	20	37	22	45	33
MW-105TT	Vinyl Chloride	580	120	6	29	82	21	22	21	53	26	170	2	47	10	46	3
	1,2-Dichloroethene	550	5	1	2.9	6	2	2	5	8	4	4	1	3	4	4	2
	Trichloroethene	ND	1	0.8	ND	ND	ND	ND	ND	1	ND	1	ND	2	ND	2	ND
	Tetrachloroethene	18	4	1	ND	2	1	4	4	20	2	11	5	24	4	12	2
	Ethene	NA	3.9	ND	ND	44	4.8	37	120	39	21	3.2	8.5	26	24	36	19
MW-105T	Vinyl Chloride	160	83	17	21	24	14	3	6	12	ND	16	2	2	5	20	1
	1,2-Dichloroethene	150	24	21	32	50	25	51	38	45	30	46	28	18	23	22	18
	Trichloroethene	2	3	1	1	ND	0.8	ND	ND	1	ND	ND	ND	ND	ND	1	ND
	Tetrachloroethene	ND	2	1	ND	ND	ND	ND	2	11	ND	2	2	2	2	5	ND
	Ethene	NA	6.3	ND	ND	14	ND	4.4	43	9.5	ND	17	3.3	4.1	30	16	3.4
MW-107TT	Vinyl Chloride	330	200	190	160	83	98	37	19	21	44	30	47	12	23	7	6
	1,2-Dichloroethene	56	15	9.3	9.4	10	9	11	8	8	14	10	8	4	6	4	4
	Trichloroethene	ND	5	2.9	2.2	2	3	3	3	3	4	5	4	2	3	3	3
	Tetrachloroethene	ND	9	3.8	4.6	4	7	5	7	8	10	10	8	7	8	8	8
	Ethene	NA	110	ND	10	14	13	38	112	88	122	43	110	85	84	45	59

Concentrations in micrograms per liter
ND, not detected
NA, not analyzed

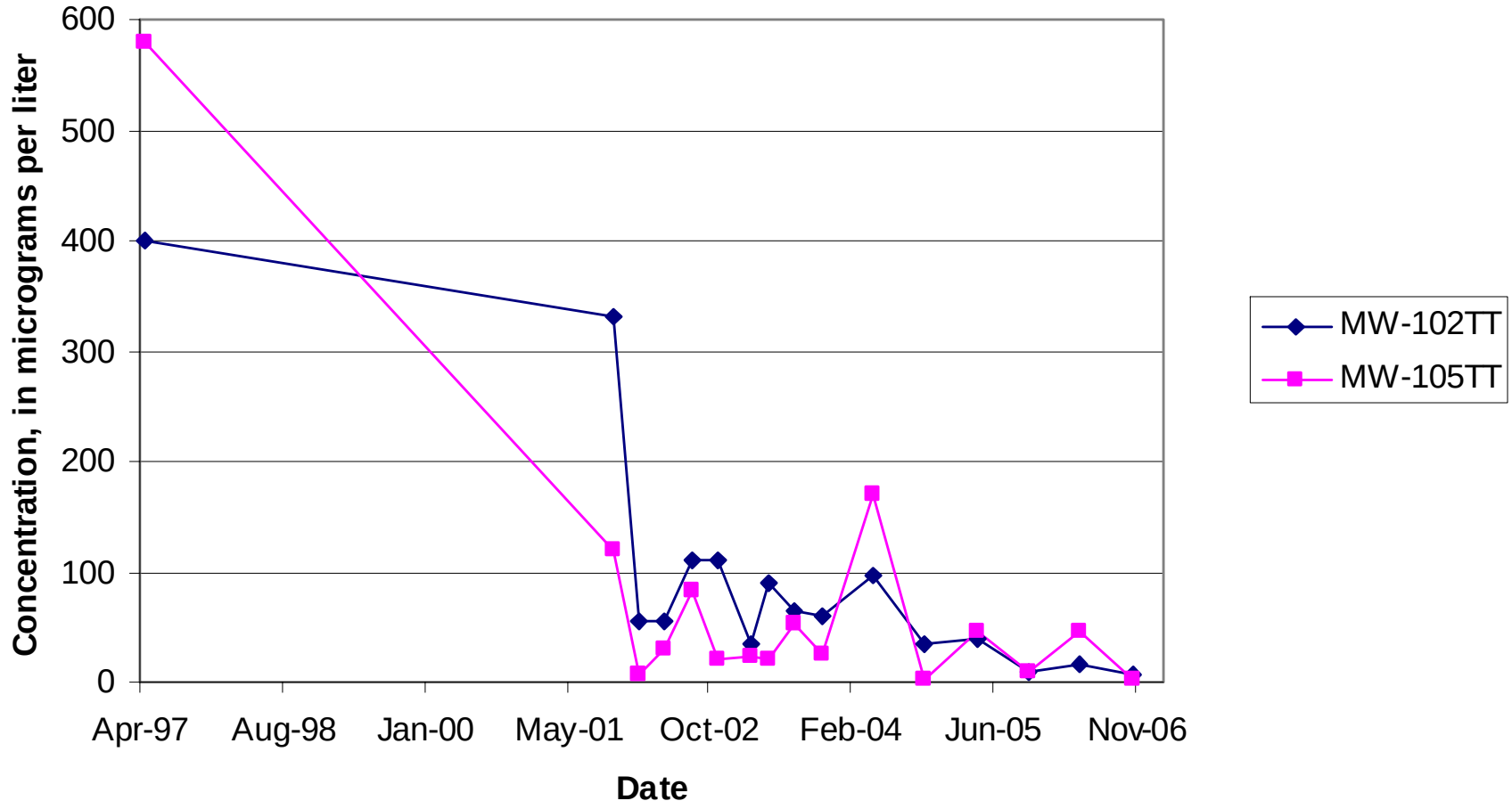


Figure 3. Vinyl chloride concentrations in wells MW-102TT and MW-105TT, May 1997-November 2006, Gallup's Quarry, Plainfield, Connecticut.

7.0 TECHNICAL ASSESSMENT

7.1 Technical Assessment Questions

This section addresses the three technical assessment questions identified in the EPA's Five-Year Review guidance document as noted below:

Question A: *Is the remedy functioning as intended by the decision documents?*

Question B: *Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of remedy selection still valid?*

Question C: *Has any other information come to light that could call into question the protectiveness of the remedy?*

The following discussion details how each question has been answered based on the findings of this five-year review.

Question A: Is the remedy functioning as intended by the decision documents?

The remedy, as prescribed in the ROD, has not yet been fully implemented because institutional controls, specifically environmental land use restrictions, have not been finalized for an adjoining property. Given that no one is currently using the Site, adjoining property, or groundwater, this does not compromise the remedy's protectiveness at this time. However, should the institutional controls not be finalized, this could impact the remedy's protectiveness in the future should the land use change.

Otherwise, the remedy appears to be functioning in accordance with the design documents. Significant reductions in contaminant concentrations in groundwater were noted at most groundwater monitoring wells from concentrations detected in 1997. Concentrations of vinyl chloride in water from four wells were consistently above a cleanup level of 2 µg/L, and concentrations of PCE were consistently above cleanup levels in seven wells. Because no one is using the groundwater at the Site as a potable water supply, the persistence of these concentrations above cleanup levels does not compromise the protectiveness of the remedy at this time. However, the remedy may not achieve the 27-year cleanup time frame specified in the ROD (in approximately 17 years from now).

Concentrations of VOCs detected in surface water do not pose a threat. Also the VOCs appear to be attributable to an unknown source in the Fry Brook drainage apart from the Site, as stated in the ROD (section V.E).

Concentrations of VOCs and one SVOC persist in soils at the FPDA. PCE, TCE, and bis(2-ethyl hexyl) phthalate were detected above the cleanup levels. Exposure to these chemicals is not considered a health risk, as stated in the ROD (section X.B). The potential for leaching to groundwater persists.

Because the selected remedy for the Site is natural attenuation, no remedial systems require operation and maintenance. The only operation and maintenance activities required at the Site are associated with repairing any damage incurred by vandals or natural causes. Access controls at the Site include fencing and warning signs. As noted during interviews with town officials and during the Site inspection, these features are not preventing access to the Site by recreational trespassers. Although

exposure of trespassers to chemicals in not considered a threat, there is the potential for vandalism of Site wells.

The data that have been collected since long-term monitoring began provide a basis for optimizing data-collection activities and refining estimates of cleanup times. Several suggestions are offered for surface water and groundwater.

Surface water

The purpose of surface water sampling stated in the ROD is to "ensure the surface water has not been adversely impacted (section X.C.ii)." No water-quality criteria for surface water are given in the ROD. Sampling of surface water during the monitoring period has confirmed the statement in the ROD that most VOC's in surface water can be attributed to an upstream source in the Fry Brook drainage. Concentrations in Mill Brook downstream of the Site and groundwater plume are typically below detection levels. With the generally low concentrations of VOCs in groundwater, it is unlikely that future discharge from the plume to surface water will cause adverse affects. The value of continuing surface water monitoring should be assessed.

Groundwater

Sampling has demonstrated that the groundwater plume has remained in a stable position for at least 10 years. The downstream component of groundwater flow shown in Figure 1-5 of the FS is not supported by available water-quality data and appears to be unlikely because of the low hydraulic gradient along the stream. Conceptually, Mill Brook and associated wetlands near the plume are the main discharge areas for groundwater and lateral downstream flow is minimal or absent. Thus, it appears unlikely that the plume will move to the area of wells MW-120S, MW-120T, MW120TT, MW-121S, MW-121TT, MW-122S, MW122TT, MW123S, and MW123TT, and these wells could potentially be omitted from the monitoring program. Although contaminants have not been detected in water from wells MW-104S and MW-104TT, these will continue to serve as useful sentinel wells in case hydrologic conditions change and cause changes in groundwater flow patterns. Pore-water sampling of sediments along the stream could provide useful information about the extent of the plume at the stream and support assessment of the downstream well network. Pore-water sampling has been demonstrated as a useful method for delineating the extent of contaminant plumes near streams (Church, P.E., and others, 2002, "Guidance on the use of passive-vapor-diffusion samplers to detect volatile organic compounds in groundwater-discharge areas, and example applications in New England," U.S. Geological Survey Water-Resources Investigations Report 02-4186, 79 p.).

The ROD states that cleanup will be accomplished within a 27-year period based on results from numerical transport modeling. The model predictions have been reasonably accurate, but the concentrations of VOCs appear to have reached a plateau in water from some wells at concentrations well below initial concentrations but still above the cleanup levels. The 27-year cleanup goal may not be achieved at the relatively low concentrations. The water-quality data that have been collected during long-term monitoring should be useful for reassessing the cleanup time frame. Consideration should be given to calibrating the original model using the monitoring data or constructing a new model using the latest modeling technologies to assess the viability of the 27-year cleanup period. If modeling indicates a significantly longer cleanup period, alternative cleanup technologies may be appropriate. A review and analysis of apparent seasonal fluctuations in vinyl chloride concentrations may provide some insights on hydrologic and natural attenuation processes that relate to the long-term effectiveness of the remedy.

