FINAL

Wyoming County Fire Training Center

WYOMING COUNTY, NEW YORK

Site Management Plan

NYSDEC Site Number: V-00604-9

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1.0 INTRODUCTION AND DESCRIPTION OF REMEDIAL PROGRAM

1.1 Introduction

This document is required as an element of the remedial program at the Wyoming County Fire Training Center (hereinafter referred to as the "Site") under the New York State (NYS) Voluntary Cleanup Program (VCP) administered by New York State Department of Environmental Conservation (NYSDEC). The site was remediated in accordance with Voluntary Cleanup Agreement (VCA) #B9-0623-02-09, Site # V-00604-9, which was executed on October 24, 2002.

1.1.1 General

Wyoming County (County) entered into a VCA with the NYSDEC to remediate a approximately one-acre portion of property contained within the Wyoming County Fire Training Center property located at 3651Wethersfield Road in the Town of Wethersfield, Wyoming County, New York.. This VCA requires Wyoming County to investigate and remediate contaminated media at the site. A map showing the site location and boundaries of the subject Site is provided in Figure1. The boundaries of the site are more fully described in the metes and bounds site description that is part of the Deed Restrictions, and are attached as Appendix A to this plan.

After completion of the remedial work described in the Remedial Design/Remedial Action Work Plan (URS – June 2006), some contamination was left in the subsurface at this site, which is hereafter referred to as 'remaining contamination." This Site Management Plan (SMP) was prepared to manage remaining contamination at the site in perpetuity or until extinguishment of the Deed Restrictions in accordance with ECL Article 71, Title 36. Remedial action work on the site began in the summer of 2001, and was completed in June 2009. All reports associated with the site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State.

This SMP was prepared by URS Corporation, on behalf of Wyoming County, in accordance with the requirements in NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation, dated May 2010, and the guidelines provided by NYSDEC. This SMP addresses the

means for implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are required by the Deed Restrictions for the site.

1.1.2 Purpose

The site contains remaining contamination after completion of the remedial action. Engineering Controls have been incorporated into the site remedy to control exposure to remaining contamination during use of the site and to ensure protection of public health and the environment. Deed Restrictions granted to the NYSDEC, and recorded with the Wyoming County Clerk, that provides an enforceable legal instrument to ensure compliance with this SMP and all ECs and ICs placed on the site. The ICs place restrictions on site use, and mandate operation, maintenance, monitoring and reporting measures for all ECs and ICs. This SMP specifies the methods necessary to ensure compliance with all ECs and ICs required for contamination that remains at the site. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Deed Restrictions and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

This SMP provides a detailed description of all procedures required to manage remaining contamination at the site after completion of the Remedial Action, including: (1) implementation and management of all Engineering and Institutional Controls; (2) media monitoring; (3) operation and maintenance of all treatment, collection, containment, or recovery systems; (4) performance of periodic inspections, certification of results, and submittal of Periodic Review Reports.

To address these needs, this SMP includes three plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs, which includes a reporting plan for the submittal of data, information, recommendations, and certifications to NYSDEC; (2) a Monitoring Plan for implementation of Site Monitoring; and (3) an Operation and Maintenance Plan for maintenance of the Engineering Controls installed as part of the remedial activities.

This plan also includes a description of Periodic Review Reports for the periodic submittal of data, information, recommendations, and certifications to NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Deed Restrictions. Failure to properly implement the SMP is a violation of the Deed Restrictions which is grounds for revocation of the Release Letter;

- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6NYCRR Part 375 and the VCA (Index# B9-0623-02-09, Site # V-00604-9) for the site, and thereby subject to applicable penalties.

1.1.3 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. In accordance with the Deed Restrictions for the site, the NYSDEC will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

1.2 Site Background

1.2.1 Site Location and Description

The site is located in the Town of Wethersfield County of Wyoming, New York and is identified as Parcel 3, Lot 32, Range 2 on the Wyoming Tax Map. The site is an approximately one-acre area contained within the Wyoming County Fire Training Center, located on the north side of Wethersfield Road, approximately one-half mile east of the intersection with Poplar Hill Road (see Figure 1). The boundaries of the site are more fully described in Appendix A – Metes and Bounds.

1.2.2 Site History

The WCFTC site was operated by Wyoming County commencing in the 1970's. Flammable liquids consisting of solvents, petroleum products, paint thinners and degreasers were brought to the WCFTC site and stored in the AST and/or in drums of various sizes in the unlined drum storage area. Liquids from the AST were conveyed to two sub-grade concrete-lined fire pits (i.e. north and south pits) via an underground steel piping/valve system. Liquids from the drums were manually fed into the fire pits. The flammable liquids were ignited and subsequently extinguished during fire training exercises.

1.2.3 Geologic Conditions

1.2.3.1 Regional Geology

Natural surface soils present in this area are classified as glacial Kame deposits as indicated on the Surficial Geologic Map of New York. The Soil Survey of Wyoming County lists a series of silt loams as the predominant surface soils in the study area, although significant grading and filling operations have obviously altered site topography and almost certainly the general soil profile.

The bedrock formation present below these unconsolidated sediments consists of Upper Devonian shales and siltstones of the Machias Formation of the Canadaway Group (as indicated on the Geologic Map of New York 1970 Niagara Sheet by the New York State Museum of Science Service Map and Chart Series #15). This formation is typically gray in color, very thinly to thinly bedded, and becomes more competent with depth, ranging from moderately soft to moderately hard.

1.2.3.2 Site Geology

The overburden soil material encountered in the study area consists of a thin surficial topsoil and/or fill layer underlain by glacial drift and till deposits. Much of the operational portion of the site has been reworked and filled to present grade and appearance. Buried topsoil horizons suggestive of original grade were encountered at some boring locations. The fill layer varies in thickness from about 0.5 to 3.0 feet.

Subsurface soils, encountered below the shallow fill, consist chiefly of glacial drift possessing a predominant (Sand-Silt-Clay) texture with varying amounts of gravel. These deposits are weakly stratified in nature and extend to depths of 12.0-16.0 feet below ground surface (bgs) across the site. The primary shallow water-bearing unit appears to be thin silty-sand layers observed in the 10 -12 foot depths. The glacial drift overlays several layers of variable glacial till with predominant textures ranging from clay to coarse silt, that extends to bedrock. The glacial till is generally very dense and has low permeability and appears to effectively isolate shallow groundwater from the underlying deeper bedrock water-bearing unit.

Based on a deep boring (Rock Well #1) completed in November 2001, natural soils extend to a depth of 36.5 feet at which point thinly bedded weathered shale bedrock is encountered. The shale unit extends to a depth of at least 64.0 feet and possesses iron stained vertical fractures and similar staining along bedding planes, indicative of groundwater movement.

1.2.4 Hydrogeologic Conditions

Groundwater elevations within the shallow overburden are generally reflective of the topographic surface. Groundwater levels are seasonal, and vary from 1 – 2' to greater than 10' bgs during wet/dry periods of the year, respectively. Historic groundwater elevation data are summarized in Table 1. The apparent shallow groundwater flow direction across the site was consistent throughout the investigation, generally from west to east mimicking site surface topography (Figure 2). Groundwater flow gradients are moderate and typically between 0.06 and 0.07 feet per feet (ft/ft). The highest gradients were observed between MW-08 and MW-22, typically 0.17 ft/ft.

Whereas the contaminant distribution in the monitoring wells suggests a northwest-southeast flow direction, there were no observed components of flow toward the south or southeast (i.e. toward the Becker property). There were no obvious influences from pumping from nearby residential supply wells (Schell or Becker). Comparisons of groundwater gradients and corresponding topographic slopes show very similar values with only the slightly steeper gradient between MW-08 and MW-22 being measurably different from the topographic slope.

1.3 Summary of Remedial Investigation Findings

A series of Remedial Investigations (RI) were performed to characterize the nature and extent of contamination at the site. The results of these investigations are described in detail in the following reports:

1. "Subsurface Investigation Report – Wyoming County Fire Training Facility", Nature's Way Environmental Consultants & Contractors, Inc., January 25, 2002.

2. "Interim Remedial Measures and Supplemental Hydrogeologic Investigation Report of the Wyoming County Fire Training Area", URS Corporation, November 2004 (Revised January 2005).

Generally, the RIs identified four areas of concern (AOCs) where soils were contaminated with VOCs consisting primarily of toluene and tetrachloroethene (PCE), including its breakdown compounds. Additionally, the data showed that groundwater at the WCFTC site had also been impacted by VOCs.

Below is a summary of site conditions when the RIs were performed in 2001 and 2004:

1.3.1 Soil

The analytical data obtained from site soils were compared to applicable New York State standards, criteria, and guidance (SCG) values.

For investigation activities conducted prior to December 2006, NYSDEC Technical Administrative Guidance Memorandum (TAGM) 4046: *Determination of Soil Cleanup Objectives and Cleanup Levels*, January 1994/January 2000 was utilized.

For investigation and remediation activities conducted after December 2006, the Soil Cleanup Objectives (SCOs) listed in 6 NYCRR Subpart 375-6 were utilized.

During the 2001 investigations, four AOCs wherein the soils were contaminated with VOCs consisting primarily of toluene, PCE and PCE breakdown compounds were identified. These AOCs include the Area 1 - Former AST Area (AOC-1), Area 2 - South Fire Pit (AOC-2), Area 3 - North Fire Pit (AOC-3) and Area 4 - Former Drum Storage Area (AOC-4) (Figure 3). The analytical results are summarized in Table 2.

In Area 1, VOC contamination was highest in near surface soils and decreased with depth. Only toluene (30000 µg/kg) exceeded the SCGs.

In Area 2, the highest VOC concentrations were noted at depths of 8 – 12', with several toluene (2400 ug/kg), PCE (16000 µg/kg), ethylbenzene (7400 µg/kg) and xylene (33000 µg/kg) exceeding the SCGs.

In Area 3, detectable levels of VOCs and SVOCs were noted in the 8 – 12' zone, although only one SVOC compound exceeded the SCGs.

In Area 4, VOC contamination was noted in the near surface soils and extended to depths of 8 – 12'. PCE (37000 µg/kg) was noted at a concentration that exceeded the SCGs.

The remaining areas of the site (i.e. outside the four AOCs) were investigated during the 2004 Interim Remedial Measures and Supplemental Hydrogeologic Investigation Report . Analytical results for soil samples collected during this investigation (Table 2 and Figure 4) indicated barely detectable levels of three VOCs in three of the seventeen borings. In the MW-15 sample, 1,1,1-trichlorethane and 1,2-dichloroethene (*cis*) were detected with estimated concentrations of 5 and 6 µg/kg, respectively. In the SB-03 sample, 1,1,1-trichloroethane was estimated at 2 µg/kg and in SB-04 dichlorodifluoromethane was estimated at 9 µg/kg. These concentrations are just slightly above detection limits and well below the applicable SCGs. These data indicated that the extent of soil contamination was limited to those areas previously identified during the initial site investigations (NWEC&C, 2001).

1.3.2 On-Site and Off-Site Groundwater

1.3.2.1 Shallow/Overburden Groundwater

The analytical data obtained from site groundwater samples were compared to applicable New York State standards, criteria, and guidance (SCG) values. The NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1, "*Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations."* October 1993 were utilized.

As part of Nature's Way 2001 site investigation program, groundwater samples were collected from the ten temporary groundwater monitoring wells, the former Agro shallow dug well and the Deep Bedrock monitoring well. All samples were analyzed for VOCs and RCRA metals.

The locations of the wells are shown on Figure 5. The analytical results are shown on Table 3 and Figure 5.

As indicated, the concentrations of VOCs in MW-3, -4, -5, -8, -9 and –10 were below laboratory detection limits. In the remaining four wells, MW-1, -2, -6 and –7, various individual VOC concentrations exceeded the NYSDEC TOGS 1.1.1 standards. Additionally, total VOC concentrations in these four wells ranged from 117 to 11,113 µg/L. The highest concentrations were observed in MW-7 which is located approximately 150 feet directly east of the South Fire Pit. In general, the contaminants identified in MW-7 are similar to those detected in MW-1 and -2 and consist primarily of Tetrachloroethene, cis- 1,2 Dichloroethene, and 1,1,1 Trichloroethane with lesser amounts of trichloroethene, 1,1-dichloroethane and vinyl chloride. The same three primary compounds were identified in MW-6 at much lower concentrations, but still above the SCGs.