Groundwater sampling costs may be reduced by using polyethylene diffusion bag samplers instead of pumped samples (D.A. Vroblesky, 2001, "User's guide for polyethylene-based passive diffusion bag samplers to obtain volatile organic compound concentrations in wells," U.S. Geological Survey Water-Resources Investigations Report 01-4060). A comparison of costs would be appropriate after consulting with regulatory officials on acceptability of the method.

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of remedy selection still valid?

The Site inspection and interviews with local officials have found the exposure scenarios associated with Site-related contaminated media and RAOs remain valid. No change in land use has occurred in the last five years.

Based on a review of ARARs, to be considered (TBC) criteria, and toxicity data, the interim cleanup goals remain valid for the upcoming 5-year review period.

Vapor intrusion is a concern for buildings that are constructed near contaminated soils and groundwater. For example, buildings may be constructed as part of the proposed biomass energy plant. Vapor intrusion became a recognized health issue after the ROD was signed and has not been addressed.

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

From all of the activities conducted as part of this five-year review, no new information has come to light which would call into questions the effectiveness of the remedy. No changes in land use or human and ecological receptors have occurred during the review period that would affect the appropriateness of exposures evaluated in the RI/FS risk assessment. No evidence of damage due to natural disasters was noted during the Site inspection.

7.2 Technical Assessment Summary

The remedy continues to be protective of human health and the environment. Vapor intrusion is a potential health issue if buildings are ever constructed near contaminated soils and groundwater.

The usefulness of analytical data for surface water should be assessed. Also, the need to continue sampling in several wells where contaminants have never been detected should also be assessed. Transport modeling would be useful for reassessing the 27-year cleanup timeframe. Sampling costs for wells may be reduced by using polyethylene bag diffusion samplers.

8.0 ISSUES

This Five-Year Review has identified several issues listed in Table 6.

Table 6. Issues for the Gallups Quarry Superfund Site.

Issues	Affects Current Protectiveness	Affects Future Protectiveness
In accordance with the ROD, institutional controls were to be implemented as part of the selected remedy. To date the institutional controls for the Site have not been finalized.	N	Y
As reported by Town officials and confirmed during the Site walk, access to the Site by recreational trespassers appears to be an ongoing issue.	N	Y
The 27-year cleanup goal for groundwater may not be accomplished.	N	N
Construction on the Site, such as the proposed biomass power plant, could, by altering recharge patterns, affect groundwater flow patterns near the plume and interpretation of water-quality trends.	N	Y
Vapor intrusion could be an issue for buildings that are ever constructed as part of the biomass power plant.	N	Y

9.0 RECOMMENDATIONS AND FOLLOW-UP ACTIONS

In response to the issues noted above, recommended actions are listed in Table 7:

Table 7. Recommendations and Follow-up Actions for the Gallups Quarry Superfund Site.

Issue	Recommendations and Follow-up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness	
					Current	Future
Institutional Controls	Finalize institutional controls for the Site	PRP	EPA/CTDEP	2010	N	Y
Site Access	Re-assess current Site access restrictions and the need to upgrade such features	PRP	EPA/CTDEP	2008	N	Y
The 27-year cleanup goal for groundwater may not be accomplished	Calibrate the numerical transport model used for the FS or construct a new transport model to reassess cleanup times.	PRP	EPA/CTDEP	2008	N	N
Possible changes in groundwater flow patterns with site reuse	Review all aspects of Site reuse for changes in recharge patterns and rates that might affect groundwater flow patterns.	Town of Plainfield	EPA/CTDEP	As plans are submitted	N	Y
Vapor intrusion for new structures	Vapor intrusion for new structures Consider mitigating measures for occupied structures on Site.	Energy plant operators	EPA/CTDEP	As construction plans are formulated	N	Y

10.0 PROTECTIVENESS STATEMENT

The remedy at the Gallup's Quarry Site currently remains protective of human health and the environment because there is little potential for exposure to Site media containing contaminant concentrations exceeding applicable criteria. To ensure protectiveness in the long-term, the following actions need to be taken:

- Finalize the institutional controls;
- Improve Site access control features to reduce recreational use of the Site; and
- Review proposed construction activities that might affect recharge rates and groundwater flow patterns.
- Consider the need for vapor intrusion control measures for future proposed building at or near the site.

11.0 NEXT REVIEW

The next five-year review should be completed by September 30, 2012. That review should summarize activities that were implemented to address issues identified in this Five-Year Report. All data generated under the long-term monitoring program should be reviewed to determine if contaminant concentration trends are consistent with those projected in the ROD.

APPENDIX A - INTERVIEW DOCUMENTATION

INTERVIEW DOCUMENTATION FORM

The following is a list of individual interviewed for this five-year review. See the attached contact record for a detailed summary of the interviews.

Name	Title/Position	Organization	Date
Leslie McVickar	Remedial Project Manager	U.S. EPA	April 30, 2007
Lou Soja	Town Planner	Town of Plainfield	April 10, 2007
Kevin Cunningham	First Selectmen	Town of Plainfield	April 12, 2007
Gary Wilson	Project Manager	Kleinfelder	March 27, 2007
Randy Kempain	General Manager	Connecticut Water Company	April 10, 2007
Mark Lewis	Environmental Analyst	CT DEP Eastern	March 27, 2007
Jeff Young	Supervisor	POTW–North Branch	April 11, 2007
Nancy Wilcox	Librarian	Plainfield Public Library	June 6, 2007

INTERVIEW RECORD

Site Name: Gallup's Quarry		**EPA ID No.:** CTD108960972
Subject: Second Five Year Review	**Time: 11:00** am	**Date: April 30, 2007**
Type: **Telephone** Visit Other **Location of Visit:** Plainfield, Connecticut		**Incoming** Outgoing

Contact Made By

Name: Forest P. Lyford	**Title:** Geologist	**Organization**: USACE

Individual Contacted:

Name: Leslie McVickar	**Title:** Remedial Project Manager	**Organization**: U.S. Environmental Protection Agency

Telephone No: (617) 918-1374 **Fax No:** **E-Mail Address:**	**Street Address:** 1 Congress Street, Suite 1100 **City, State, Zip:** Boston, MA 02114

Summary Of Conversation

Q1: What is your overall impression of the project and Site?
A1: No problems. The concentration trends for VOCs are progressing as predicted by the model.

Q2: Are you aware of any issues the five-year review should focus on?
A2: The proposed biomass energy facility is outside the area of the plume and should not be a major issue relating to the plume. There may be a vapor intrusion issue, however, and venting of new structures should be considered.

Q3: Who should USACE speak to in the community to solicit local input?
A3: Ms. McVickar provided an updated list from the first five-year review during a visit to her office on March 16, 2007.

Q4: Is the remedy functioning as expected?
A4: Yes.

Q6: Is the Town actively involved in the Site or do they show an active interest?
A6: Yes. The town owns part of the Site. The town is very supportive of the proposed biomass facility.

Q8: Have there been any changes in the Site or surrounding property in the last 5 years, or are changes planned?
A8: She restated the concern about vapor intrusion for any new structures on Site because the water table is generally less than 10 feet deep.

INTERVIEW RECORD

Site Name: Gallup's Quarry		**EPA ID No.:** CTD108960972
Subject: Second Five Year Review	**Time:** 12:30 pm	**Date:** 3/27/07
Type: Telephone **Visit** Other **Location of Visit:** Plainfield, Connecticut		Incoming Outgoing

Contact Made By

Name: Forest P. Lyford	**Title:** Geologist	**Organization**: USACE

Individual Contacted:

Name: W. Gary Wilson	**Title:** Principal Professional	**Organization**: Kleinfelder

Telephone No: (978) 486-0060 ext. 237 **Fax No:** (978) 486-0630 **E-Mail Address:** gwilson@kleinfelder.com	**Street Address:** 30 Porter Road **City, State, Zip:** Littleton, MA 01460

Summary Of Conversation

Q1: What is your overall impression of the project and Site?
A1: The remedy is appropriate for the problem. No drinking water is impacted by groundwater contamination.

Q2: Are you aware of any issues the five-year review should focus on?
A2: Any construction or development of the Site should be implemented in a manner that does not affect the remedy. The monitoring program should be reviewed. Specifically, some of the groundwater and surface-water monitoring could be discontinued. He questions the value of periodic sampling for metals and pthalates.

Q3: Who should USACE speak to in the community to solicit local input?
A3: The community does not show much interest in the Site. There are no abutters so there is not much interest.

Q4: Is the remedy functioning as expected?
A4: In general, the remedy is functioning better than projected by modeling. An exception is at well 107TT at the source area where declines are less than projected.

Q5: Has there been any significant changes in the O&M activities or a chance to optimize the O&M?
A5: No. The fence has been repaired since the last five-year review.

Q6: Are you aware of any residential well sampling efforts?
A6: He is not aware of any sampling since the remedial investigation.

Q7: Is the Town actively involved in the Site?
A7: No, except potential use of the Site for the proposed power plant

Q8: Do you feel that information related to the Site is readily available?
A8: All documents should be in the library.

Q9: Have there been any changes in the Site or surrounding property in the last 5 years, or are changes planned?
A9: The proposed power plant will affect the property. The new Lowe's warehouse has altered locations and names of the former Tarbox road near the Site.

Q10: Has the Site had any negative economic impacts on the town?
A10: No.

Q11: Are you aware of any changes in the state ARARs, groundwater quality standards, etc., since 2002?
A11: None that would affect the Site. Clean water is over contaminated water and there are no structures over the plume, so indoor air is not an issue.

Q12: Are you aware of any pending or future water needs or any change in water usage in the area?
A12: Gary is not aware of any water needs.

INTERVIEW RECORD

Site Name: Gallup's Quarry		**EPA ID No.:** CTD108960972
Subject: Second Five Year Review	**Time: 12:30** pm	**Date**: 3/27/07
Type: Telephone **Visit** Other **Location of Visit:** Plainfield, Connecticut		Incoming Outgoing

Contact Made By:

Name: Forest P. Lyford	**Title:** Geologist	**Organization:** USACE

Individual Contacted:

Name: Mark Lewis	**Title:** Environmental Analyst	**Organization**: Connecticut Department of Environmental Protection
Telephone No: (860) 424-3768 **Fax No:** (860) 424-4057 **E-Mail Address:** mark.lewis@po.state.ct.us		**Street Address:** 79 Elm Street **City, State, Zip:** Hartford. CT 06106

Summary Of Conversation

Q1: What is your overall impression of the project and Site?
A1: The selected remedy remains protective of human health and the environment. Concentrations of contaminants are either at steady state or are declining.

Q2: Are you aware of any issues the five-year review should focus on?
A2: Land restrictions on the adjoining Tilcon property west of the Site.

Q3: Who should USACE speak to in the community to solicit local input?
A3: USACE should talk to town officials about the proposed biomass facility.

Q4: Is the remedy functioning as expected?
A4: Yes, the remedy appears to be functioning.

Q5: Has there been any significant changes in the O&M activities or a chance to optimize the O&M?
A5: Institutional controls are important because of the proposed power plant. The monitoring well network should not be disturbed by construction activities.

Q6: Are you aware of any residential well sampling efforts?

A6: None known since 1993-95. Mark suggests checking with the Northeast District Department of Health, which also documents construction of monitoring wells.

Q7: Is the Town actively involved in the Site?
A7: No, except for the current interest in the power plant. Local citizen appear to be supportive of the plant.

Q8: Do you feel that information related to the Site is readily available?
A8: The State of Connecticut has paper copies of Site information on file.

Q9: Have there been any changes in the Site or surrounding property in the last 5 years, or are changes planned?
A9: An access road has been added to the adjacent Tilcon property.

Q10: Has the Site had any negative economic impacts on the town?
A10: There have been no negative or positive impacts. The proposed power plant would be a positive impact.

Q11: Are you aware of any changes in the state ARARs, groundwater quality standards, etc., since 2002?
A11: The state is revising the remediation standards, but they probably will not be adopted before this five-year review is due. Volatilization criteria will be changing.

Q12: Are you aware of any pending or future water needs or any change in water usage in the area?
A12: The proposed power plant for the Site will withdraw about 900,000 gallons of water per day from the Quinnebaug River for power generation. Some of that water will be returned to the Quinnebaug. Groundwater development in the area would be limited because of concerns about endangered species.

INTERVIEW RECORD

Site Name: Gallup's Quarry		**EPA ID No.:** CTD108960972
Subject: Second Five Year Review	**Time: 6:30** am	**Date**: 4/11/07
Type: **Telephone** Visit Other **Location of Visit:**		Incoming **Outgoing**
Contact Made By:		
Name: Forest P. Lyford	**Title:** Geologist	**Organization:** USACE
Individual Contacted:		
Name: Jeff Young	**Title:** Supervisor	**Organization**: POTW, North Branch
Telephone No: (860) 564-3335 **Fax No** **E-Mail Address:**	**Street Address:** 8 Community Ave. **City, State, Zip:** Plainfield, CT 06374	

Summary Of Conversation

Q1: What is your overall impression of the project and Site?
A1: Mr. Young sees no problem.

Q2: Are you aware of any issues the five-year review should focus on?
A2: None

Q3: Are you aware of any releases from the POTW to Frye Brook?
A3: No. All treated discharges go to the outflow.

Q4: Does the POTW sample the brook? If so, can sample results be made available?
A4: The POTW does not sample the brook.

INTERVIEW RECORD

Site Name: Gallup's Quarry		**EPA ID No.:** CTD108960972
Subject: Second Five Year Review	**Time: 3:30** pm	**Date**: 3/27/07
Type: **Telephone** Visit Other **Location of Visit:**	Incoming	**Outgoing**

Contact Made By:

Name: Forest P. Lyford	**Title:** Geologist	**Organization:** USACE

Individual Contacted:

Name: Kevin Cunningham	**Title:** First Selectman	**Organization**: Town of Plainfield
Telephone No: (860) 230-3000 **Fax No** **E-Mail Address:**	**Street Address:** 8 Community Ave. **City, State, Zip:** Plainfield, CT 06374	

Summary Of Conversation

Q1: What is your overall impression of the project and Site?
A1: Mr. Cunningham feels that the Site is protected and he is not concerned about the contaminants on Site. No groundwater deve concern.

Q2: Are you aware of any issues the five-year review should focus on?
A2: He is concerned about easy access of the Site to ATV's and possible safety concerns of crossing the railroad. The proposed bic should not affect contaminants in groundwater.

Q3: Who should USACE speak to in the community to solicit local input?
A3: He suggested the town planner.

Q4: Is the remedy functioning as expected?
A4: Yes.

Q5: Have citizens expressed concern about the Site?
A5: None that is known to him.

Q6: Is the Town actively involved in the Site?
A6: No, except for the current interest in the power plant. Local citizens appear to be supportive of the plant.

Q7: Do you feel that information related to the Site is readily available?
A7: All reports are available in town files.

Q8: Have there been any changes in the Site or surrounding property in the last 5 years, or are changes planned?
A8: Tarbox road has been upgraded and moved to support the nearby Lowes distribution center. A sewage line has been added. None of these features affect the Site directly.

Q9: Has the Site had any negative economic impacts on the town?
A9: The Site has had no negative impacts. The possible redevelopment of the Site will have a positive impact.

Q10: Are you aware of any pending or future water needs or any change in water usage in the area?
A10: The proposed power plant for the Site will withdraw water from the Quinnebaug River for power generation. Potable water will be provided by the town supplier. No additional water usage is expected in the area. Plans are to extend sewer lines to the nearby former Greyhound Park, but that activity won't affect the Site.

INTERVIEW RECORD

Site Name: Gallup's Quarry		**EPA ID No.:** CTD108960972
Subject: Second Five Year Review	**Time: 15:30** pm	**Date**: 4/10/07
Type: **Telephone** Visit Other **Location of Visit:**		**Incoming** Outgoing
Contact Made By:		
Name: Forest P. Lyford	**Title:** Geologist	**Organization:** USACE
Individual Contacted:		
Name: Randy Kempain	**Title:** Regional Manager	**Organization**: Connecticut Water Company
Telephone No: (860) 774-8889 ext. 3405 **Fax No:** **E-Mail Address:**	**Street Address:** P.O. Box 648 **City, State, Zip:** Danielson, CT 06239	

Summary Of Conversation

Q1: Are you familiar with the Site?
A1: Mr. Kempain says he is familiar with the Site but not intimately.

Q2: What is your overall impression of the project and Site?
A2: He feels that the Site is quiet and he has no concerns.

Q3: Do you feel that information related to the Site is readily available?
A3: He goes to the Connecticut DEP if he needs information about water quality and new development.

Q4: Are you aware of any pending or future water needs or any change in water usage in the area?
A4: He is aware of the proposed power plant for the Site. So far, his company has not been approached for domestic water. His company services the new Lowes facility.

Q5: Does your company ever get questions from water customers about effects of the Site on water quality.
A5: His customers are assured of good water quality. Concerns about the Site have not been expressed.

Mr. Kempain clarified the locations of wells used for public supply in Plainfield.

INTERVIEW RECORD

Site Name: Gallup's Quarry		**EPA ID No.:** CTD108960972
Subject: Second Five Year Review	**Time: 11:30** pm	**Date**: 4/10/07
Type: **Telephone** Visit Other **Location of Visit:**		Incoming **Outgoing**

Contact Made By:

Name: Forest P. Lyford	**Title:** Geologist	**Organization:** USACE

Individual Contacted:

Name: Lou Soja	**Title:** Town Planner	**Organization**: Town of Plainfield
Telephone No: (860) 230-3028 **Fax No** **E-Mail Address:**	**Street Address:** 8 Community Ave. **City, State, Zip:** Plainfield, CT 06374	

Summary Of Conversation

Q1: What is your overall impression of the project and Site?
A1: Mr. Soja feels that the Site is all cleaned up and is not causing a problem.

Q2: Are you aware of any issues the five-year review should focus on?
A2: None

Q3: Who should USACE speak to in the community to solicit local input?
A3: He suggested the First Selectman.

Q4: Have citizens expressed concern about the Site?
A4: No concerns have been expressed. Questions were raised during the reviews for the proposed power plant, but they were told that everything is cleaned up.

Q5: Is the Town actively involved in the Site?
A5: There is considerable interest in reuse of the Site for a power plant.

Q6: Do you feel that information related to the Site is readily available?
A6: The town maintains a file on the Site.

Q7: Have there been any changes in the Site or surrounding property in the last 5 years, or are changes planned?
A7: Roads have been upgraded and the location changed to support the nearby Lowes distribution center. There are no applications for additional changes in the area.

Q8: Has the Site had any negative economic impacts on the town?
A8: None

Q9: Are you aware of any pending or future water needs or any change in water usage in the area?
A9: The proposed power plant for the Site will withdraw water from the Quinnebaug River for power generation. Storm-water runoff from impermeable surfaces associated with the proposed power plant will be managed.

INTERVIEW RECORD

Site Name: Gallup's Quarry		**EPA ID No.:** CTD108960972
Subject: Second Five Year Review	**Time: 15:30** pm	**Date**: 6/6/07
Type: **Telephone** Visit Other **Location of Visit:**		Incoming **Outgoing**
Contact Made By:		
Name: Forest P. Lyford	**Title:** Geologist	**Organization:** USACE
Individual Contacted:		
Name: Nancy Wilcox	**Title:** Librarian	**Organization** Plainfield Public Library
Telephone No: (860) 564-4407 **Fax No:** **E-Mail Address:**	**Street Address:** 39 Railroad Avenue **City, State, Zip:** Plainfield, CT 06374	
Summary Of Conversation		
Q1: Is information for the Site available in the public library? A1: Ms. Wilcox reports that records for the Site are maintained in the Plainfield Public Library. The library receives occasional inquiries about the Site.		

APPENDIX B - SITE ACCESS AND INSTITUTIONAL CONTROLS PLAN

Reformatted from Original Submitted by the
Settling Defendants of the Gallup's Quarry Superfund Site
Dated: March 19, 2001

I. Introduction

The Settling Defendants, as defined in the Consent Decree in settlement of Civil Action No. 3:OQCV 252 (AVC) ("Consent Decree"), submit this plan for site access and institutional controls at the Gallup's Superfund Site (the "Site"). The plan serves two purposes. First, it provides a detailed site access plan as required by EPA in Section of the Statement of Work. Second, as required by Section of the Statement of Work, it provides that institutional controls at the site will achieve one or more of the following purposes:

a. to prevent the use of contaminated groundwater;

b. to restrict development for residential activities;

c. to limit the use and disturbance of contaminated soils in the Former Primary Disposal Area ("FPDA") and Former Seepage Bed ("FSB"), as defined in the Consent Decree;

d. to require EPA approval of any construction activities that may disturb contaminated soils at the Site; and

e. to bind and inform purchasers of property with respect to groundwater and other restrictions associated with the Site.

II Site Access

The Settling Defendants will use best efforts to provide access to all necessary parties. Such access will be provided both to the Site itself and to any surrounding properties at which access is proved to be necessary. A list of property owners from whom such access will be sought is attached hereto as Schedule 1. See corresponding map attached hereto at Figure 1. In order to secure all access necessary to perform the remedial action described in Section IX of the Consent Decree.

The Settling Defendants shall use best efforts to negotiate with all appropriate, parties. Such access may be necessary to achieve any of the following activities: monitoring the work; verifying data or information submitted to the United States or the State; conducting investigations relating to contamination at or near the site; assessing the need for, planning, or implementing additional response actions at or near the site; obtaining samples; implementing the work pursuant to the conditions set forth in paragraph 91 of the Consent Decree; inspecting and copying records, operating logs, contracts, or other documents maintained or generated by the Settling Defendants; assessing the Settling Defendants' compliance with the Consent Decree; and determining whether the Site or other property is being used in a manner that is prohibited, restricted, or that may need to be prohibited or restricted, by or pursuant to the Consent Decree.

The Settling Defendants will use best efforts to secure all necessary access from parties occupying surrounding property. As was done in accordance with the Remedial Investigation Report and Feasibility Study Report, issued by EPA on June 13, 1997, the Settling Defendants will draft, circulate, and use best efforts to obtain site access so that all parties from whom permission for access proves to be necessary consent to access agreements similar to the one attached hereto as Exhibit A.