The former Agro Well (shallow dug well), which is located about 150 feet east – southeast of Area 1 – AST Area, contained four VOCs at concentrations exceeding the SCGs. The contaminants are similar to those detected in the other four monitoring wells and include tetrachloroethene, 1,1,1-trichloroethane, 1,1-dichloroethane and cis-1,2-dichloroethene. Total VOC concentrations were 516 µg/L.

The former Weber well (shallow dug well), which is located about 175 feet east southeast of Area 1 – AST Area, contained 7 VOCs at concentrations exceeding the SCGs. The contaminants are similar to those observed in the four monitoring wells and the Agro well, and include 1,1-dichloroethane, cis-1,2-dichloroethene, 1,1,1- trichloroethane, trichloroethene, benzene, tetrachloroethene, and xylene. Total VOC concentrations were 2536.4 µg/L.

Five of the ten groundwater monitoring wells (MW-1, -4, -5, -7 and –8) and the former Agro Well contained one or more RCRA list metals at concentrations exceeding the SCGs. The metals include arsenic, cadmium, chromium, lead and selenium.

A groundwater sample collected from a spring located across Wethersfield Road from the Weber property, on the Becker property, contained 4 VOCs at concentrations that slightly exceed the SCGs. The contaminants included 1,1-dichloroethane, cis-1,2-dichloroethene, 1,1,1-trichloroethane, and tetrachloroethene.

1.3.2.2 Deep Bedrock Aquifer

A groundwater sample collected from the bedrock monitoring well located near the northwest corner of the former Weber property showed no VOCs and no RCRA list metals at concentrations exceeding the SCGs, indicating that it has not been impacted by historical activities at the site.

1.3.3 Surface Water

Surface water contamination was limited to a single detected compound, tetrachloroethene, in the Rear Pond at a concentration (12 µg/L) that just slightly exceeds the SCGs (5 µg/L). This result indicates that migration of VOC contamination to site surface water is very minimal.

No VOCs were detected in surface water samples in any of the offsite ponds (i.e. Schell and Becker ponds).

1.3.4 Sediment

Analytical results of a sediment sample collected from the Rear Pond during the SHI (Table 4), indicated vinyl chloride at a concentration of 28 µg/kg, which exceeded the SCG criteria of 0.7 µg/kg.

1.3.5 On-Site and Off-Site Soil Vapor

There are no enclosed structures located in areas of known groundwater contamination. Consequently, no vapor intrusion studies were required to be conducted at the site.

1.3.6 Underground Structures

There are no underground structures remaining on the site.

1.4 Summary of Remedial Actions

The site was remediated in accordance with the following NYSDEC-approved Work Plans:

1. "Interim Remedial Measure Work Plan for Contaminated Soil Removal at the Wyoming County Fire Training Area", URS Corporation, August 2003.
2. "Remedial Design/Remedial Action Work Plan for the Wyoming County Fire Training Area", URS Corporation, June 2006.

The following is a summary of the Remedial Actions performed at the site:

1. 2001 - NWECC conducted remedial activities at the WCFTC site that consisted of drum removal, AST removal and contaminated soil excavation.

2. 2003 – URS implemented IRM activities following NYSDEC approval of the IRM Work Plan consisting of excavation of VOC-contaminated soils from the four AOCs, and placement of the contaminated soils in three onsite soil vapor extraction (SVE) cells.

3 2006 – URS implemented the NYSDEC-Approved Remedial Action (RA) for groundwater. The RA consisted of In-Situ Oxidation (ISO) in VOC source areas and installation of two Permeable Reactive Walls (PRWs - North and South).

4 2009 – North Permeable Reactive Wall Enhancement - See 1.4.5 below.

5 Execution and recording of Deed Restrictions to restrict land use and prevent future exposure to any contamination remaining at the site.

6 Restrictions limiting property usage to industrial or commercial use and prohibition of the use of groundwater for drinking or industrial purposes unless first obtaining permission from the relevant Agency. In the event of construction, an evaluation of sub-slab impacts will be required.

7 Development and implementation of a Site Management Plan for long term management of remaining contamination as required for the Site which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance and (4) reporting;

Remedial activities were completed at the site in June 2009.

1.4.1 Removal of Contaminated Materials from the Site

A discussion of the type and quantities of contaminated materials removed from the site is presented below:

1.4.1.1 Source Areas

As indicated, the primary source of VOC-contamination at the site was related to the four AOCs. The limits of soil excavation in these areas is shown on Figure 6 and summarized below.

Area 1 – AST Area

Approximately 343 cubic yards (cy) of VOC-impacted soil was removed to depths ranging from 7 to 10 feet in an irregular shaped area approximately 18 by 34 feet, and placed in the SVE cells. Confirmatory samples collected following completion of the excavation exhibited total VOC concentrations < 10 mg/kg.

Area 2 – South Fire Pit

Approximately 265 cy of VOC-impacted soil from inside/below the fire pit and on the north and east sides of the pit were removed and placed in the SVE cells. The irregular shaped area of approximately 25 by 36 feet, had an average depth of 11 feet. All confirmatory samples exhibited

total VOC concentrations < 10 mg/kg, except the sample collected from the bottom of the excavation at a depth of about 11 feet, which exhibited a total VOC concentration of 56.7 mg/kg.

Area 3 – North Fire Pit

Non VOC-impacted soil from inside the fire pit and the concrete containment walls/floor were removed and stockpiled for use as backfill in this excavation. Approximately 235 cy of VOC-impacted soils from below the fire pit and areas on the north and east sides of the pit were removed and placed in the SVE cells. The irregular shaped area of approximately 32 by 26 feet, had an average depth of 8 feet. Approximately 15 cy of petroleum-contaminated soils excavated on the east side of Area 3 were disposed offsite in a permitted facility. All the confirmatory samples collected from the bottom and sidewalls of the excavation exhibited total VOC concentrations < 10 mg/kg.

Area 4 – Drum Storage Area

Approximately 130 cy of VOC-impacted soil was removed from an irregular shaped area approximately 18 by 28 feet, with an average depth of 7.5 feet, and placed in the SVE cells. All confirmatory samples collected from the excavation exhibited total VOC concentrations <10mg/kg, with the exception of the sample obtained from the west wall (72 mg/kg.)

1.4.1.2 Soil Vapor Extraction (SVE) Cells

Three SVE cells were operated onsite from January 2004 to July 2007. Operations were discontinued when the samples indicated the remedial action objectives (RAOs) had been met. The cells were then decommissioned in accordance with the NYSDEC-approved Work Plan (URS, 2007). As a final step prior to decommissioning, excess chemical oxidizing reagents (i.e. hydrogen peroxide and Klozur persulfate) from the In-Situ Oxidation program were injected into each of the three SVE cells to further reduce VOC levels.

A total of about 1500 tons of VOC-contaminated soil had been placed in the three SVE cells. It was agreed with the NYSDEC that once the VOC concentrations in the soil were below the Part 375 SCOs for restricted commercial uses (Table 5), the soil could be disposed onsite in the 'Treated Soil Disposal Area' at the northeast corner of the site (Figure 7).

Of the 1,500 tons of VOC-contaminated soils placed in the SVE cells, analytical testing results indicated that after treatment, only 26 tons contained VOCs at concentrations that exceeded the Part 375 SCOs. These soils also were determined to be hazardous, and subsequently were disposed off-site in a permitted facility. The remaining 1,474 tons of treated soil were disposed onsite in the Treated Soil Disposal Area.

In addition to the soils in the SVE cells, the following materials were recovered during decommissioning and disposed offsite in a permitted facility:

- Approximately 5.5 tons of SVE piping, geomembrane and geotextile materials used in construction of the cells.
- Approximately 2,000 pounds of activated carbon used to remove the VOCs prior to discharge to the atmosphere.
- Total of 701 gallons of VOC-contaminated water that had collected in the gravel bedding layer in the South SVE Cell.

1.4.1.3 Miscellaneous Materials Disposal

Two onsite soil piles from earlier site activities (i.e. 2001 – 2003) contained VOC-impacted soils and a mixture of soil and large chunks of dried paint material, respectively. The VOC-impacted soils were placed in the onsite SVE cells for treatment. The 62 tons of soil/paint materials were analyzed and determined to be non-hazardous and subsequently disposed offsite in a permitted facility

In Area 3 - North Fire Pit, some of the excavated soils exhibited a strong weathered diesel fuel odor, more appropriate for offsite disposal than SVE cell treatment. A sample of the soil was collected and analyzed for VOCs, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP pesticides, and TCLP metals for disposal purposes. Based on the results, 68 tons of soil was classified as petroleum-contaminated soil and disposed offsite in a permitted facility.

1.4.2 Quality of Backfill Placed in Excavated Areas

Following receipt of confirmatory samples showing that the cleanup objective had been achieved in the four AOCs, over 900 tons of certified clean stone fill from Frey Sand and Gravel Division in Alexander, NY and/or County Line Stone Co., in Akron, NY was used to backfill the excavated areas. All the excavations were backfilled and compacted to grade.

1.4.3 On-Site and Off-Site Treatment Systems

No long-term treatment systems were installed as part of the site remedy.

1.4.4 Remaining Contamination

Generally, soils in the four AOCs were excavated vertically and laterally until total VOC concentrations were below the NYSDEC agreed cleanup goal of < 10 mg/kg, as confirmed by laboratory analysis, or the water table was intersected (approximately 8 feet bgs). The limits of excavation and confirmatory sample results are presented on Figure 6. VOC-impacted soils were placed in one of the three SVE cells constructed onsite. All the confirmatory samples exhibited total VOC concentrations < 10 mg/kg, with the exception of the samples collected directly below the Area 2 - South Fire Pit (56.67 mg/kg), in the south wall of Area 3 – North Fire Pit (11.63 mg/kg), and from the west wall (72 mg/kg) of Area 4 – Drum Storage Area (Figure 6). The sample collected from below the Area 2 – South Fire

Pit was from a depth of 11 feet, which is below the groundwater surface, which is typically about 6 – 7 feet below ground surface in this area. The excavations were backfilled to grade with clean fill.

Whereas the total VOC concentrations in all the confirmatory samples were < 10 mg/kg, with the above-noted exceptions, some of the individual VOCs detected in the confirmatory samples exceeded their corresponding TAGM 4046 cleanup objectives which were applicable at the time of the remediation. However, none of the concentrations exceed the currently applicable Part 375 SCOs for restricted commercial uses. These include the following:

- Tetrachloroethene: Area 2 – east wall, west wall and bottom below fire pit; Area 3 – north wall; Area 4 – west wall and bottom.
- 1,2-dichloroethene: Area 1 – bottom; Area 2 – bottom below fire pit.
- 1,1,1-trichloroethane: Area 2 – bottom below fire pit.
- Toluene: Area 2 – bottom below fire pit.
- Xylene: Area 2 – bottom below fire pit.

Additionally, treated soil from the SVE cells was disposed onsite in the 'Treated Soil Disposal Area (Figure 7). These soils may contain some residual VOCs, however, the concentrations are less than the SCOs for restricted commercial use of the site.

1.4.5 Engineering and Institutional Controls

Since remaining contamination is present at this site, Engineering Controls and Institutional Controls have been implemented to protect public health and the environment for the applicable future use. The Controlled Property has two permeable reactive walls (PRWs) installed at the locations shown on Figure 8. A description of these PRWs is provided below:

North Permeable Reactive Wall

In accordance with the RD/RA Work Plan, a 170-foot long permeable reactive wall (PRW) was installed in the southeast corner of the site. The PRW extends from about 25 feet southwest of MW-15 east to MW-14, parallel to Wethersfield Road. The trench is approximately 2-feet wide and 10 feet deep, and is backfilled from 10 feet to within about 1 foot of the ground surface with a mixture of zero valent iron (ZVI) and coarse sand. Approximately 100 cubic yards of the sand/zero valent iron mixture was emplaced (i.e. 9,872 pounds of zero valent iron). A typical cross-section is presented in Figure 9.