The Settling Defendants will also use best efforts to secure access to the Site itself. Such access will be secured by an easement. The easement will be part of an Environmental Land Use Restriction and Easement similar to the one attached hereto as Exhibit B. At this time, the property constituting the Site is subject to a probate proceeding, as the previous owner of the property recently passed away. As soon as the new owner of the property is determined, the Settling Defendants shall use best efforts to ensure that the necessary easement and land use restriction are obtained and recorded in the land records. In the meantime, the Settling Defendants have used best efforts in an attempt to secure an

easement and land use restriction from the executor of the estate. A letter seeking such a restriction and easement is attached as Exhibit C.

III Institutional Controls

In order to achieve the objectives outlined in Section of the Statement of Work, the Settling Defendants shall use best efforts to implement the necessary institutional controls. In addition to refraining from using the Site, or such other property, in any manner that would interfere with or adversely affect the integrity or protectiveness of the remedial measures to be implemented pursuant to the Consent Decree, and the institutional controls already in place, the Settling Defendants anticipate implementing a number of different institutional controls to achieve the various objectives described in the Statement of Work.

A. Environmental Land Use Restriction

The most effective method of achieving the goals of the institutional controls is an Land Use Restriction. Such a restriction will prevent the use of contaminated groundwater, restrict development for residential activities, limit the use and disturbance of contaminated soils in the FPDA and FSB, require EPA approval of any construction activities that may disturb the contaminated soils at the Site, restrict construction in the FPDA and FSB and bind and inform purchasers of property with respect to groundwater and other restrictions associated with the Site. A draft Environmental Land Use Restriction and Easement that will achieve each of these goals is attached as Exhibit B. Because of the comprehensive nature of the restriction, it is unlikely that any other substantial institutional controls will be necessary to achieve the above goals.

B. Physical Barriers

The Environmental Land Use Restriction will be most effective at preventing the owner or user of the Site from interfering with any of the stated goals of the institutional controls. In addition to obtaining the Environmental Land Use Restriction, and as a measure to prevent outside interference with the goals of the institutional controls, the Settling Defendants will ensure that existing physical barriers are maintained. Currently, there are rocks in the road blocking any motor vehicle access to the Site. Further, there are fences surrounding part of the site, further restricting access to both pedestrians as well as vehicles. The Settling Defendants will maintain the existing fencing and inspect and repair such fencing on an annual basis, and keep proper records of any such inspections and maintenance, in an effort to ensure that there will be no outside interference with the achievement of the goals of the institutional controls.

C. Annual Reporting and State Sampling Requirements

The Environmental Land Use Restriction should be sufficient to achieve the goals of the institutional controls. In an effort to prevent the use of contaminated ground water, and as an additional precautionary measure, the Settling Defendants will make annual submissions of information (in the of a map and narrative description) regarding the nature and location of the plume of contamination to the Northeast District Department of Health. Additionally, any newly constructed private water supplies would be required to be sampled pursuant to § 19-13- of the Connecticut Public Health Code, including analysis for organic chemicals "when reasonable grounds exist to suspect that organic chemicals may be present." The well would not be allowed to be used for domestic purposes if the analysis reveals that the maximum contaminant levels are exceeded.

D. Potential Federal

Typically, public water supplies are subject to state, rather than federal, enforcement. In certain circumstances, however, the federal government may exercise control over contaminated water supplies. The Federal Safe Water Act allocates to the states primary enforcement responsibility for protecting public water supplies. Each state program, however, must be federally approved. Connecticut's program is federally approved. However, even in a state, like Connecticut, whose program has been approved, the federal government may exercise its emergency power over drinking water sources where the state fails to act.

Administrator, upon receipt of information that a contaminant which water may present an imminent and substantial endangerment to the health of persons, and that appropriate State and local authorities have not acted to protect the health of such persons, may take such actions as he may deem necessary in order to protect the health of such persons.

> [T]he Administrator, upon receipt of information that a contaminant which is present in or is likely to enter a public water system or an underground source of drinking water may present an imminent and substantial endangerment to the health of persons, and that appropriate State and local authorities have not acted to protect the health of such persons, may take such actions as he may deem necessary in order to protect the health of such persons.

42 U.S.C. § 300i

While it is unlikely that it will be necessary, the authority of the Administrator to intervene in the event that state controls fail provides an additional potential institutional control.

IV. Conclusion

Pursuant to the procedures outlined above, the Settling Defendants will use best efforts to provide all necessary access to the Site itself as well as the surrounding property and ensure that that all necessary institutional controls will be implemented.

SCHEDULE 1 -ACCESS AGREEMENTS TO BE SOUGHT FROM ABUTTING PROPERTY OWNERS TO GALLUP'S QUARRY SITE

Lot Number	Owner	Home Address
1	Gallup	P.O. Box 145 Plainfield, CT
4	Norman Atlas	3001 South Ocean Drive Hollywood, FL
7	Robert Gluck	Packer Road Plainfield, CT 06374
8	Tilcon Minerals, Inc.	909 Road North Branford, 06405
9	Paul Sweet, First Selectman Town of Plainfield	8 Community Avenue Plainfield, CT 06374

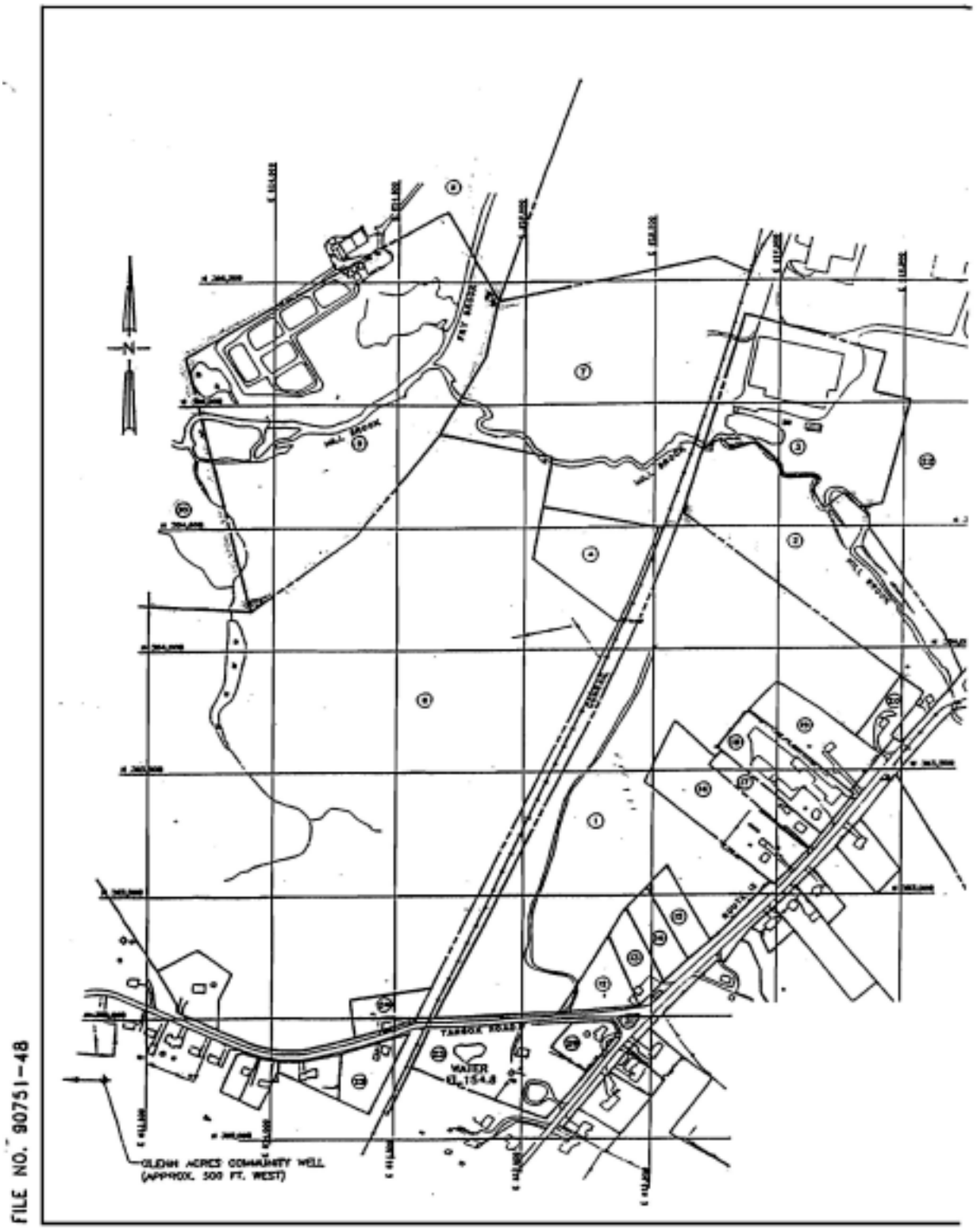

FILE NO. 90751-48
GLENN ACRES COMMUNITY WELL
(APPROX. 500 FT. WEST)
WATER
EL. 154.8

Figure 1.

EXHIBIT A

THE GALLUP'S QUARRY PRP GROUP
c/o Tricia A Haught
Day, Berry & Howard
City Place 1
Harford, CT 06103-3499
(860) 275-0536

[Address goes here]

Re: License to Enter Upon Land

Dear [name goes here] :

Your property is located in the vicinity of the Gallup's Quarry Superfund Site located on Road in the Town of Plainfield, Connecticut. In order to monitor remediation of suspected environmental contamination at the Gallup's Quarry Superfund Site, the United States Protection Agency is requiring that certain activities take place. Because of the proximity of your property to the Site, some of the activities may have to be undertaken on your property. The purpose of these activities is to ensure that your property has not been adversely affected by contamination which might emanate from the Site. Further, these activities will help us determine what steps should be taken to remedy the situation. In short, such activities are being done for your benefit.

The Gallup's Quarry Group is a group of business organizations which, without admitting responsibility for causing the conditions at the Site, have jointly agreed to accept responsibility for the remediation of such conditions. They have, accordingly, entered into a Consent Decree with the United States and the State of Connecticut that may require them to undertake certain activities at your property. Further, it may be necessary for representatives of the United States government or the State of Connecticut government to access your property as well.

In a previous stage of these proceedings, the Gallup's Quarry Group sought and obtained access to your property for similar purposes. This access has since expired. By signing this Agreement, you will renew permission to the Gallup's Quarry Group, its consultants, subcontractors, agents, and other authorized representatives, and the United States and its designated coordinators, agents, employees, contractors, consultants and other authorized representatives and the State of Connecticut and its designated coordinators, agents, employees, contractors, consultants and other authorized representatives to enter your property for the purposes stated herein, subject to the conditions set forth below:

1. Access will be limited to the outdoor areas of your property, between the hours of 8 A.M. and Access will be limited to weekdays that are not recognized holidays.
2. The activities that may be conducted shall be limited to:

-soil and groundwater sampling and monitoring.

3. Every reasonable effort will be made to minimize disruption of your property and your daily life.

4. At the end of each day's work, we will leave your property in as clean a condition as is reasonable under the circumstances.

5. At the completion of the your property will be returned to substantially the same condition that existed prior to the work. Any holes will be filled and regraded.

6. Access will be permitted under the terms of this agreement for the length of time necessary for completion of the cleanup and monitoring effort, conducted in accordance with the requirements of the United States Environmental Protection Agency, and will continue until the Environmental Protection Agency determines that the cleanup objectives have been met.

Should you be willing to grant the requested access, please sign this document (if the property is jointly owned or otherwise co-owned, both owners must sign) and return it to the Gallup's Quarry PRP Group within 10 days of your receipt of this form in the stamped, pre-addressed, envelope provided. If you have any questions regarding this access request, you may call me at (860) 275-0536. If you have any technical questions regarding the cleanup and monitoring effort, you may call the United States Environmental Protection Agency's Remedial Project Manager, Ms. Leslie McVickar at (617) 593-9689 or the Project Coordinator for the Gallup's Quarry PRP Group, Mr. Gary Wilson at (603) 889-3737.

THE GALLUP'S QUARRY PRP GROUP

Very truly yours,

Tricia A. Haught

LANDOWNER(S):
cc: Leslie McVickar
Gary Wilson
Gallup's Quarry Technical Committee

EXHIBIT B

DECLARATION OF ENVIRONMENTAL LAND USE RESTRICTION AND GRANT OF EASEMENT

This Declaration of Environmental Land Use Restriction and Grant of Easement is made this day of, 2001, between ("the Grantor") and the Commissioner of Environmental Protection of the State of Connecticut ("the Grantee").

WITNESSETH:

WHEREAS, Grantor is the owner in fee simple of certain real property (the "Property") known as the Gallup's Quarry Superfund Site, encompassing approximately 29 acres, located on Road in the Town of Plainfield in County, Connecticut, designated at Lot 32, Block 30 on tax map number 10 of the Town of Plainfield in County, more particularly described on Exhibit A which is attached hereto and made a part hereof; and

WHEREAS, the Grantee has determined that the environmental land use restriction set forth below is consistent with regulations adopted by him pursuant to Section 22a-133k of the Connecticut General Statutes; and

WHEREAS, the Grantee has determined that this environmental land use restriction will effectively protect public health and the environment from the hazards of pollution; and

WHEREAS, the Grantee's written approval of this Environmental land use restriction is contained in the document attached hereto as Exhibit B (the "Decision Document") which is made a part hereof; and
WHEREAS, the property or portion thereof identified in the class A-2 survey ("the Subject Area") which survey is attached hereto as Exhibit C which is made a part hereof, contains pollutants; and

WHEREAS, to prevent exposure to or migration of such pollutants and to abate hazards to human health and the environment, and in accordance with the Decision Document, the Grantor desires to impose certain restrictions upon the use, occupancy, and activities of and at the Subject Area, and to grant this environmental land use restriction to the Grantee on the and conditions set forth below; and

WHEREAS, Grantor intends that such restrictions shall run with the land and be binding upon and enforceable against Grantor and Grantor's successors and assigns;

NOW, THEREFORE, Grantor agrees as follows:

1. Purpose

In accordance with the Decision Document, the purpose of this Environmental land use restriction is to assure that contaminated portions of the Subject Area are not used for residential activities, that contaminated groundwater at the Subject Area is not utilized for drinking purposes, and that buildings are not constructed over soils or ground water at the Subject Area polluted with substances in concentrations exceeding the volatilization criteria established in R.C.S.A. sections 22a-through 32a-133k-3 inclusive.

2. Restrictions Applicable to the Subject Area

In furtherance of the purposes of this environmental land use restriction, Grantor shall assure that use, occupancy, and activity of and at the Subject Area are restricted as follows:

a. Use.

Any portion of the Subject Area affected by contamination above cleanup levels, as specified in Section IX, Paragraph of the Consent Decree in settlement of Civil Action No. CV 252 (AVC) ("Consent Decree"), shall not be developed for residential activities as defined in the Connecticut Department of Environmental Protection Remediation Standard Regulations, in R.C.S.A. Section 1 3 3k-1(a)(53)

b. Ground water.

Pursuant to Section IX, Paragraph of the Consent Decree, contaminated groundwater underlying the Subject Area shall not be withdrawn for any purpose unless otherwise provided for in the Consent Decree's Statement of Work. Groundwater supply wells shall not be installed or otherwise operated in a manner that would conflict with the natural attenuation of groundwater at the Subject Area or that would conduct contaminated groundwater the Subject Area.

c. Disturbances.

(i) Contaminated soils in the Former Primary Disposal Area and Former Seepage Bed shall not be disturbed, except pursuant to a plan approved by EPA, after reasonable opportunity for review and comment by the CT DEP. Consent Decree, Section IX, Paragraph

(ii) No use or activity shall be permitted which will disturb any of the remedial measures implemented at the Property, including without limitation: the installation of groundwater monitoring wells, long-term monitoring of groundwater, surface water, and soils, installation of signs, and maintenance of monitoring equipment, entry fences and signs. Consent Decree, Section IX, Paragraph 26(b)(5).

d. Construction.

No building shall be constructed in the Former Primary Disposal Area and Former Seepage Bed, except pursuant to a plan approved by EPA for approval, after reasonable opportunity for review and comment by the CT DEP. Consent Decree, Section IX, Paragraph 3.

Except as provided in Paragraph 4 below, no action shall be taken, allowed, suffered, or omitted if such action or omission is reasonably likely to:

(i) Create a risk of migration of pollutants or a potential hazard to human health or the environment; or

(ii) Result in a disturbance of the structural integrity of any engineering controls or other structures designed or utilized at the Property to contain pollutants or limit human exposure to pollutants.

[NOTE: spurious paragraph three heading removed]

3. Emergencies

In the event of an emergency which presents a significant risk to human health or the environment, the application of Paragraph 3 above may be suspended, provided such risk cannot be abated without suspending such Paragraph and the Grantor:

(i) Immediately notifies the Grantee of the emergency;
(ii) Limits both the extent and duration of the suspension to the minimum reasonably necessary to adequately respond to the emergency;
(iii) Implements all measures necessary to limit actual and potential present and future risk to human health and the environment resulting from such suspension; and
(iv) Implements a plan approved in writing by the Grantee, on a schedule approved by the Grantee, to ensure that the Subject Area is remediated in accordance with R.C.S.A. sections 22a-133k-1 through 22a-1 33k-3, inclusive, or restored to its condition prior to such emergency.

4. Release of Restriction; Alterations of Subject Area

Grantor shall not make, or allow or suffer to be made, any alteration of any kind in, to, or about any portion of any the Subject Area inconsistent with this Environmental land use restriction unless the Grantor has first recorded the Grantee's written approval of such alteration upon the land records of Plainfield. The Grantee shall not approve any such alteration and shall not release the Property from the provisions of this environmental land use restriction unless the Grantor demonstrates to the Grantee's satisfaction that Grantor has remediated the Subject Area in accordance sections 22a-133k-1 through 22a-133k-3, inclusive.

5. Grant of Easement to the Grantee

Grantor hereby grants and conveys to the Grantee, his agents, contractors, and with R.C.S.A. employees, and to any person performing pollution remediation activities under the direction thereof, a non-exclusive easement (the "Easement") over the Subject Area and over such other parts of the Property as are necessary for access to the Subject Area or for carrying out any actions to abate a threat to human health or the environment associated with the Subject Area.

Pursuant to this Easement, the Grantee, his agents, contractors, and employees, and any person performing pollution remediation activities under the direction thereof, may enter upon and inspect the Property and perform such investigations and actions as the Grantee deems necessary for any one or more of the following purposes:

(i) Ensuring that use, occupancy, and activities of and at the Property are consistent with this environmental land use restriction;
(ii) Ensuring that any remediation implemented complies with R.C. S.A. sections 22a-1 through 22a-133k-3, inclusive; and
(iii) Performing any additional investigations or remediation necessary to protect human health and the environment.

6. Notice and Time of Entry onto Property

Entry onto the Property by the Grantee pursuant to this Easement shall be upon reasonable notice and at reasonable times, provided that entry shall not be subject to these limitations if the Grantee determines that immediate entry is necessary to protect human health or the environment.

7. Notice to Lessees and Other Holders of Interests in the Property

Grantor, or any holder of any interest in the property, shall cause any lease, grant, or other transfer of any interest in the Property to include a provision expressly requiring the lessee, grantee, or transferee to comply with this environmental land use restriction and Grant of Easement. The failure to include such provision shall not affect the validity or applicability to the Property of this environmental land use restriction and Grant of Easement.

8. Persons Entitled to Enforce Restrictions

The restrictions in this environmental land use restriction on use, occupancy, and activity of and at the Property shall be enforceable in accordance with section of the General Statutes.

9. Severability and Termination

If any court of competent jurisdiction that any provision of this environmental land use restriction or Grant of Easement is invalid or unenforceable, such provision shall be deemed to have been modified automatically to conform to the requirements for validity and enforceability as determined by such court. In the event that the provision invalidated is of such nature that it cannot be so modified, the provision shall be deemed deleted this instrument as though it had never been included herein. In either case, the remaining provisions of this instrument shall remain in full force and effect. Further, in either case, the Grantor shall submit a copy of this restriction and of the judgement of the Court to the Grantee in accordance with R.C.S.A. section 22a-133q-1(1). This environmental land use restriction shall be terminated if the Grantee provides notification pursuant to R.C.S.A. section 22a-133q-1(1).

10. Binding Effect

All of the terms, covenants and conditions of this environmental land use restriction and grant of easement shall run with the land and shall be binding on the Grantor, the Grantor's successors and assigns, and each owner and any other party entitled to possession or use of the Property during such period of ownership or possession.

11. Terms Used Herein

The definitions of terms used herein shall be the same as the definitions contained in sections 22a-133k-1 and22a-133o-1 of the Regulations of Connecticut State Agencies as such sections existed on the date of execution of this environmental land use restriction.

EXHIBIT C

Date

Milton Jacobsen, Esq.
Brown, Jacobsen, Tillinghast, Lahan & King
22 Courthouse Square
Norwich, CT 06360

Re: Gallup's Quarry Superfund Site

Dear Mr. Jacobsen:

I write this letter on behalf of the Gallup's Quarry Potentially Responsible Party Group (the Group"). As you may know, the PRP Group is a group of companies and individuals which, without admitting responsibility for causing the conditions at the Gallup's Quarry Superfund Site (the "Site"), have jointly agreed to accept responsibility for the remediation of such conditions. As you may also know, prior to his passing, Mr. C. Gallup was, himself, one of the original The Gallup's Quarry PRP Group has entered into a Consent Decree with the United States and the State of Connecticut that requires them and representatives of the United States and Connecticut Government to undertake certain activities at the Site.

In order to monitor remediation of suspected environmental contamination at the Site, the United States Environmental Protection Agency is requiring that a number of activities take place. The purpose of these activities is to ensure that any adverse affects of contamination at the Site are minimized. Further, these activities will help us determine what steps should be taken to remedy the situation. Finally, the activities will include implementation of the remedies, themselves. In short, such activities are being done for the benefit of the Site, itself.

Pursuant to the Consent Decree, the PRP Group is required to seek an environmental land use restriction and easement for the Site. We understand that, since Mr. Gallup passed away, the distribution of his estate has yet to be determined. According to a representative at the Probate Court in Plainfield, it is that this situation will have changed by the end of the year.