Initial construction occurred in September/Nov 2006. The presence of boulders in this area necessitated that the trenches be widened to 2-feet instead of the specified one-foot width. Considering the fixed quantity of ZVI and sand available, it was only possible to fill half as much of the trench as originally planned. As discussed and agreed with the NYSDEC, the ZVI/sand was emplaced in the 7 to 10-feet interval instead of the specified 4 to 10 foot interval. At the request of

the NYSDEC, the PRW was enhanced in May of 2009. The PRW trench was re-excavated to a depth of 7-feet to expose the top of the ZVI/sand mixture. Additional ZVI/sand was emplaced until the trench was filled to within about 2-feet of the ground surface (i.e. 2.0 – 10.0 feet). The remainder of the trench was backfilled with the excavated soil.

South Permeable Reactive Wall

Additionally, in accordance with the RD/RA Work Plan, a 69-foot long trench located approximately 50 feet east of MW-13 and oriented perpendicular to Wethersfield Road was excavated to approximately 10 feet bgs. Bedrock was encountered at a depth of about 4 feet at the northern end of the trench. The depth to bedrock gradually increased to the south, such that the full 10 foot depth could be excavated after the first 40 feet, or so. This trench also was widened to two feet due to the presence of large boulders. As agreed with the NYSDEC, a three foot thick layer of the sand/zero valent iron mixture was emplaced above the bedrock in the northern half of the trench. In the remaining portion, the sand/zero valent iron mixture was emplaced in the 7.0- to 10.0-foot interval and compacted with the excavator bucket. A total of 16 cubic yards of the sand/zero valent iron mixture was emplaced (i.e. 1,688 pounds of zero valent iron). The excavated soil was placed in lifts about one foot thick and compacted with the excavator. The backfill was mounded up above the trench, with the excess soil being spread and graded around the trench. A typical cross-section of the PRW is shown on Figure 10.

A series of Institutional Controls are required to implement, maintain and monitor these Engineering Controls (ECs). The Deed Restrictions require compliance with these Institutional Controls (ICs), to ensure that:

- All Engineering Controls must be operated and maintained as specified in this SMP;
- All Engineering Controls on the Site must be inspected and certified at a frequency and in a manner defined in this SMP;
- Groundwater, soil vapor, and other environmental or public health monitoring must be performed as defined in this SMP;
- Data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in this SMP;

- On-site environmental monitoring devices, including but not limited to, groundwater monitoring wells and soil vapor probes, must be protected and replaced as necessary to ensure continued functioning in the manner specified in this SMP.

In addition, the Deed Restrictions place the following restrictions on the property:

- Vegetable gardens and farming on the property are prohibited;
- Use of groundwater underlying the property is prohibited without treatment rendering it safe for the intended use or as otherwise approved by the relevant agency;
- All future activities on the property that would disturb remaining contaminated material must be conducted in accordance with the Excavation Plan included in this SMP;
- The potential for vapor intrusion must be evaluated for any future buildings developed on the site, and any potential impacts that are identified must be mitigated;
- The property may be used for, restricted commercial/ industrial use, provided that the long-term Engineering and Institutional Controls described in the SMP remain in use.

These EC/ICs are designed to:

- Prevent ingestion/direct contact with contaminated soil;
- Prevent inhalation of or exposure to contaminants volatilizing from contaminated soil;
- Prevent ingestion of groundwater with contaminant levels that exceed drinking water standards;
- Prevent contact with or inhalation of volatiles from contaminated groundwater;
- Restore groundwater to pre-disposal/pre-release conditions, to the extent practicable;
- Prevent the discharge of contaminants to surface water;
- Prevent contaminated groundwater from migrating off-site; and
- Prevent migration of contaminants that would result in off-site groundwater or surface water contamination.

2.0 ENGINEERING AND INSTITUTIONAL CONTROL PLAN

2.1 Introduction

2.1.1 General

Remedial activities completed at the site were conducted in accordance with the NYSDEC-approved RD/RAWP for the Wyoming County Fire Training Area, June 2006. The remedial goals included attainment of Soil Cleanup Objectives (SCOs) for on-site soils for restricted commercial/ industrial use. The SCOs were approved by NYSDEC and are listed in Table 5. A summary of the remedial strategies and EC/ICs implemented at the site are as follows:

Since remaining contaminated groundwater exists beneath the site, Engineering Controls and Institutional Controls (EC/ICs) are required to protect human health and the environment. This Engineering and Institutional Control Plan describes the procedures for the implementation and management of all EC/ICs at the site. The EC/IC Plan is one component of the SMP and is subject to revision by NYSDEC.

2.1.2 Purpose

The purpose of this Plan is to provide:

- A description of all EC/ICs on the site;
- The basic operation and intended role of each implemented EC/IC;
- A description of the key components of the ICs created as stated in the Deed Restriction;
- A description of the features that should be evaluated during each periodic inspection and compliance certification period;
- A description of plans and procedures to be followed for implementation of EC/ICs, such as the implementation of an Excavation Plan for the safe handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the site;
- Any other provisions necessary to identify or establish methods for implementing the EC/ICs required by the site remedy, as determined by the NYSDEC; and

- A description of the reporting requirements for these controls.

2.2 Engineering Controls

2.2.1 Engineering Control Systems

The Excavation Work Plan that appears in Section 2.4 outlines the procedures required to be implemented in the event that intrusive activities (i.e. excavation, utility repairs, drilling, etc.) are conducted in the site area.

2.2.1.1 Permeable Reactive Walls

Two permeable reactive walls (PRWs) were installed at the locations shown on Figure 8. A description of these PRWs is provided in Section 1.4, and typical cross-sections are shown on Figures 9 and 10.

Procedures for maintaining the PRWs are documented in the Operation and Maintenance Plan (Section 4 of this SMP). Procedures for monitoring the system are included in the Monitoring Plan (Section 3 of this SMP). The Monitoring Plan also addresses severe condition inspections in the event that a severe condition, which may affect controls at the site, occurs.

2.2.2 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, the remedial processes will be considered to be completed when effectiveness monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The specific determination of when the following remedial processes are complete will be made in compliance with Section 6.6 of NYSDEC DER-10.

2.2.2.1 Monitored Natural Attenuation

Groundwater monitoring activities to assess natural attenuation will continue, as determined by the NYSDEC, until residual groundwater concentrations are found to be consistently below NYSDEC standards or have become asymptotic at an acceptable level over an extended period. Monitoring will continue until permission to discontinue is granted in writing by the NYSDEC. If groundwater contaminant levels become asymptotic at a level that is not acceptable to the DEC, additional source removal, treatment, and or control measures will be evaluated.

2.3 Institutional Controls

A series of Institutional Controls is required by the Decision Document to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the site to commercial/industrial uses only. Adherence to these Institutional Controls on the site is required by the Deed Restrictions and will be implemented under this Site Management Plan.

These Institutional Controls are:

Compliance with the Deed Restrictions by the Grantor and the Grantor's successors and assigns with all elements of this SMPAll Engineering Controls must be maintained as specified in this SMP;

- All Engineering Controls on the Controlled Property must be inspected and certified at a frequency and in a manner defined in the SMP.

- Groundwater and other environmental or public health monitoring must be performed as defined in this SMP;

- Data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in this SMP;

- On-site environmental monitoring devices, including but not limited to, groundwater monitoring wells, must be protected and replaced as necessary to ensure the devices function in the manner specified in this SMP.

Institutional Controls identified in the Deed Restrictions may not be discontinued without an amendment to or extinguishment of the Deed Restrictions.

The site has a series of Institutional Controls in the form of site restrictions. Adherence to these Institutional Controls is required by the Deed Restrictions. Site restrictions that apply to the Controlled Property are:

- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended purpose;

- All future activities on the property that will disturb remaining contaminated material are prohibited unless they are conducted in accordance with this SMP;

- The potential for vapor intrusion must be evaluated for any buildings that will developed on the site and any potential impacts that are identified must be mitigated;
- The Controlled Property may only be used for restricted commercial/industrial use provided that the long-term Engineering and Institutional Controls included in this SMP are employed.

- The Controlled Property may not be used for a less restrictive use, such as unrestricted or restricted residential use without additional remediation and amendment of the Deed Restrictions by the Commissioner of NYSDEC.

- The site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property

at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable.

2.3.1 Soil Vapor Intrusion Evaluation

Prior to the construction of any enclosed structures located over areas that contain remaining contamination, a soil vapor intrusion (SVI) evaluation will be performed to determine whether any mitigation measures are necessary to eliminate potential exposure to volatile organic vapors in the proposed structure. Alternatively, an SVI mitigation system will be installed as an element of the building foundation without first conducting an investigation. This mitigation system will include a vapor barrier and passive sub-slab depressurization system that is capable of being converted to an active system.

Prior to conducting an SVI investigation or installing a mitigation system, a work plan will be developed and submitted to the NYSDEC and NYSDOH for approval. This work plan will be developed in accordance with the most recent NYSDOH "Guidance for Evaluating Vapor Intrusion in the State of New York". Measures to be employed to mitigate potential vapor intrusion will be evaluated, selected, designed, installed, and maintained based on the SVI evaluation, the NYSDOH guidance, and construction details of the proposed structure.

Preliminary (unvalidated) SVI sampling data will be forwarded to the NYSDEC and NYSDOH for initial review and interpretation. Upon validation, the final data will be transmitted to the agencies, along with a recommendation for follow-up action, such as mitigation.

SVI sampling results, evaluations, and follow-up actions will also be summarized in the next Periodic Review Report.

2.4 Excavation Work Plan

The site remedy allows for restricted commercial/industrial use. Any future intrusive work that will penetrate, encounter or disturb the remaining contamination will be performed in compliance with this Excavation Plan (EWP). Any work conducted pursuant to the EWP must also

be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) prepared for the site. A sample HASP is attached as Appendix B to this SMP that is in current compliance with DER-10, and 29 CFR 1910, 29 CFR 1926, and all other applicable Federal, State and local regulations. Based on future changes to State and federal health and safety requirements, and specific methods employed by future contractors, the HASP and CAMP will be updated and re-submitted with the notification provided in Section 2.4.1 below. Any intrusive construction work will be performed in compliance with the EWP, HASP and CAMP, and will be included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan (See Section 2.6).

The site owner and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all invasive work, the structural integrity of excavations, and for structures that may be affected by excavations (such as building foundations and bridge footings).

The site owner will ensure that site development activities will not interfere with, or otherwise impair or compromise the engineering controls described in this SMP.

2.4.1 Notification

At least 15 days prior to the start of any activity that is reasonably anticipated to encounter remaining contamination, the site owner or their representative will notify the Department. Currently, this notification will be made to:

Anthony Lopes – Project Manager
NYSDEC
Region 9
270 Michigan Avenue
Buffalo, New York 14302

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent, plans for site re-grading, intrusive elements or utilities to be installed below grade, or any work that may impact an engineering control,
- A summary of environmental conditions anticipated in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;

- A schedule for the work, detailing the start and completion of all intrusive work,

- A summary of the applicable components of this EWP,

- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120, as applicable,

▪ A copy of the contractor's health and safety plan, in electronic format,

- Identification of disposal facilities for potential waste streams,

- Identification of sources of any anticipated backfill, along with all required chemical testing results.

2.4.2 Soil Screening Methods

Visual, olfactory and instrument-based soil screening will be performed by a qualified environmental professional during all remedial and development excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal, material that requires testing, material that can be returned to the subsurface, and material that can be used as cover soil.

2.4.3 Stockpile Methods

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by NYSDEC.

2.4.4 Materials Excavation and Load Out

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the property and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the site.

Loaded vehicles leaving the site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

A truck wash will be operated on-site, as necessary. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the site until the activities performed under this section are complete. Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the site are clean of dirt and other materials derived from the site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials.

2.4.5 Materials Transport Off-Site

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

Truck transport routes will be identified that will: (a) limit transport through residential areas and past sensitive sites; (b) use city-mapped truck routes; (c) minimize off-site queuing of trucks entering the facility; (d) limit total distance to major highways; and (e) promote safety in access to highways.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project site.

Egress points for truck and equipment transport from the site will be kept clean of dirt and other materials during site remediation and development.

Queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-site queuing will be prohibited.

2.4.6 Materials Disposal Off-Site

All soil/fill/solid waste excavated and removed from areas of the site with remaining contamination will be treated as contaminated and regulated material unless tested and shown to be contaminant free, and will be transported and disposed in accordance with all local, State (including

6NYCRR Part 360) and Federal regulations. If disposal of soil/fill from this site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated off-site management of materials from this site will not occur without formal NYSDEC approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc. Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste pursuant to 6NYCRR Part 360-1.2. Material that does not meet 6 NYCRR Part 375 Track 1 unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility) without a beneficial use determination issued by NYSDEC.

2.4.7 Materials Reuse On-Site

Chemical criteria for on-site reuse of material have been approved by NYSDEC and are listed in Table 5. The qualified environmental professional will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-site

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the site will not be reused on-site.

2.4.8 Fluids Management

All liquids to be removed from the site, including excavation dewatering and groundwater monitoring well purge and development waters, will be handled, transported and disposed in

accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the site, but will be managed off-site.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a SPDES permit.

2.4.9 Backfill from Off-Site Sources

All materials proposed for import onto the site will be approved by the qualified environmental professional and will be in compliance with provisions in this SMP, applicable regulations (6NYCRR 375-6.7(d)) and guidance (DER-10) prior to receipt at the site.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the site.

All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria, the resulting soil quality standards for imported backfill are listed in Table 5. Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill objectives for this site, will not be imported onto the site without prior approval by NYSDEC. Solid waste will not be imported onto the site.

Trucks entering the site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

2.4.10 Stormwater Pollution Prevention

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.

All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters

Silt fencing or hay bales will be installed around the entire perimeter of the remedial construction area.

2.4.11 Contingency Plan

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for full a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs), unless the site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in daily and periodic electronic media reports.

2.4.12 Community Air Monitoring Plan

Community Air Monitoring will be consistent with the guidance provided in the NYSDOH's Generic Community Air Monitoring Plan (CAMP). Monitoring will be conducted for VOCs and particulates during intrusive activities. Action levels will be as specified in the CAMP.

Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

2.4.13 Odor Control Plan

This odor control plan is capable of controlling emissions of nuisance odors off-site. Specific odor control methods to be used on a routine basis will include the following, listed in order of application: reducing excavation size; covering soil piles and/or portions of the excavation with plastic sheeting; application of Biosolve over the excavation area and onto excavated soils; application of foam (e.g. Rusmar or similar) to soil piles and open portions of the excavation. If nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the property owner's Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (a) direct load-out of soils to trucks for off-site disposal; (b) use of chemical odorants in spray or misting systems; and, (c) use of staff to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity

to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

2.4.14 Dust Control Plan

A dust suppression plan that addresses dust management during invasive on-site work will include, at a minimum, the items listed below:

- Dust suppression will be achieved through the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon or hose of sufficient length to be capable of spraying water directly onto off-road areas including excavations and stockpiles.

- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, un-vegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.

- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

2.5 Inspections and Notifications

2.5.1 Inspections

Inspections of all remedial components installed at the site will be conducted at the frequency specified in SMP Monitoring Plan schedule. A comprehensive site-wide inspection will be conducted annually, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- Whether Engineering Controls continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Deed Restrictions;
- Achievement of remedial performance criteria;

- Sampling and analysis of appropriate media during monitoring events;
- If site records are complete and up to date; and
- Changes, or needed changes, to the remedial or monitoring system;

Inspections will be conducted in accordance with the procedures set forth in the Monitoring Plan of this SMP (Section 3), using the Site-Wide Inspection Form included in Appendix C. The reporting requirements are outlined in the Periodic Review Reporting Section of this Plan (Section 2.6).

If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs, an inspection of the site will be conducted within 5 days of the event to verify the effectiveness of the EC/ICs implemented at the site by a qualified environmental professional as determined by NYSDEC.

2.5.2 Notifications

Notifications will be submitted by the property owner to the NYSDEC as needed for the following reasons:

- 60-day advance notice of any proposed changes in site use that are required under the terms of the Voluntary Cleanup Agreement (VCA), 6NYCRR Part 375, and/or Environmental Conservation Law.

- 7-day advance notice of any proposed ground-intrusive activities pursuant to the Excavation Work Plan.

- Notice within 48-hours of any damage or defect that reduces or has the potential to reduce the effectiveness of Engineering Controls and likewise any action to be taken to mitigate the damage or defect.

- Verbal notice by noon of the following day of any emergency, such as a fire, flood, or earthquake that reduces or has the potential to reduce the effectiveness of Engineering Controls in place at the site, with written

confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.

- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action shall be submitted to the NYSDEC within 45 days and shall describe and document actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the site or the responsibility for implementing this SMP will include the following notifications:

- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser has been provided with a copy of the Voluntary Cleanup Agreement (VCA), and this SMP
- Within 15 days after the transfer of all or part of the site, the new owner's name, contact representative, and contact information will be confirmed in writing.

Notifications will be made to:
Mr. Anthony Lopes – Project Manager
NYSDEC
Region 9
270 Michigan Avenue
Buffalo, New York 14302
(716) 851-7220

In the event that NYSDEC develops a centralized notification system, that system will be used instead.

2.5.3 Inspection Forms, Sampling Data, and Maintenance Reports

All inspections and monitoring events will be recorded on the appropriate form for the respective system which is contained in Appendix ([G] [EC System Inspection Checklist]). Additionally, a general site-wide inspection form will be completed during the site-wide inspection (see Appendix G). These forms are subject to NYSDEC revision.

All applicable inspection forms and other records, including all media sampling data and system maintenance reports, generated for the site during the reporting period will be provided in electronic format in the Periodic Review Report.

2.5.4 Evaluation of Records and Reporting

The results of the inspection and site monitoring data will be evaluated as part of the EC/IC certification to confirm that the:

- EC/ICs are in place, are performing properly, and remain effective;
- The Monitoring Plan is being implemented;
- Maintenance activities are being conducted properly; and, based on the above items,
- The site remedy continues to be protective of public health and the environment and is performing as designed in the RD/RA Work Plan and FER.

2.6 Certification of Engineering and Institutional Controls

Inspection of the EC/ICs will occur at the frequency described in Section 3 (Monitoring Plan) and Section 4 (Operation and Maintenance Plan). After the last inspection of the reporting period, a qualified environmental professional will prepare the following certification:

For each institutional or engineering control identified for the site, I certify that all of the following statements are true:

- The inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;
- The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;
- Nothing has occurred that would impair the ability of the controls to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;
- Access is available to the site by NYSDEC and NYSDOH to evaluate continued maintenance of such controls; and
- Site use is compliant with the Deed Restriction.
- The engineering control systems are intact and undamaged;
- To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program [and generally accepted engineering practices]; and
- The information presented in this report is accurate and complete.
- I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as [Owner or Owner's Designated Site Representative] (and if the site consists of multiple properties): [I have been authorized and designated by all site owners to sign this certification] for the site.

  The signed certification will be included in the Periodic Review Report described below.

2.6.1 Periodic Review Report

A Periodic Review Report will be submitted every year, beginning eighteen months after the Certificate of Completion is issued. In the event that the site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the site described in Appendix B (Metes and Bounds). The report will be prepared in accordance with NYSDEC DER-10 and submitted within 45 days of the end of each certification period. Media sampling results will also incorporated into the Periodic Review Report. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the site;
- Results of the required annual site inspections and severe condition inspections, if applicable;
- All applicable inspection forms and other records generated for the site during the reporting period in electronic format;
- A summary of any discharge monitoring data and/or information generated during the reporting period with comments and conclusions;
- Data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends;
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted electronically in a NYSDEC-approved format;
- A site evaluation, which includes the following:
    - The compliance of the remedy with the requirements of the site-specific RAWP;

- Any new conclusions or observations regarding site contamination based on inspections or data generated by the Monitoring Plan for the media being monitored;
- Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan; and
- The overall performance and effectiveness of the remedy.

The Periodic Review Report will be submitted, in hard-copy format, to the NYSDEC Regional Office located at 270 Michigan Avenue, Buffalo, NY 14203, and in electronic format to NYSDEC Central Office located at 625 Broadway, Albany, NY 12233 and the NYSDOH Bureau of Environmental Exposure Investigation located at Flannigan Square, 547 River St., Troy, NY 12180.

2.7 Corrective Measures Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, a corrective measures plan will be submitted to the NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the corrective measures plan until it is approved by the NYSDEC.

3.0 MONITORING PLAN

3.1 Introduction

3.1.1 General

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the implemented ECs to reduce or mitigate contamination at the site. ECs at the site include two permeable reactive walls. This Monitoring Plan may only be revised with the approval of NYSDEC.

3.1.2 Purpose and Schedule

This Monitoring Plan describes the methods to be used for:

- Sampling and analysis of appropriate media (e.g., groundwater);
- Assessing compliance with NYSDEC groundwater standards, Part 375 SCOs, surface water standards, and sediment guidance values;
- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment; and
- Preparing the necessary reports for the various monitoring activities.

To adequately address these issues, this Monitoring Plan provides information on:

- Sampling locations, protocol, and frequency;
- Information on all designed monitoring systems (e.g., well logs);
- Analytical sampling program requirements;
- Reporting requirements;
- Quality Assurance/Quality Control (QA/QC) requirements;

- Inspection and maintenance requirements for monitoring wells;
- Monitoring well decommissioning procedures; and
- Annual inspection and periodic certification.

Annual monitoring of the performance of the remedy and overall reduction in contamination on-site and off-site will be conducted for the first two years following issuance of the Certificate of Completion by the Department of the Site. The frequency thereafter will be determined by NYSDEC. Trends in contaminant levels in groundwater in the affected areas will be evaluated to determine if the remedy continues to be effective in achieving remedial goals. Monitoring programs for environmental media are summarized in Table 6 and outlined in detail in Sections 3.2 through 3.5 below.

Table 6: Media Monitoring Schedule

Monitoring Program	Frequency*	Matrix	Analysis
Groundwater	Annual	Groundwater	VOCs Only (SW8260B)
	Semi-Annual	Potable Water Supply	VOCs Only (E502.2 or 505)
	Semi-Annual	Spring	VOCs Only (E502.2 or 505)

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH

3.2 Groundwater Monitoring Program

Groundwater monitoring will be performed on a periodic basis to assess the performance of the remedy.

3.2.1 Monitoring System

3.2.1.1 Existing Water Quality

Monitoring at the site is currently performed on a semi-annual basis and includes groundwater, surface water, and sediment. Additionally, the spring and potable water

supplies for the Schell and Becker residences are sampled quarterly. Only those monitoring wells that exhibit detectable levels of VOCs are currently sampled. Sampling of the remaining monitoring wells, which do not exhibit detectable levels of VOCs, has been discontinued. The analytical results for the 3rd Quarter of 2009 sampling event (i.e. July 2009) are summarized in Table 3 and on Figure 11. These results represent the current post-remediation contamination conditions at the site and will serve as a baseline for future monitoring. These results indicate the following:

- There are no detectable concentrations of VOCs in the potable groundwater supply well samples collected from the tap at either the Schell or Becker residences. This is consistent with the results from all previous sampling events.

- Several VOCs, consisting primarily of PCE, TCE, 1,2-DCE, 1,1,1-TCA, and 1,1-DCA, are present in groundwater at concentrations that exceed the SCGs in MW-02, MW-07, MW-12, MW-15, MW-19 and the spring.

- PCE was detected in the surface water of the Rear Pond at a concentration (6.4 μg/L) that slightly exceeds the SCG (5.0 μg/L)

- No VOCs have been detected in sediment from the Rear Pond at concentrations that exceed the SCGs since January 2007 (30 months).