Meanwhile, time is of the essence in obtaining the environmental land use restriction and easement. The necessary parties will not be able to perform remediation until the land use restriction and easement are obtained. The sooner these are secured, then, the sooner remediation of the Site can commence. Further, the PRP Group has agreed to adhere to a fairly rigid schedule in obtaining the necessary documents and performing the remediation. Thus, the Group cannot afford to wait until the new owner of the property at the Site is determined. It is important that this process move as sswiftly as possible.

We have learned from the Probate Court in Plainfield that you are the Executor of Mr. Gallup's estate. As the new owner of the property is not likely to take title in the near we turn to you for assistance in obtaining the land use restriction and easement. The final document is expected to be substantially similar to the enclosed draft Declaration of Environmental Land Use Restriction and Grant of

Easement. This is only a draft for substantive purposes. The substance is largely dictated by requirements of the Consent Decree as well as state and federal environmental laws and regulations.

Please do not hesitate do call me if you have any questions relating to these matters. I look forward to your prompt response and assistance in this matter.

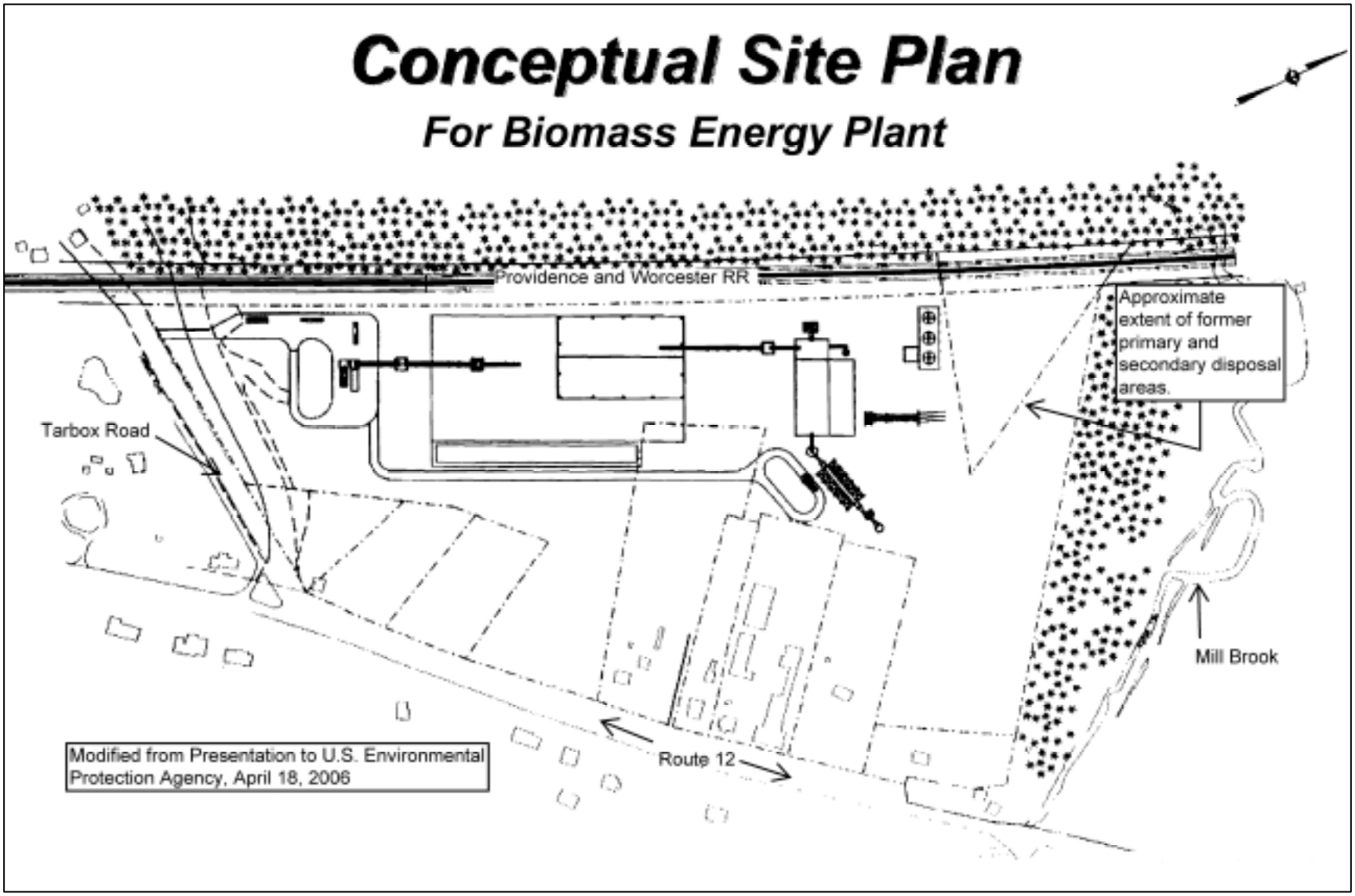
Very truly yours,

A. Haught

cc: Leslie McVicker

APPENDIX C - CONCEPTUAL SITE PLAN FOR BIOMASS ENERGY PLANT

(From presentation to U.S. Environmental Protection Agency by Plainfield Renewable Energy, LLC, April 18, 2006)


Conceptual Site Plan
For Biomass Energy Plant
Providence and Worcester RR
Approximate extent of former primary and secondary disposal areas.
Tarbox Road
Mill Brook
Route 12
Modified from Presentation to U.S. Environmental Protection Agency, April 18, 2006

APPENDIX D – SOIL SAMPLE RESULTS, 1994-2006

(Data from Kleinfelder, May 2006 Groundwater Monitoring Report)

TABLE 7
Soil Sample Results
May 2006 Event
Round 14
Gallup's Quarry Superfund Site
Plainfield, Connecticut

Sample Identification	Approximate Sampling Depth (ft bgs)	Sampling Date	Ethyl benzene	Tetrachloroethene	Trichloroethene	Chloroemethane	Total Xylenes	bis (2 ethyl hexyl) Phthalate
Cleanup Level (mg/kg)			**10.1**	**0.1**	**0.1**	**0.054**	**19.5**	**10 (FPDA) 1 (FSB)**
SB101	0-1	10/04/94						**1.5**
	0-2	11/15/01	NA	NA	NA	NA	NA	
	0-2	6/9/06	NA	NA	NA	NA	NA	0.18 J
SB107	2-6	10/10/94						**23**
	4-6	11/7/01		**1.2**				**22**
	4-6	6/9/06	NA	NA	NA	NA	NA	3.7
SB108	4-6	10/11/94			**0.77** J	0.039 J	0.71 J	
	4-6	11/7/01	.14 J	**0.12** J	**0.47**		0.81	
	4-6	11/7/01	.22	**0.24**	**1**		1.1	NA
	4-6	6/9/06		0.032	0.064		0.019	NA
SB109	4-6	10/11/94	8.5	**3.6**	**6.2**		**46**	
	1-4	10/11/94						**20**
	4-6	11/7/01	.62	**1.4**	**0.23**		4.3	**19**
	4-6	6/9/06	**41**	**28**	**7.6**		**230**	**15**
	4-6	6/9/06	**47**	**34**	**12**		**240**	**16**
SB110	1-3.5	10/12/94	5.4				**46**	**46**
	4-6	11/7/01	.33				1.9	
	4-6	6/9/06	1.8				13	2
SB114	1-3	11/2/95		**0.14**	0.013			NA
	4-6	11/7/01		**0.31**	0.027 J			NA
	4-6	6/9/06		0.001 J	0.001 J		0.004 J	NA
SB115	3-5	11/2/95	**16**	**28**	**1.7**		**80**	NA
	4-6	11/7/01	.004	0.024	0.002 J		0.016	NA
	4-6	6/9/06	0.13	**0.48**			0.54	NA
SB125	6-8	11/7/96	1.7	**0.85**	**1.2**		10	NA
	4-6	11/7/01		0.0009 J	0.002 J		0.0003 J	NA
	4-6	6/9/06	0.001 J	0.001 J	0.001 J		0.004 J	NA

All results are in mg/kg
No value indicates the compound was not detected in the sample.
NA: not analyzed
Concentrations in bold exceed the cleanup level
Gray shading: historical data

APPENDIX E - GROUNDWATER SAMPLE RESULTS FOR VOLATILE ORGANIC COMPOUNDS

(Data from Kleinfelder, November 2006 Groundwater Monitoring Report)

TABLE 4
Groundwater Sample Results for Volatile Organic Compounds
November 2006 Sampling Event
Round 15
Gallup's Quarry Superfund Site
Plainfield, Connecticut

Sample ID	Screen Depth (ft bgs)	Sampling Date	Vinyl chloride	Methylene chloride	1,1-Dichloroethene	1,2-Dichloroethene (total)	1,2-Dichloroethane	1,1,1-Trichloroethane	Trichloroethene	Benzene	Tetrachloroethene	Xylene (total)	Ethene*	VC Equivalent
Cleanup Level			2	5	6	70	1	200	5	1	5	530		
MW-101S	10-20	May-97										2		0
		Nov-01				0.5		0.1			1			1
		Feb-02				0.6			0.7		1			1
		May-02				0.5					0.7			1
		Aug-02				0.6					2			1
		Nov-02				0.6					2			1
		Mar-03				0.6					0.7			1
		May-03				0.7			0.7		1			1
		Aug-03				0.6			0.5		2			1
		Nov-03									0.7			0
		May-04									0.5			0
		Nov-04									0.9			0
		May-05				0.5			0.4		0.5			1
		Nov-05				0.3			0.3		0.5			1
		May-06			0.2	1			0.6		0.3			1
		Nov-06				0.3			0.3		0.3			0
MW-101TT	59-69	May-97				2								1
		Nov-01			0.3	2		2			8			5
		Feb-02				2		2			9			5
		May-02				2		2			10			5
		Aug-02				2		1			7			4
		Nov-02				2		2			8			4
		Mar-03				2		1			6			4
		May-03				2		1			5			3
		Aug-03				1		1			6			3
		Nov-03				2		2			6			4
		May-04				1		1			5			3
		Nov-04				1		1			6			3
		May-05			0.3	1		1	0.3		5			3
		Nov-05				1		1	0.2		5			3
		May-06			0.3	0.9			0.3		5			3
		Nov-06			0.3	0.9		0.9	0.2		4			2

TABLE 4
Groundwater Sample Results for Volatile Organic Compounds
November 2006 Sampling Event
Round 15
Gallup's Quarry Superfund Site
Plainfield, Connecticut

Sample ID	Screen Depth (ft bgs)	Sampling Date	Vinyl chloride	Methylene chloride	1,1-Dichloroethane	1,2-Dichloroethene (total)	1,2-Dichloroethane	1,1,1-Trichloroethane	Trichloroethene	Benzene	Tetrachloroethene	Xylenes (total)	Ether*	VC Equivalent
Cleanup Level			2	5	6	70	1	200	5	1	5	530		
MW-101T	72-77	May-97				3								3
		Nov-00			0.5	3		3			17			8
		Feb-02			0.6	2		3	0.7		19			10
		May-02				1		2	0.5		14			8
		Aug-02			0.6	2		2	0.6		19			9
		Nov-02				3		2	0.5		12			7
		Nov-02			0.5	2		2	0.5		16			8
		Mar-03			0.6	2		2	0.6		19			9
		May-03				2		2	0.5		9			5
		Aug-03				2		2	0.6		13			7
		Nov-03				3		2	0.6		19			9
		May-04				2		2			19			5
		Nov-04				2		2			9			5
		May-05			0.5	2		2	0.6		9			5
		Nov-05			0.4			1	0.4		7			3
		May-06			0.5	1.2		2			9			5
		Nov-06			0.5	1		2	0.6		9			4
MW-102S	3-13	May-97	8		4	100	7		33					81
		Nov-00	1		0.5	8		9	4		4			10
		Feb-02				6		12	5		7			9
		May-02	5.9		1	9.5		28	5		6.5			17
		Aug-02	6		2	21		78	22		39			41
		Nov-02			3	29		93	29		14			93
		Mar-03			2	17		78	20		31			35
		May-03			2	17		71	24		27			34
		Aug-03				7		27	9		13			14
		Nov-03				3		9	3		4			4
		May-04				2		17	5		9			7
		Nov-04				3		3	2		2			3
		May-05			0.6	6		29	10		35			16
		Nov-05						2			2			1
		May-06				2		4	1		3			3
		Nov-06						2			1			1
MW-102D	48-59	May-97	480		17	340	39	210		2		660		624
		Nov-00	530			3		48	0.9		19	17	49	447
		Feb-02	95			1		10			3	2	6	70
		May-02	56					5.3			2.1	2.9	3.2	64
		Aug-02	130		0.7	3		19	4		7	6	16	161
		Nov-02	130			3		20	3		12		23	169
		Mar-03	34			2		9			4		26	84
		Nov-03	31			2		9			4		31	102
		May-03	90		0.8	3		42	3		14		78	235
		Aug-03	45			2		31	2		10		27	131
		Nov-03	39			2		27			8	2	37	145
		May-04	96		1	6		38	3		23	37		159
		Nov-04	34			1		11			12		28	83
		May-05	39			4		19	2		12	76	37	129
		Nov-05	30			1		9			8	7	22	82
		May-06	85			2		34	0.9		9		47	219
		Nov-06	8			1		8			6	1.2	33	84
		Nov-06	8			1		8			6	1.2	33	84

TABLE 4
Groundwater Sample Results for Volatile Organic Compounds
November 2006 Sampling Event
Round 15
Gallup's Quarry Superfund Site
Plainfield, Connecticut

Sample ID	Screen Depth (ft bgs)	Sampling Date	Vinyl chloride	Methylene chloride	1,1-Dichloroethene	1,2-Dichloroethene (total)	1,2-Dichloroethane	1,1,1-Trichloroethane	Trichloroethene	Benzene	Tetrachloroethene	Xylenes (total)	Dibrm*	VC Equivalent
Cleanup Level			2	5	6	70	3	200	5	1	5	530		
MW-102B	70-80	May-97				1								1
		Nov-01			0.2			0.3			1			1
		Feb-02												0
		May-02												0
		Aug-02												0
		Nov-02									0.7			0
		Mar-03									0.6			0
		May-03									0.5			0
		Aug-03												0
		Nov-03												0
		May-04									0.5			0.2
		Nov-04												0
		May-05									0.4			0.16
		Nov-05									0.4			0
		May-06				0.6			0.3		0.3			1
		Nov-06												0
MW-103S	2-12	May-97							5					4
		Nov-01				0.3								0
		Feb-02							0.9					0
		May-02							0.53					0
		Aug-02												0
		Nov-02												0
		Mar-03												0
		May-03							0.9					0
		Aug-03							0.8					0
		Nov-03												0
		May-04												0
		Nov-04												0
		May-05				0.3			0.4					0
		Nov-05							0.3					
		May-06				0.3			0.5					0
		Nov-06				0.3			0.5					0
MW-103TT	43.5-53.5	May-97				7						2		4
		Nov-01			0.6	8		0.3			1			6
		Feb-02				4			0.6		0.8			3
		May-02				3.7					0.81			3
		Aug-02			0.6	3					1			3
		Nov-02			0.5	4					1			3
		Mar-03			0.6	4					1			3
		May-03				6					1			4
		Aug-03			0.7	6					2			3
		Nov-03			0.7	5					1			4
		May-04			0.5	4					2			4
		Nov-04			0.6	3					1			3
		May-05			0.6	3					2			3
		Nov-05			0.8	2			0.2		2			3
		May-06			0.7	2.2			0.4		1			2
		Nov-06			0.6	1			0.2		1			1

TABLE 4
Groundwater Sample Results for Volatile Organic Compounds
November 2006 Sampling Event
Round 15
Gallup's Quarry Superfund Site
Plainfield, Connecticut

Sample ID	Screen Depth (ft bgs)	Sampling Date	Vinyl chloride	Methylene chloride	1,1-Dichloroethene	1,2-Dichloroethene (total)	1,2-Dichloroethane	1,1,1-Trichloroethane	Trichloroethene	Benzene	Tetrachloroethene	Xylene (total)	Ethene*	VC Equivalent
Cleanup Level			2	5	6	70	1	200	5	1	5	530		
MW-105TT	23-33	May-97	**550**	**12**	**20**	**550**		350			**18**	**930**		929
		Nov-01	**120**			5		31	1		4	56	3.9	134
		Feb-02	**6**			1		5	0.8		1			7
		Feb-02	**6**			*1*		*6*	*0.7*		*1*			*7*
		May-02	**29**			2.9		5.2				3.6		31
		Aug-02	**82**			6		42			2	**610**	44	183
		Nov-02	**21**			2		7			1	18	4.8	33
		Mar-03	**22**			2		36			4	370	37	106
		May-03	**21**			5		87			4	**740**	120	290
		Aug-03	**53**			8		71	1		**20**	210	39	152
		Nov-03	**26**			4		18			2	94	21	75
		May-04	**170**			4		110	1		**11**	**1500**	3.2	184
		Nov-04	2			1		5			5	26	8.5	23
		May-05	**47**			3		40	2		**24**	150	26	117
		Nov-05	**10**			4		10			4	70	24	67
		May-06	**46**			4		29	2		**12**	140	36	133
		Nov-06	**3**			2		7			**2**	87	19	47
MW-105T	43-48	May-97	**130**		4	**140**		90	2			400		217
		May-97	**160**		5	**150**		97	3			420		255
		Nov-01	**83**		0.9	24		14	1		2	9	6.3	113
		Feb-02	**17**			21		5	1		1			31
		May-02	**21**			32		2.8						40
		Aug-02	**24**			50		16				190	14	85
		Aug-02	**21**			*49*		*15*	*1*			*180*	*12*	*77*
		Nov-02	**14**			25		3	0.8			2		29
		Mar-03	**3**			51		4				30	4.4	43
		May-03	**6**			38		36			2	200	43	124
		Aug-03	**12**			45		25	1		**11**	30	9.5	65
		Nov-03				30								18
		May-04	**16**			46		14			2	83	17	82
		Nov-04	2			28		2			2		3.3	27
		May-05	2			18		3			2	4	4.1	23
		Nov-05	**5**			23		11			2	210	30	86
		May-06	**20**			22		14	1		5	48	16	71
		May-06	**23**			*23*		*13*	*1*		*5*	*47*	*NA*	
		Nov-06	*1*			*18*		*2*				*55*	*3.4*	19

TABLE 4
Groundwater Sample Results for Volatile Organic Compounds
November 2006 Sampling Event
Round 19
Gallup's Quarry Superfund Site
Plainfield, Connecticut

Sample ID	Screen Depth (ft bgs)	Sampling Date	Vinyl chloride	Methylene chloride	1,1-Dichloroethene	1,2-Dichloroethene (total)	1,2-Dichloroethane	1,1,1-Trichloroethane	Trichloroethene	Benzene	Tetrachloroethene	Xylenes (total)	Ethene*	VC Equivalent
Cleanup Level			2	5	6	70	1	200	5	1	5	530		
MW-106S	10-20	May-87												0
		Nov-91												0
		Feb-92												0
		May-92												0
		Aug-92												0
		Nov-92												0
		Mar-93												0
		May-93												0
		Aug-93												0
		Nov-93												0
		Mar-94												0
		Nov-94												0
		May-95												0
		Nov-95												0
		Mar-96												0
		Nov-96												0
MW-106TT	31-30	May-87												0
		Nov-91						0.1						0
		Feb-92												0
		May-92												0
		Aug-92												0
		Nov-92												0
		Mar-93												0
		May-93												0
		Aug-93												0
		Nov-93												0
		May-94												0
		Nov-94												0
		May-95												0
		Nov-95												0
		May-96												0
		Apr-97												0
		Nov-96												0
MW-107S	9.5-19.5	May-87												0
		Nov-91						0.1			0.2			0
		Feb-92												0
		May-92												0
		Aug-92												0
		Nov-92												0
		Mar-93												0
		May-93												0
		Aug-93												0
		Nov-93												0
		May-94												0
		Nov-94												0
		May-95												0
		Apr-97												0
		Nov-95												0
		May-96												0
		Nov-96												0

TABLE 4
Groundwater Sample Results for Volatile Organic Compounds
November 2006 Sampling Event
Round 15
Gallup's Quarry Superfund Site
Plainfield, Connecticut

Sample ID	Screen Depth (ft bgs)	Sampling Date	Vinyl chloride	Methylene chloride	1,1-Dichloroethene	1,2-Dichloroethene (total)	1,2-Dichloroethane	1,1,1-Trichloroethane	Trichloroethene	Benzene	Tetrachloroethene	Xylene (total)	Ethene*	VC Equivalent
Cleanup Level			2	5	6	70	1	200	5	1	5	530		
MW-107TT	33-43	May-97	**330**		1	56						**550**		364
		Nov-01	**180**		1	15		24	5		9	97	110	438
		*Nov-01***	**200**		*0.9*	*14*		*23*	*5*		**9**	*100*		*213*
		Feb-02	**190**			9.3		31	2.9		3.8	98		199
		May-02	**150**			9.4		21	2.2		4.6	94	10	183
		May-02	**160**			*8.8*		*22*	*2.1*		*4.9*	*11*	*10*	*176*
		Aug-02	**81**			10		13	2		4	57	14	122
		Nov-02	**88**			9		11	3		7	66	13	126
		Nov-02	**98**			*9*		*12*	*3*		7	*67*	*13*	*132*
		Mar-03	**57**			11		10	3		5	41	20	93
		May-03	**89**			8		13	3		7	97	10	112
		May-03	**89**			*9*		*13*	*3*		7	*77*	*8*	*88*
		Aug-03	**21**		0.5	8		13	3		8	110	26	88
		Aug-03	**20**			*7*		*13*	*2*		**8**	*110*	*27*	*80*
		Nov-03	**41**			14		11	4		10	38	27	115
		Nov-03	**44**			*14*		*12*	*4*		**10**	*46*	*29*	*122*
		May-04	**30**		1	10		23	5	1	10	240		43
		May-04	**26**			*8*		*21*	*4*		**9**	*220*		*39*
		Nov-04	**47**			8		10	4		8	28	24	110
		Nov-04	**47**			*8*		*10*	*4*		**8**	*28*	*26*	*101*
		May-05	**13**			3		10	2		6	160	31	85
		May-05	**13**			*4*		*11*	*3*		7	*170*	*27*	*79*
		Nov-05	**25**			8		7	3		8	30	24	84
		Nov-05	**25**			*6*		*7*	*4*		**8**	*30*	*22*	*80*
		May-06	**7**			4		4	3		8	9	14	42
		Nov-06	**6**			4		4	3		8	18	11	39
MW-107T	33-43	May-97												0
		Nov-01						0.1			0.2			0
		Feb-02	0.7			0.8		0.8	1					2
		May-02						0.89	1.2		0.5			3
		Aug-02						0.5	0.9					0
		Nov-02							0.7					0
		Mar-03							0.7					0
		May-03							0.6					0
		May-03							*0.8*					*0*
		Aug-03							0.6					0
		Nov-03							0.5					0
		May-04												0
		Nov-04												0
		Nov-04												*0*
		May-05						0.4	0.9		0.2			0
		Nov-05						0.3	0.4			3		0
		May-06						0.2	0.4					0
		Nov-06						0.3	0.4					0