- In general, the total VOC concentrations in the most impacted areas of the site (i.e. MW-07) as compared to pre-remediation conditions have shown a significant decrease. In other areas of the site, outside the immediate remediation limits, VOC concentrations have remained relatively unchanged. As indicated by the data, fluctuations in VOC concentrations have occurred, and are very cyclical. The concentrations typically rise during the summer months as groundwater levels drop and decrease during the winter months as groundwater levels rise. (Consistent with less dilution/lower hydraulic gradients in summer which would result in higher concentrations and higher dilution/steeper hydraulic gradients in the winter which would result in lower concentrations.)

- The total VOC concentrations in groundwater from the spring, although still quite low, have shown a slow, but generally steady increase since remediation was completed.

3.2.1.2 Monitoring Program

Monitoring wells MW-02, MW-07, MW-12, MW-14 and MW-15 will be used to monitor groundwater conditions at the site. Additionally, samples will be collected from both the Schell and Becker residential water supplies and from the off-site spring located on the south side of Wethersfield Road, approximately 60 feet east of MW-13. The samples will be analyzed for VOCs (Method SW8260B for groundwater samples and E502.2 or 505 for potable water). The monitoring well and sampling locations are shown on Figure 12. Copies of the boring logs and well construction logs are contained in Appendix D. Table 3 presents a summary of the historical analytical data for the monitoring wells.

3.2.2 Groundwater Monitoring Schedule

Sampling of the Schell and Becker potable water supply wells and spring will be conducted semi-annually for the first two years following issuance of the Release and Covenant Not to Sue letter by the Department for the Site. Sampling of the groundwater monitoring wells will be performed annually, and will be sampled in the spring (i.e. Apr/May) one year and the summer (July/Aug) the following year. The data will be evaluated at that time and the sampling frequency modified accordingly, with the approval of NYSDEC. The SMP will be modified to reflect changes in sampling plans approved by NYSDEC.

Deliverables for the groundwater monitoring program are specified below.

3.2.3 Sampling Event Protocol

All monitoring well sampling activities will be conducted in accordance with procedures in the Field Sampling Plan (FSP) in Appendix E, and will be recorded in a field

book and a groundwater-sampling log presented in the FSP. Other observations (e.g., well integrity, etc.) will be noted on the well sampling log. The well sampling log will serve as the inspection form for the groundwater monitoring well network.

3.3 Monitoring Well Repairs, Replacement and Decommissioning

If biofouling or silt accumulation occurs in the on-site and/or off-site monitoring wells, the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will be properly decommissioned and replaced (as per the Monitoring Plan), if an event renders the wells unusable.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance.

The NYSDEC will be notified prior to any repair or decommissioning of monitoring wells for the purpose of replacement, and the repair or decommissioning and replacement process will be documented in the subsequent periodic report. Well decommissioning without replacement will be done only with the prior approval of NYSDEC. Well abandonment will be performed in accordance with NYSDEC's "Groundwater Monitoring Well Decommissioning Procedures." Monitoring wells that are decommissioned because they have been rendered unusable will be reinstalled in the nearest available location, unless otherwise approved by the NYSDEC.

3.4 Other Monitoring

No surface water, sediment, biota, or other media monitoring will be performed.

3.5 Monitoring Quality Assurance/Quality Control

All sampling and analyses will be performed in accordance with the requirements of the Quality Assurance Project Plan (QAPP) prepared for the site (Appendix F). Main Components of the QAPP include:

- QA/QC Objectives for Data Measurement;

- Sampling Program:
    - Sample containers will be properly washed, decontaminated, and appropriate preservative will be added (if applicable) prior to their use by the analytical laboratory. Containers with preservative will be tagged as such.
    - Sample holding times will be in accordance with the NYSDEC ASP requirements.
    - Field QC samples (e.g., trip blanks, coded field duplicates, and matrix spike/matrix spike duplicates) will be collected as necessary.

- Sample Tracking and Custody;

- Calibration Procedures:
    - All field analytical equipment will be calibrated immediately prior to each day's use. Calibration procedures will conform to manufacturer's standard instructions.
    - The laboratory will follow all calibration procedures and schedules as specified in USEPA SW-846 and subsequent updates that apply to the instruments used for the analytical methods.

- Analytical Procedures;

- Preparation of a Data Usability Summary Report (DUSR), which will present the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain of custody procedures, and a summary assessment of precision, accuracy, representativeness, comparability, and completeness for each analytical method.

- Internal QC and Checks;
- QA Performance and System Audits;

- Preventative Maintenance Procedures and Schedules;

- Corrective Action Measures.

3.6 Engineering Control System Monitoring

Two permeable reactive walls (PRWs) were installed at the locations shown on Figure 8. A description of these PRWs is provided in Section 1.4, and typical cross-sections are shown on Figures 9 and 10.

3.6.1 Inspection Schedule

A baseline inspection will be conducted within 30 days after receipt of the Certificate of Completion. Subsequent inspection events will be conducted semi-annually.

Inspection frequency is subject to change with the approval of the NYSDEC. Unscheduled inspections and/or sampling may take place when a suspected failure of the PRWs has been reported or an emergency occurs (e.g., major erosion, flooding) that is deemed likely to affect the operation of the system. Monitoring deliverables for the PRWs are specified later in this Plan.

3.6.2 General Inspection of Permeable Reactive Walls

A visual inspection of the PRWs will be conducted during the monitoring events. The PRWs will be monitored for signs of seepage, subsidence and surface erosion.

A complete list of the components to be checked is provided in Appendix G. If there are indications of subsidence and/or erosion, maintenance and repair as per the Operation and Maintenance Plan will be performed immediately.

3.7 Monitoring Reporting Requirements

Forms and any other information generated during regular monitoring events and inspections will be kept on file with NYSDEC. All forms, and other relevant reporting formats used during the monitoring/inspection events, will be (1) subject to approval by NYSDEC and (2) submitted at the time of the Periodic Review Report, as specified in Section 2.6.

The PRW monitoring results will be reported to NYSDEC annually in the Periodic Review Report. The report will include, at a minimum:

- Date of event;
- Personnel conducting sampling;
- Description of the activities performed;
- Type of samples collected (e.g., groundwater, potable water, etc);
- Copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation, inspection checklists, etc.);
- Sampling results in comparison to appropriate standards/criteria;
- A figure illustrating sample type and sampling locations;
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (to be submitted electronically in the NYSDEC-identified format);
- Any observations, conclusions, or recommendations; and
- A determination as to whether groundwater conditions have changed since the last reporting event.

4.0 OPERATION AND MAINTENANCE PLAN

4.1 Introduction

The site remedy does not rely on any mechanical systems, such as sub-slab depressurization systems or air sparge/soil vapor extraction systems to protect public health and the environment. Therefore, the operation and maintenance of such components is not included in this SMP. The site remedy does rely on the integrity of the PRWs to protect public health and the environment. Maintenance of the PRWs is included in this SMP.

4.2 Engineering Control System Maintenance

4.2.1 Permeable Reactive Wall Maintenance

The maintenance requirements for the PRWs include repair of areas along the alignment of the PRW, or in the immediate vicinity of the PRW, that may be damaged as a result of weather conditions, erosion, subsidence of the underlying materials, seepage of groundwater, or other factors. Repair will consist of replacing material (soil or stone) over eroded or damaged areas with clean soil or #2 crushed stone as appropriate.

4.3 Maintenance Reporting Requirements

Maintenance reports and any other information generated during regular operations at the site will be kept on-file by Wyoming County. All reports, forms, and other relevant information generated will be available upon request to the NYSDEC and will be submitted as part of the Periodic Review Report, as specified in this SMP.

4.3.1 Routine Maintenance Reports

Checklists or forms (see Appendix G) will be completed during each routine maintenance event. Checklists/forms will include, but not be limited to the following information:

- Date;
- Name, company, and position of person(s) conducting maintenance activities;

- Maintenance activities conducted;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet); and,
- Other documentation such as copies of invoices for maintenance work, receipts for replacement equipment, etc., (attached to the checklist/form).

4.3.2 Non-Routine Maintenance Reports

During each non-routine maintenance event, a form (See Appendix G) will be completed which will include, but not be limited to, the following information:

- Date;
- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents (included either on the form or on an attached sheet); and,
- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form).

4.4 Contingency Plan

Emergencies may include injury to personnel, fire or explosion, environmental release, or serious weather conditions. The objectives during any emergency shall be to protect human health and safety and then the environment. A qualified environmental professional or Site Safety Officer will determine the best course of action for dealing with the emergency and possible follow-up requirements that may result from implementing these actions (e.g. erosion of soil cover due to severe weather conditions, injury to site inspection workers).

4.4.1 Emergency Telephone Numbers

In the event of any environmentally related situation or unplanned occurrence requiring assistance the Owner or Owner's representative(s) should contact the appropriate party from the

contact list below. For emergencies, appropriate emergency response personnel should be contacted. Prompt contact should also be made to qualified environmental professional. These emergency contact lists must be maintained in an easily accessible location at the site.

Table 7: Emergency Contact Numbers

Medical, Fire, and Police:	911
One Call Center:	(800) 272-4480 (3 day notice required for utility markout)
Poison Control Center:	(800) 222-1222
Pollution Toxic Chemical Oil Spills:	(800) 424-8802
NYSDEC Spills Hotline	(800) 457-7362

Table 8: Other Contact Numbers

Wyoming County Department of Buildings and Grounds – Dennis Halstead	(585) 786-8958
NYSDEC Project Manager – Anthony Lopes	(716) 851-7220
URS Project Manager – Robert Henschel	(716) 856-5636

* Note: Emergency contact numbers are subject to change and will be updated whenever a change in personnel occurs.

4.4.2 Map and Directions to Emergency Health Facility

Site Location: 3651 Wethersfield Road

Nearest Hospital Name: Wyoming County Community Hospital

Hospital Location: 400 N. Main Street, Warsaw, NY

Hospital Telephone: (585) 786-2233

Directions to the Hospital:

Start out going east on Wethersfield Road toward Hatfield Road for approximately 1.74 miles. Turn left onto Hermitage Rd. for approximately 3.92 miles. Turn right onto US-20A

for approximately 3.62 miles. Turn left onto NY-19/N. Main St. for approximately 1.07 miles and the Hospital will be on the right hand side.

Total Distance: 10.4 miles

Total Estimated Time: 15 minutes

Figure 13 presents a map showing the route from the site to the Hospital:

4.4.3 Response Procedures

As appropriate, the fire department and other emergency response group will be notified immediately by telephone of the emergency. The emergency telephone number list is found at the beginning of this Contingency Plan (Table 7). The list will also be posted prominently at the site and made readily available to all personnel at all times.

4.4.3.1 Contingency Procedures

If any of the aforementioned conditions for implementing the Contingency Plan are met, the appropriate following contingency procedure(s) shall be performed.

4.4.3.1.1 Contingency Procedures for Fire/Explosion

When fire or explosion appear imminent or have occurred, all normal activity in affected areas will cease. The Project Emergency Coordinator (PEC) will make an assessment of the potential risk and severity of the situation to decide whether the emergency event will or will not be readily controllable with existing portable fire extinguishers or site equipment and materials at hand. Fire fighting will not be done at the risk to site workers. Local fire departments will be contacted in all situations in which fires and/or explosions have occurred. The following steps will be taken for localized fire.

- contact local fire departments;
- move all personnel to an upwind location at an appropriately safe distance away;
- determine if fire is within on-site personnel capabilities to attempt initial fire fighting;
- determine if smoke and/or fumes from fire are potentially impacting offsite areas;

- if the fire is not impacting offsite areas and is within on-site personnel capabilities, utilize most appropriate means of extinguishing fire (e.g., fire extinguishers, water, covering with soil, etc.); and
- once fire is extinguished, containerize and properly dispose of any spilled material, runoff, or soil.

If the situation appears uncontrollable and poses a direct threat to human life, fire departments will be contacted and the Evacuation Plan will be implemented. If the chances of an impending explosion are high, the entire area within a 1,000-foot radius of the fire source will be evacuated. The PEC will alert personnel when all danger has passed, as determined by the chief fire fighter from the responding fire department. All equipment used in the emergency will be cleaned and refurbished as soon as possible after the emergency has passed so that it will be ready for use in the event of any future emergency.