TABLE 4
Groundwater Sample Results for Volatile Organic Compounds
November 2006 Sampling Event
Round 15
Gallup's Quarry Superfund Site
Plainfield, Connecticut

Sample ID	Screen Depth (ft bgs)	Sampling Date	Vinyl chloride	Methylene chloride	1,1-Dichloroethane	1,2-Dichloroethene (total)	1,2-Dichloroethane	1,1,1-Trichloroethane	Trichloroethene	Benzene	Tetrachloroethene	Xylene (total)	Ethene*	VC Equivalent
Cleanup Level			2	5	6	70	3	200	5	1	5	530		
MW-107TF	33-43	May-97	**330**		**1**	**36**						**250**		**364**
		Nov-01	**180**		**1**	**15**		**24**	**5**		**9**	**97**	**110**	**438**
		*Nov-01***	**200**		*0.9*	*14*		*23*	*5*		**9**	*100*		*215*
		Feb-02	**190**			**9.3**		**38**	**2.9**		**3.8**	**98**		**199**
		May-02	**150**			**9.4**		**21**	**2.2**		**4.6**	**54**	**10**	**183**
		May-02	**160**			*9.8*		*22*	*2.1*		*4.6*	*53*	*10*	*190*
		Aug-02	**83**			**10**		**13**	**2**		**4**	**55**	**14**	**123**
		Nov-02	**88**			**9**		**11**	**3**		**7**	**44**	**13**	**126**
		Nov-02	**90**			*8*		*12*	*2*		*7*	*47*	*11*	*132*
		Mar-03	**37**			**11**		**10**	**3**		**5**	**41**	**20**	**93**
		May-03	**19**			**8**		**13**	**3**		**7**	**97**	**38**	**112**
		May-03	**19**			*8*		*13*	*3*		*7*	*77*	*32*	*80*
		Aug-03	**21**		*0.5*	**8**		**15**	**3**		**8**	**110**	**26**	**88**
		Aug-03	**20**			*7*		*15*	*3*		**8**	*110*	*27*	*86*
		Nov-03	**41**			**14**		**11**	**4**		**10**	**38**	**27**	**115**
		Nov-03	**44**			*14*		*12*	*4*		**10**	*40*	*28*	*122*
		May-04	**30**		**1**	**10**		**23**	**5**	**1**	**10**	**240**		**43**
		May-04	**26**			*8*		*21*	*4*		**9**	*220*		*36*
		Nov-04	**47**			**8**		**10**	**4**		**8**	**28**	**24**	**110**
		Nov-04	**47**			*8*		*10*	*4*		**8**	*28*	*20*	*101*
		May-05	**12**			**3**		**10**	**2**		**6**	**160**	**31**	**83**
		May-05	**12**			*4*		*12*	*3*		*7*	*170*	*27*	*78*
		Nov-05	**13**			**6**		**7**	**3**		**8**	**30**	**24**	*84*
		Nov-05	**13**			*6*		*7*	*4*		**8**	*30*	*22*	*80*
		May-06	**7**			**4**		**4**	**3**		**8**	**9**	**14**	*42*
		Nov-06	**6**			4		4	3		8	18	21	*59*
MW-107I	33-43	May-97												0
		Nov-01						0.1			0.2			0
		Feb-02	0.7			0.9		0.8	1					1
		May-02						0.89	1.2		0.5			1
		Aug-02						0.5	0.9					0
		Nov-02							0.7					0
		Mar-03							0.7					0
		May-03							0.8					0
		May-03							*0.8*					*0*
		Aug-03							0.6					0
		Nov-03							0.9					0
		May-04												0
		Nov-04												0
		Nov-04												*0*
		May-05						0.4	0.5		0.2			0
		Nov-05						0.3	0.4			3		0
		May-06						0.2	0.4					0
		Nov-06						0.3	0.4					0

TABLE 4
Groundwater Sample Results for Volatile Organic Compounds
November 2006 Sampling Event
Round 15
Gallup's Quarry Superfund Site
Plainfield, Connecticut

Sample ID	Screen Depth (ft bgs)	Sampling Date	Vinyl chloride	Methylene chloride	1,1-Dichloroethene	1,2-Dichloroethene (total)	1,2-Dichloroethane	1,1,1-Trichloroethane	Trichloroethene	Benzene	Tetrachloroethene	Xylenes (total)	Ethene*	VC Equivalent
Cleanup Level			2	5	6	70	3	200	5	1	5	500		
MW-120S	5-15	Nov-01												0
		Feb-02												0
		May-02												0
		Aug-02												0
		Nov-02												0
		Mar-03												0
		May-03												0
		Aug-03												0
		Nov-03												0
		May-04												0
		Nov-04												0
		May-05												0
		Nov-05												0
		May-06												0
		Nov-06												0
MW-120M	48-58	Nov-01												0
		Feb-02												0
		May-02												0
		Aug-02												0
		Nov-02												0
		Mar-03												0
		May-03												0
		Aug-03												0
		Nov-03												0
		May-04												0
		Nov-04												0
		May-05												0
		Nov-05												0
		May-06												0
		Nov-06												0
MW-120TT	61-71	Nov-01												0
		Feb-02												0
		Feb-02												0
		May-02												0
		Aug-02												0
		Nov-02												0
		Mar-03												0
		May-03												0
		Aug-03												0
		Nov-03												0
		May-04												0
		Nov-04												0
		May-05												0
		Nov-05												0
		May-06												0
		Nov-06												0

TABLE 4
Groundwater Sample Results for Volatile Organic Compounds
November 2006 Sampling Event
Round 15
Gallup's Quarry Superfund Site
Plainfield, Connecticut

Sample ID	Screen Depth (ft bgs)	Sampling Date	Vinyl chloride	Methylene chloride	1,1-Dichloroethene	1,2-Dichloroethene (total)	1,2-Dichloroethane	1,1,1-Trichloroethane	Trichloroethene	Benzene	Tetrachloroethene	Xylene (total)	Ethene*	VC Equivalent
Cleanup Level			2	5	6	70	1	200	5	1	5	530		
MW-121S	5-15	Nov-01												0
		Feb-02												0
		May-02												0
		Aug-02												0
		Nov-02												0
		Mar-03												0
		May-03												0
		Aug-03												0
		Nov-03												0
		May-04												0
		Nov-04												0
		May-05												0
		Nov-05												0
		May-06												0
		Nov-06												0
MW-121TT	60-70	Nov-01												0
		Feb-02												0
		May-02												0
		Aug-02												0
		Nov-02												0
		Mar-03												0
		May-03												0
		Aug-03												0
		Nov-03												0
		May-04												0
		Nov-04												0
		May-05												0
		Nov-05												0
		May-06												0
		Nov-06												0
		Nov-06												0

TABLE 4
Groundwater Sample Results for Volatile Organic Compounds
November 2006 Sampling Event
Round 15
Gallup's Quarry Superfund Site
Plainfield, Connecticut

Sample ID	Screen Depth (ft bgs)	Sampling Date	Vinyl chloride	Methylene chloride	1,1-Dichloroethene	1,2-Dichloroethene (total)	1,2-Dichloroethane	1,1,1-Trichloroethane	Trichloroethene	Benzene	Tetrachloroethene	Xylene (total)	Ethene*	VC Equivalent
Cleanup Level			2	5	6	70	1	200	5	1	5	530		
MW-122S	6-16	Nov-01												0
		Feb-02												0
		May-02												0
		Aug-02												0
		Nov-02												0
		Mar-03												0
		May-03												0
		Aug-03												0
		Nov-03												0
		May-04												0
		Nov-04												0
		May-05												0
		Nov-05												0
		May-06												0
		Nov-06												0
MW-122TT	53-63	Nov-01												0
		Feb-02												0
		May-02												0
		Aug-02												0
		Nov-02												0
		Mar-03												0
		May-03												0
		Aug-03												0
		Nov-03												0
		May-04												0
		Nov-04												0
		May-05												0
		Nov-05												0
		May-06												0
		Nov-06												0

TABLE 4
Groundwater Sample Results for Volatile Organic Compounds
November 2006 Sampling Event
Round 15
Gallup's Quarry Superfund Site
Plainfield, Connecticut

Sample ID	Screen Depth (ft bgs)	Sampling Date	Vinyl chloride	Methylene chloride	1,2-Dichloroethene	1,2-Dichloroethene (total)	1,2-Dichloroethane	1,1,1-Trichloroethane	Trichloroethene	Benzene	Tetrachloroethene	Xylene (total)	Ethene*	VC Equivalent
Cleanup Level			2	5	6	70	1	200	5	1	5	530		
MW-123S	18.5-28.5	Nov-01												0
		Feb-02												0
		May-02												0
		Aug-02												0
		Nov-02												0
		Mar-03												0
		May-03												0
		Aug-03												0
		Nov-03												0
		May-04												0
		Nov-04												0
		May-05												0
		Nov-05												0
		May-06												0
		Nov-06												0
MW-123TT	65-75	Nov-01												0
		Feb-02												0
		May-02												0
		Aug-02												0
		Aug-02												0
		Nov-02												0
		Mar-03												0
		May-03												0
		Aug-03												0
		Nov-03												0
		May-04												0
		Nov-04												0
		May-05												0
		Nov-05												0
		May-06												0
		Nov-06												0

Blank cells indicate compound not detected
"J" qualifier indicates that the concentration of an analyte was less than the sample-specific rporting limits.
"D" qualifier is used to indicate the positive result of an analyte from diluted sample analyses
Multiple entries for the same date indicate a duplicate sample was collected for QA purposes
'VC Equivalent = VC+0.6*11DCE+ 0.6*12DCE+0.5*TCE+0.4*PCE+2.2*ethene (rounded to the nearest integer)
* Ethene data are only available for MW-102S, -102TT, -105TT, -109T, -106TT, and -107TT, and was not analyzed for in May 1997. Therefore, the vinyl chloride equivalent is biased low for the May 1997 calculations for these wells.
** The duplicate sample was not analyzed for ethene.