4.4.3.1.2 Contingency Procedures for Spills or Material Releases

If a hazardous waste spill or material release or process upset resulting in probable vapor release is identified, the PEC will immediately assess the magnitude and potential seriousness of the spill or release based upon;

- MSDS for the material spilled or released;
- source of the release or spillage of hazardous material;
- an estimate of the quantity released and the rate at which it is being released;
- the direction in which the spill or air release is moving;
- personnel who may be or may have been in contact with the material, or air release, and possible injury or sickness as a result;
- potential for fire and/or explosion resulting from the situation; and
- estimates of area under influence of the release.

If the spill or release is determined to be within the on-site emergency response capabilities, the PEC will ensure implementation of the necessary remedial action. If the accident is beyond the capabilities of the operating crew, all personnel not involved with emergency response activity will

be evacuated from the immediate area and the appropriate emergency response group(s) will be contacted.

4.4.3.1.3 Contingency Procedures for Severe Weather

When severe weather occurs, such as a tornado is sighted in the area, when a blizzard warning has been issued, or when a lightning storm occurs, the information will be immediately relayed to the PEC. In the case of a tornado sighting, the PEC will then institute emergency shutdown procedures, and all personnel will be directed to proceed indoors after completing appropriate shutdown procedures. In the case of a blizzard warning, or lightning storm, the PEC will have operations stopped and direct all personnel to stand by for emergency procedures. Other types of weather or weather induced conditions (e.g., snow storms or flooding) for which long range prediction is available may also require positive action as identified herein.

When the severe weather has passed, the PEC will direct all contractors to inspect on-site equipment to ensure its readiness for operation prior to restarting operations.

If an inspection indicates a fire, explosion, or release has occurred as the result of a severe weather condition, the procedures for those events will be followed.

4.4.3.1.4 Contingency Procedures for Physical Injury to Workers

Regardless of the nature and degree of the injury, the PEC will be apprised of all injuries requiring first aid of any kind. A report of the injury or incident will be completed as required by the *Health and Safety Plan*.

Upon notification that a worker has been injured, the PEC will immediately determine the severity of the accident, and whether the victim can be safely moved from the incident site. Appropriate medical assistance will be summoned immediately.

Minor injuries sustained by workers will be treated on-site using materials from the first aid kits. Whenever possible, such treatment will be administered by trained personnel in a "clean zone".

Examples of minor injuries include small scrapes and blisters. Minor injuries would not be expected to trigger implementation of the contingency plan.

Major injuries sustained by workers will require professional medical attention at a hospital. The PEC will immediately summon an ambulance and contact the hospital to which the injured worker will be transported. The PEC will notify the site owner as soon as practical. The hospital and ambulance should be advised of:

- the nature of the injury;
- whether the injured worker will be decontaminated prior to transport;
- when and where the injury was sustained; and
- the present condition of the injured worker (e.g., conscious, breathing).

4.4.3.1.5 Contingency Procedures for Chemical Injury to Workers

Injuries involving hazardous chemicals or symptoms of severe chemical overexposure will automatically trigger implementation of the contingency plan. Upon notification that a chemical injury has been sustained or severe symptoms of chemical exposure are being experienced, the PEC will notify the hospital and ambulance of the occurrence. The PEC will provide, to the extent possible, the following information:

- the nature of the injury (e.g., eyes contaminated);
- the chemical(s) involved;
- the present condition of the injured worker (e.g., conscious, breathing);
- whether the injured worker will be decontaminated prior to transport; and
- when and where the injury was sustained.

Steps will immediately be taken to remove the victim from the incident site using whatever personal protective equipment (PPE) and safety equipment is necessary. Rescuers will check for vital signs and, if possible, remove contaminated outer clothing. If the victim's eyes have been contaminated, personnel trained in administering first aid will flush the victim's eyes with eyewash solution until the emergency response team arrives.

Details on the nature of the contaminant and methods for treating exposure or injury can be obtained from the MSDSs or Occupational Health Guidelines as provided in the *Health and Safety Plan*.

4.4.4 Emergency Evacuation Procedures

4.4.4.1 Site Evacuation Procedures

If an emergency occurs that requires the evacuation of an area to ensure personnel safety, including (but not limited to) fire, explosion, severe weather or hazardous waste/material spills, or a significant release of vapors into the atmosphere, an air horn will be sounded on the site by the nearest person aware of the event. The horn will sound continuously for approximately 15 seconds, signaling that immediate evacuation of all personnel from the area is necessary as a result of some existing or impending danger. In areas where only two or three people are working side by side, and the need to evacuate can be communicated verbally by the nearest person aware of the event, the air horn will not be necessary.

All heavy equipment in the area will be shutdown. Under no circumstances will incoming visitors (other than emergency response personnel) be allowed to enter any area where an emergency is occurring. Visitors or observers and all non-essential personnel present in the area of an emergency will be instructed to evacuate the area immediately.

Contractor and subcontractor emergency coordinators and/or health and safety officers (as designated) will be responsible for ensuring that emergency response requirements specific to their own operations are carried out. These parties will report their activities to the PEC. The PEC, however, has final authority regarding all emergency response activities.

All non-essential personnel shall evacuate the emergency areas and notify personnel in adjacent areas to evacuate also. The evacuated workers will assemble at the primary assembly area at the front entry gate, where the PEC will give directions for implementing necessary actions. In the event that the primary assembly area is involved, unapproachable, or unsafe due to the event, evacuated workers shall assemble at the alternate assembly area at the driveway to the former Weber house. The PEC will phone for backup assistance.

Personnel are to avoid encountering smoke/gas plumes as practicable during evacuation and assembling.

The PEC will take charge of all emergency response activities and dictate the procedures that will be followed until emergency personnel arrive. The PEC will assess the seriousness of the situation, and direct whatever efforts are necessary until the emergency response units arrive.

After initiating emergency response procedures, the PEC will assign appropriate personnel to check and attempt to ensure that access roads are not obstructed. If traffic control is necessary, as in the event of a fire or explosion, personnel who have been trained in these procedures and designated at the project safety meeting will take over these duties until emergency units arrive.

The PEC will remain at the site to provide any assistance requested by emergency-response squads as they arrive to deal with the situation. The PEC will have the authority to shut down any part or the entire project after an emergency until he deems it safe to continue operations. He will dictate any changes in project safety practices which are made necessary by the emergency that has occurred or are required for preventing further emergencies.

4.4.4.2 Off-Site Evacuation Procedures

If the PEC deems that humans outside of the site are at risk, he will notify the appropriate agencies and departments (e.g., Site Owner, Wyoming County Department of Health, New York State Police Department, New York State Department of Environmental Conservation and New York State Department of Health, etc.) of the need, or potential need, to institute off-site evacuation procedures. The PEC will provide, at a minimum, the following information:

- his or her name and telephone number;
- name and address of facility;
- time and type of incident (e.g., release, fire, etc.)
- name and quantity of materials or materials involved, to the extent this information is known;
- the extent of injuries, if any; and
- the possible hazards to human health or environment, and cleanup procedures.

TABLES

TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
AGRO-1	978645.9631	592479.2423	2024.22	NA	2024.22	A		0					
MNW							6/4/2004 0000		NM	-	0.00	-	
MNW							6/7/2004 0000		NM	-	0.00	-	
MNW							6/11/2004 0000		10.65	2013.57	0.00	2,013.57	
MNW							6/25/2004 0000		NM	-	0.00	-	
MNW							8/8/2004 0821		11.13	2013.09	0.00	2,013.09	
FRONT POND	978488.451	592264.591	2036.40	NA	2036.40			0					
							6/10/2008 0000		5.99	2030.41	0.00	2,030.41	
							7/10/2008 0000		6.17	2030.23	0.00	2,030.23	
							10/16/2008 0000		6.07	2030.33	0.00	2,030.33	
							2/12/2009 0000		6.07	2030.33	0.00	2,030.33	
							4/9/2009 0000		5.99	2030.41	0.00	2,030.41	
							7/9/2009 0000		6.23	2030.17	0.00	2,030.17	
							10/29/2009 0000		6.18	2030.22	0.00	2,030.22	
							1/21/2010 0000		NM	-	NM	-	Frozen
							5/27/2010 0000		NM	-	NM	-	
MW-02	978931.2427	592314.1629	2023.95	NA	2025.64	A		0					
MNW							6/4/2004 1621		2.75	2022.89	0.00	2,022.89	
MNW							6/7/2004 1150		3.96	2021.68	0.00	2,021.68	
MNW							6/14/2004 0830		4.43	2021.21	0.00	2,021.21	
MNW							6/14/2004 1558		4.51	2021.13	0.00	2,021.13	
MNW							6/25/2004 0839		4.66	2020.98	0.00	2,020.98	
MNW							8/8/2004 0853		4.28	2021.36	0.00	2,021.36	
MNW							2/9/2005 0000		2.66	2022.98	0.00	2,022.98	
MNW							1/11/2007 0000		3.31	2022.33	0.00	2,022.33	
MNW							4/5/2007 0000		3.32	2022.32	0.00	2,022.32	
MNW							7/11/2007 0000		4.96	2020.68	0.00	2,020.68	

NM - No Measurement

Type:
MNW Monitoring Well

The value noted in the column labeled Specific Gravity is an assumed value for free product, if found.

TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							10/11/2007 0000		5.82	2019.82	0.00	2,019.82	
MNW							1/8/2008 0000		3.12	2022.52	0.00	2,022.52	
MNW							4/16/2008 0000		3.44	2022.20	0.00	2,022.20	
MNW							7/10/2008 0000		4.35	2021.29	0.00	2,021.29	
MNW							10/16/2008 0000		4.63	2021.01	0.00	2,021.01	
MNW							2/12/2009 0000		2.84	2022.80	0.00	2,022.80	
MNW							4/9/2009 0000		2.84	2022.80	0.00	2,022.80	
MNW							7/9/2009 0000		3.98	2021.66	0.00	2,021.66	
MNW							10/29/2009 0000		3.84	2021.80	0.00	2,021.80	
MNW							1/21/2010 0000		NM	-	NM	-	
MNW							5/27/2010 0000		3.98	2021.66	0.00	2,021.66	
MNW							7/25/2011 0000		4.88	2020.76	0.00	2,020.76	
MW-03	978828.2168	592202.3606	2032.93	NA	2035.79	A		0					
MNW							11/6/2001 0000		14.84	2020.95	0.00	2,020.95	
MNW							6/4/2004 1618		11.96	2023.83	0.00	2,023.83	
MNW							6/7/2004 1145		12.63	2023.16	0.00	2,023.16	
MNW							6/11/2004 1500		12.78	2023.01	0.00	2,023.01	
MNW							6/14/2004 1556		13.03	2022.76	0.00	2,022.76	
MNW							6/25/2004 0837		13.38	2022.41	0.00	2,022.41	
MNW							8/8/2004 0855		12.97	2022.82	0.00	2,022.82	
MNW							2/9/2005 0000		NM	-	NM	-	Obstruction at 2.85'
MNW							1/11/2007 0000		NM	-	NM	-	Destroyed
MNW							4/5/2007 0000		NM	-	NM	-	DESTROYED
MNW							10/11/2007 0000		NM	-	NM	-	
MNW							1/8/2008 0000		12.25	2023.54	0.00	2,023.54	
MNW							4/16/2008 0000		12.14	2023.65	0.00	2,023.65	
MNW							7/10/2008 0000		13.44	2022.35	0.00	2,022.35	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							10/16/2008 0000		14.03	2021.76	0.00	2,021.76	
MNW							2/12/2009 0000		11.49	2024.30	0.00	2,024.30	
MNW							4/9/2009 0000		11.44	2024.35	0.00	2,024.35	
MNW							7/9/2009 0000		12.87	2022.92	0.00	2,022.92	
MNW							10/29/2009 0000		12.79	2023.00	0.00	2,023.00	
MNW							1/21/2010 0000		12.65	2023.14	0.00	2,023.14	
MNW							5/27/2010 0000		12.47	2023.32	0.00	2,023.32	
MNW							7/25/2011 0000		13.73	2022.06	0.00	2,022.06	
MW-04	978686.2916	592234.1593	2034.25	NA	2036.40	A		0					
MNW							11/6/2001 0000		9.93	2026.47	0.00	2,026.47	
MNW							6/4/2004 1615		4.23	2032.17	0.00	2,032.17	
MNW							6/7/2004 1144		5.22	2031.18	0.00	2,031.18	
MNW							6/14/2004 0800		5.98	2030.42	0.00	2,030.42	
MNW							6/14/2004 1554		5.97	2030.43	0.00	2,030.43	
MNW							6/25/2004 0835		6.78	2029.62	0.00	2,029.62	
MNW							8/8/2004 0851		6.08	2030.32	0.00	2,030.32	
MNW							2/9/2005 0000		4.11	2032.29	0.00	2,032.29	
MNW							1/11/2007 0000		3.49	2032.91	0.00	2,032.91	
MNW							4/5/2007 0000		4.18	2032.22	0.00	2,032.22	
MNW							7/11/2007 0000		7.98	2028.42	0.00	2,028.42	
MNW							10/11/2007 0000		10.32	2026.08	0.00	2,026.08	
MNW							1/8/2008 0000		4.16	2032.24	0.00	2,032.24	
MNW							4/16/2008 0000		3.75	2032.65	0.00	2,032.65	
MNW							6/10/2008 0000		6.82	2029.58	0.00	2,029.58	
MNW							7/10/2008 0000		5.81	2030.59	0.00	2,030.59	
MNW							10/16/2008 0000		7.55	2028.85	0.00	2,028.85	
MNW							2/12/2009 0000		3.49	2032.91	0.00	2,032.91	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							4/9/2009 0000		3.31	2033.09	0.00	2,033.09	
MNW							7/9/2009 0000		5.35	2031.05	0.00	2,031.05	
MNW							10/29/2009 0000		6.48	2029.92	0.00	2,029.92	
MNW							1/21/2010 0000		3.74	2032.66	0.00	2,032.66	
MNW							5/27/2010 0000		3.7	2032.70	0.00	2,032.70	
MNW							7/25/2011 0000		6.41	2029.99	0.00	2,029.99	
MW-05	979063.4391	592223.0659	2023.11	NA	2026.00	A		0					
MNW							11/6/2001 0000		5.53	2020.47	0.00	2,020.47	
MNW							6/4/2004 1626		4.87	2021.13	0.00	2,021.13	
MNW							6/7/2004 1148		5.16	2020.84	0.00	2,020.84	
MNW							6/11/2004 1430		5.31	2020.69	0.00	2,020.69	
MNW							6/14/2004 1600		5.27	2020.73	0.00	2,020.73	
MNW							6/25/2004 0841		5.42	2020.58	0.00	2,020.58	
MNW							8/8/2004 0853		5.15	2020.85	0.00	2,020.85	
MNW							2/9/2005 0000		4.53	2021.47	0.00	2,021.47	
MNW							1/11/2007 0000		4.71	2021.29	0.00	2,021.29	
MNW							4/5/2007 0000		4.96	2021.04	0.00	2,021.04	
MNW							7/11/2007 0000		5.74	2020.26	0.00	2,020.26	
MNW							10/11/2007 0000		6.29	2019.71	0.00	2,019.71	
MNW							1/8/2008 0000		5.08	2020.92	0.00	2,020.92	
MNW							4/16/2008 0000		4.63	2021.37	0.00	2,021.37	
MNW							7/10/2008 0000		5.13	2020.87	0.00	2,020.87	
MNW							10/16/2008 0000		5.09	2020.91	0.00	2,020.91	
MNW							2/12/2009 0000		4.14	2021.86	0.00	2,021.86	
MNW							4/9/2009 0000		4.16	2021.84	0.00	2,021.84	
MNW							7/9/2009 0000		4.78	2021.22	0.00	2,021.22	
MNW							10/29/2009 0000		4.73	2021.27	0.00	2,021.27	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							1/21/2010 0000		4.88	2021.12	0.00	2,021.12	
MNW							5/27/2010 0000		4.89	2021.11	0.00	2,021.11	
MNW							7/25/2011 0000		5.59	2020.41	0.00	2,020.41	
MW-06	978973.2045	592468.4489	2018.62	NA	2020.28	A		0					
MNW							11/7/2001 0000		5.14	2015.14	0.00	2,015.14	
MNW							6/4/2004 1453		4.35	2015.93	0.00	2,015.93	
MNW							6/7/2004 1102		5.08	2015.20	0.00	2,015.20	
MNW							6/14/2004 0930		6.03	2014.25	0.00	2,014.25	
MNW							6/14/2004 1511		6.11	2014.17	0.00	2,014.17	
MNW							6/25/2004 0729		6.54	2013.74	0.00	2,013.74	
MNW							8/8/2004 0818		5.66	2014.62	0.00	2,014.62	
MNW							2/9/2005 0000		2.35	2017.93	0.00	2,017.93	
MNW							1/11/2007 0000		3.45	2016.83	0.00	2,016.83	
MNW							4/5/2007 0000		4	2016.28	0.00	2,016.28	
MNW							7/11/2007 0000		6.78	2013.50	0.00	2,013.50	
MNW							10/11/2007 0000		7.73	2012.55	0.00	2,012.55	
MNW							1/8/2008 0000		2.14	2018.14	0.00	2,018.14	
MNW							4/16/2008 0000		1.71	2018.57	0.00	2,018.57	
MNW							7/10/2008 0000		5.15	2015.13	0.00	2,015.13	
MNW							10/16/2008 0000		2.28	2018.00	0.00	2,018.00	
MNW							2/12/2009 0000		1.87	2018.41	0.00	2,018.41	
MNW							4/9/2009 0000		1.79	2018.49	0.00	2,018.49	
MNW							7/9/2009 0000		4.06	2016.22	0.00	2,016.22	
MNW							10/29/2009 0000		2.85	2017.43	0.00	2,017.43	
MNW							1/21/2010 0000		4.3	2015.98	0.00	2,015.98	
MNW							5/27/2010 0000		3.82	2016.46	0.00	2,016.46	
MNW							7/25/2011 0000		7.13	2013.15	0.00	2,013.15	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MW-07	978803.3993	592454.4238	2024.24	NA	2026.14	A		0					
MNW							11/7/2001 0000		5.58	2020.56	0.00	2,020.56	
MNW							6/4/2004 1459		4.27	2021.87	0.00	2,021.87	
MNW							6/7/2004 1104		4.68	2021.46	0.00	2,021.46	
MNW							6/14/2004 1100		4.98	2021.16	0.00	2,021.16	
MNW							6/14/2004 1512		4.98	2021.16	0.00	2,021.16	
MNW							6/25/2004 0732		5.22	2020.92	0.00	2,020.92	
MNW							8/8/2004 0820		4.92	2021.22	0.00	2,021.22	
MNW							2/9/2005 0000		4.07	2022.07	0.00	2,022.07	
MNW							1/11/2007 0000		3.69	2022.45	0.00	2,022.45	
MNW							4/5/2007 0000		4.13	2022.01	0.00	2,022.01	
MNW							7/11/2007 0000		5.49	2020.65	0.00	2,020.65	
MNW							10/11/2007 0000		6.14	2020.00	0.00	2,020.00	
MNW							1/8/2008 0000		2.98	2023.16	0.00	2,023.16	
MNW							4/16/2008 0000		3.4	2022.74	0.00	2,022.74	
MNW							7/10/2008 0000		4.14	2022.00	0.00	2,022.00	
MNW							10/16/2008 0000		4.59	2021.55	0.00	2,021.55	
MNW							2/12/2009 0000		2.11	2024.03	0.00	2,024.03	
MNW							4/9/2009 0000		2.81	2023.33	0.00	2,023.33	
MNW							7/9/2009 0000		3.82	2022.32	0.00	2,022.32	
MNW							10/29/2009 0000		3.59	2022.55	0.00	2,022.55	
MNW							1/21/2010 0000		6.67	2019.47	0.00	2,019.47	
MNW							5/27/2010 0000		6.3	2019.84	0.00	2,019.84	
MNW							7/25/2011 0000		7.35	2018.79	0.00	2,018.79	
MW-08	978912.8311	592533.1998	2017.14	NA	2018.28	A		0					
MNW							11/7/2001 0000		5.7	2012.58	0.00	2,012.58	
MNW							6/4/2004 1455		4.37	2013.91	0.00	2,013.91	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							6/7/2004 1105		4.98	2013.30	0.00	2,013.30	
MNW							6/14/2004 1015		5.65	2012.63	0.00	2,012.63	
MNW							6/14/2004 1509		5.66	2012.62	0.00	2,012.62	
MNW							6/25/2004 0731		6.9	2011.38	0.00	2,011.38	
MNW							8/8/2004 0816		5.47	2012.81	0.00	2,012.81	
MNW							2/9/2005 0000		3.62	2014.66	0.00	2,014.66	
MNW							1/11/2007 0000		NM	-	NM	-	
MNW							4/5/2007 0000		4.01	2014.27	0.00	2,014.27	
MNW							7/11/2007 0000		6.76	2011.52	0.00	2,011.52	
MNW							10/11/2007 0000		8.59	2009.69	0.00	2,009.69	
MNW							1/8/2008 0000		2.18	2016.10	0.00	2,016.10	
MNW							4/16/2008 0000		3.69	2014.59	0.00	2,014.59	
MNW							7/10/2008 0000		5.34	2012.94	0.00	2,012.94	
MNW							10/16/2008 0000		5.53	2012.75	0.00	2,012.75	
MNW							2/12/2009 0000		NM	-	NM	-	Snow Covered
MNW							4/9/2009 0000		3.54	2014.74	0.00	2,014.74	
MNW							7/9/2009 0000		4.83	2013.45	0.00	2,013.45	
MNW							10/29/2009 0000		4.17	2014.11	0.00	2,014.11	
MNW							1/21/2010 0000		5.01	2013.27	0.00	2,013.27	
MNW							5/27/2010 0000		4.95	2013.33	0.00	2,013.33	
MNW							7/25/2011 0000		7.3	2010.98	0.00	2,010.98	
MW-10	978535.9216	592744.4241	2006.26	NA	2007.95	A		0					
MNW							6/4/2004 1547		2.82	2005.13	0.00	2,005.13	
MNW							6/7/2004 1154		3.8	2004.15	0.00	2,004.15	
MNW							6/14/2004 1145		5.19	2002.76	0.00	2,002.76	
MNW							6/14/2004 1521		6.65	2001.30	0.00	2,001.30	
MNW							6/25/2004 0807		6.24	2001.71	0.00	2,001.71	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							8/8/2004 0832		4.51	2003.44	0.00	2,003.44	
MNW							2/9/2005 0000		1.72	2006.23	0.00	2,006.23	
MNW							1/11/2007 0000		1.67	2006.28	0.00	2,006.28	
MNW							4/5/2007 0000		2.22	2005.73	0.00	2,005.73	
MNW							7/11/2007 0000		8.09	1999.86	0.00	1,999.86	
MNW							10/11/2007 0000		10.94	1997.01	0.00	1,997.01	
MNW							1/8/2008 0000		2.61	2005.34	0.00	2,005.34	
MNW							4/16/2008 0000		2.39	2005.56	0.00	2,005.56	
MNW							6/10/2008 0000		7.11	2000.84	0.00	2,000.84	
MNW							7/10/2008 0000		5.51	2002.44	0.00	2,002.44	
MNW							9/11/2008 0000		7.43	2000.52	0.00	2,000.52	
MNW							10/16/2008 0000		7.38	2000.57	0.00	2,000.57	
MNW							11/25/2008 0000		2.83	2005.12	0.00	2,005.12	
MNW							2/12/2009 0000		1.88	2006.07	0.00	2,006.07	
MNW							4/9/2009 0000		1.87	2006.08	0.00	2,006.08	
MNW							7/9/2009 0000		4.78	2003.17	0.00	2,003.17	
MNW							10/29/2009 0000		3.09	2004.86	0.00	2,004.86	
MNW							1/21/2010 0000		2.45	2005.50	0.00	2,005.50	
MNW							5/27/2010 0000		4.86	2003.09	0.00	2,003.09	
MNW							7/25/2011 0000		8.02	1999.93	0.00	1,999.93	
MW-11	978340.5964	592466.9970	2024.01	2027.08	2026.92	A		0					
MNW							6/4/2004 1559		3.51	2023.41	0.00	2,023.41	
MNW							6/7/2004 1132		4.09	2022.83	0.00	2,022.83	
MNW							6/10/2004 1000		4.65	2022.27	0.00	2,022.27	
MNW							6/14/2004 1529		5.12	2021.80	0.00	2,021.80	
MNW							6/25/2004 0820		5.68	2021.24	0.00	2,021.24	
MNW							8/8/2004 0840		4.64	2022.28	0.00	2,022.28	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							2/9/2005 0000		3.07	2023.85	0.00	2,023.85	
MNW							1/11/2007 0000		3.17	2023.75	0.00	2,023.75	
MNW							4/5/2007 0000		3.32	2023.60	0.00	2,023.60	
MNW							7/11/2007 0000		6.26	2020.66	0.00	2,020.66	
MNW							10/11/2007 0000		9.29	2017.63	0.00	2,017.63	
MNW							1/8/2008 0000		3.62	2023.30	0.00	2,023.30	
MNW							4/16/2008 0000		3.83	2023.09	0.00	2,023.09	
MNW							6/10/2008 0000		5.95	2020.97	0.00	2,020.97	
MNW							7/10/2008 0000		4.69	2022.23	0.00	2,022.23	
MNW							9/11/2008 0000		6.29	2020.63	0.00	2,020.63	
MNW							10/16/2008 0000		4.3	2022.62	0.00	2,022.62	
MNW							11/25/2008 0000		3.67	2023.25	0.00	2,023.25	
MNW							2/12/2009 0000		2.93	2023.99	0.00	2,023.99	
MNW							4/9/2009 0000		3.29	2023.63	0.00	2,023.63	
MNW							7/9/2009 0000		4.38	2022.54	0.00	2,022.54	
MNW							10/29/2009 0000		3.42	2023.50	0.00	2,023.50	
MNW							1/21/2010 0000		3.8	2023.12	0.00	2,023.12	
MNW							5/27/2010 0000		4.66	2022.26	0.00	2,022.26	
MNW							7/25/2011 0000		6.75	2020.17	0.00	2,020.17	
MW-12	978338.5912	592597.3441	2015.67	2018.84	2018.68	A		0					
MNW							6/4/2004 1602		6.86	2011.82	0.00	2,011.82	
MNW							6/7/2004 1134		8.01	2010.67	0.00	2,010.67	
MNW							6/10/2004 0900		8.27	2010.41	0.00	2,010.41	
MNW							6/14/2004 1543		8.84	2009.84	0.00	2,009.84	
MNW							6/25/2004 0816		9.31	2009.37	0.00	2,009.37	
MNW							8/8/2004 0842		8.97	2009.71	0.00	2,009.71	
MNW							2/9/2005 0000		6.75	2011.93	0.00	2,011.93	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							1/11/2007 0000		7.51	2011.17	0.00	2,011.17	
MNW							4/5/2007 0000		7.09	2011.59	0.00	2,011.59	
MNW							7/11/2007 0000		9.94	2008.74	0.00	2,008.74	
MNW							10/11/2007 0000		11.58	2007.10	0.00	2,007.10	
MNW							1/8/2008 0000		6.9	2011.78	0.00	2,011.78	
MNW							4/16/2008 0000		7.28	2011.40	0.00	2,011.40	
MNW							6/10/2008 0000		9.57	2009.11	0.00	2,009.11	
MNW							7/10/2008 0000		9.25	2009.43	0.00	2,009.43	
MNW							9/11/2008 0000		9.96	2008.72	0.00	2,008.72	
MNW							10/16/2008 0000		9.54	2009.14	0.00	2,009.14	
MNW							11/25/2008 0000		8.45	2010.23	0.00	2,010.23	
MNW							2/12/2009 0000		6.28	2012.40	0.00	2,012.40	
MNW							4/9/2009 0000		6.8	2011.88	0.00	2,011.88	
MNW							7/9/2009 0000		8.96	2009.72	0.00	2,009.72	
MNW							10/29/2009 0000		8.58	2010.10	0.00	2,010.10	
MNW							1/21/2010 0000		8.52	2010.16	0.00	2,010.16	
MNW							5/27/2010 0000		8.61	2010.07	0.00	2,010.07	
MNW							7/25/2011 0000		10.24	2008.44	0.00	2,008.44	
MW-13	978334.5807	592741.7286	2007.13	2010.23	2010.06	A		0					
MNW							6/4/2004 1604		6.57	2003.49	0.00	2,003.49	
MNW							6/7/2004 1136		6.76	2003.30	0.00	2,003.30	
MNW							6/9/2004 0800		6.75	2003.31	0.00	2,003.31	
MNW							6/14/2004 1545		7.1	2002.96	0.00	2,002.96	
MNW							6/25/2004 0812		7.32	2002.74	0.00	2,002.74	
MNW							8/8/2004 0846		6.98	2003.08	0.00	2,003.08	
MNW							2/9/2005 0000		4.92	2005.14	0.00	2,005.14	
MNW							1/11/2007 0000		4.38	2005.68	0.00	2,005.68	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							4/5/2007 0000		5.34	2004.72	0.00	2,004.72	
MNW							7/11/2007 0000		7.68	2002.38	0.00	2,002.38	
MNW							10/11/2007 0000		8.61	2001.45	0.00	2,001.45	
MNW							1/8/2008 0000		3.39	2006.67	0.00	2,006.67	
MNW							4/16/2008 0000		6.25	2003.81	0.00	2,003.81	
MNW							6/10/2008 0000		7.99	2002.07	0.00	2,002.07	
MNW							7/10/2008 0000		7.61	2002.45	0.00	2,002.45	
MNW							9/11/2008 0000		7.81	2002.25	0.00	2,002.25	
MNW							10/16/2008 0000		4.03	2006.03	0.00	2,006.03	
MNW							11/25/2008 0000		6.55	2003.51	0.00	2,003.51	
MNW							2/12/2009 0000		3.32	2006.74	0.00	2,006.74	
MNW							4/9/2009 0000		3.63	2006.43	0.00	2,006.43	
MNW							7/9/2009 0000		7.25	2002.81	0.00	2,002.81	
MNW							10/29/2009 0000		8.98	2001.08	0.00	2,001.08	
MNW							1/21/2010 0000		6.22	2003.84	0.00	2,003.84	
MNW							5/27/2010 0000		7.63	2002.43	0.00	2,002.43	
MNW							7/25/2011 0000		8.46	2001.60	0.00	2,001.60	
MW-14	978464.9225	592765.7927	2005.22	2008.34	2008.16	A		0					
MNW							6/4/2004 1550		4.81	2003.35	0.00	2,003.35	
MNW							6/7/2004 1117		5.44	2002.72	0.00	2,002.72	
MNW							6/10/2004 0950		5.85	2002.31	0.00	2,002.31	
MNW							6/14/2004 1523		6.8	2001.36	0.00	2,001.36	
MNW							6/25/2004 0804		8.23	1999.93	0.00	1,999.93	
MNW							8/8/2004 0834		6.22	2001.94	0.00	2,001.94	
MNW							2/9/2005 0000		3.35	2004.81	0.00	2,004.81	
MNW							1/11/2007 0000		3.44	2004.72	0.00	2,004.72	
MNW							4/5/2007 0000		4.11	2004.05	0.00	2,004.05	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							7/11/2007 0000		6.96	2001.20	0.00	2,001.20	
MNW							10/11/2007 0000		9.83	1998.33	0.00	1,998.33	
MNW							1/8/2008 0000		3.81	2004.35	0.00	2,004.35	
MNW							4/16/2008 0000		4.72	2003.44	0.00	2,003.44	
MNW							6/10/2008 0000		6.71	2001.45	0.00	2,001.45	
MNW							7/10/2008 0000		6.3	2001.86	0.00	2,001.86	
MNW							9/11/2008 0000		6.72	2001.44	0.00	2,001.44	
MNW							10/16/2008 0000		7.16	2001.00	0.00	2,001.00	
MNW							11/25/2008 0000		5.24	2002.92	0.00	2,002.92	
MNW							2/12/2009 0000		3.21	2004.95	0.00	2,004.95	
MNW							4/9/2009 0000		3.59	2004.57	0.00	2,004.57	
MNW							7/9/2009 0000		5.68	2002.48	0.00	2,002.48	
MNW							10/29/2009 0000		4.27	2003.89	0.00	2,003.89	
MNW							1/21/2010 0000		4.12	2004.04	0.00	2,004.04	
MNW							5/27/2010 0000		5.36	2002.80	0.00	2,002.80	
MNW							7/25/2011 0000		7.4	2000.76	0.00	2,000.76	
MW-15	978457.9041	592600.3521	2016.62	2019.75	2019.59	A		0					
MNW							6/4/2004 1553		7.85	2011.74	0.00	2,011.74	
MNW							6/7/2004 1119		8.32	2011.27	0.00	2,011.27	
MNW							6/10/2004 1215		8.54	2011.05	0.00	2,011.05	
MNW							6/14/2004 1525		9.09	2010.50	0.00	2,010.50	
MNW							6/25/2004 0800		9.57	2010.02	0.00	2,010.02	
MNW							8/8/2004 0836		9.27	2010.32	0.00	2,010.32	
MNW							2/9/2005 0000		6.86	2012.73	0.00	2,012.73	
MNW							1/11/2007 0000		7.64	2011.95	0.00	2,011.95	
MNW							4/5/2007 0000		7.31	2012.28	0.00	2,012.28	
MNW							7/11/2007 0000		10.3	2009.29	0.00	2,009.29	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							10/11/2007 0000		11.99	2007.60	0.00	2,007.60	
MNW							1/8/2008 0000		7.18	2012.41	0.00	2,012.41	
MNW							4/16/2008 0000		7.52	2012.07	0.00	2,012.07	
MNW							6/10/2008 0000		9.83	2009.76	0.00	2,009.76	
MNW							7/10/2008 0000		9.55	2010.04	0.00	2,010.04	
MNW							9/11/2008 0000		10.3	2009.29	0.00	2,009.29	
MNW							10/16/2008 0000		10.01	2009.58	0.00	2,009.58	
MNW							11/25/2008 0000		8.81	2010.78	0.00	2,010.78	
MNW							2/12/2009 0000		6.42	2013.17	0.00	2,013.17	
MNW							4/9/2009 0000		7.17	2012.42	0.00	2,012.42	
MNW							7/9/2009 0000		9.31	2010.28	0.00	2,010.28	
MNW							10/29/2009 0000		5.17	2014.42	0.00	2,014.42	
MNW							1/21/2010 0000		8.91	2010.68	0.00	2,010.68	
MNW							5/27/2010 0000		8.91	2010.68	0.00	2,010.68	
MNW							7/25/2011 0000		10.58	2009.01	0.00	2,009.01	
MW-16	978467.9303	592445.9410	2026.75	2029.83	2029.66	A		0					
MNW							6/4/2004 1556		8.11	2021.55	0.00	2,021.55	
MNW							6/7/2004 1121		8.73	2020.93	0.00	2,020.93	
MNW							6/10/2004 1420		9.08	2020.58	0.00	2,020.58	
MNW							6/14/2004 1522		10.17	2019.49	0.00	2,019.49	
MNW							6/25/2004 0755		10.86	2018.80	0.00	2,018.80	
MNW							8/8/2004 0838		10.79	2018.87	0.00	2,018.87	
MNW							2/9/2005 0000		7.41	2022.25	0.00	2,022.25	
MNW							1/11/2007 0000		7.96	2021.70	0.00	2,021.70	
MNW							4/5/2007 0000		7.91	2021.75	0.00	2,021.75	
MNW							7/11/2007 0000		12.15	2017.51	0.00	2,017.51	
MNW							10/11/2007 0000		17.11	2012.55	0.00	2,012.55	

NM - No Measurement

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MNW Monitoring Well

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TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							1/8/2008 0000		6.72	2022.94	0.00	2,022.94	
MNW							4/16/2008 0000		8.29	2021.37	0.00	2,021.37	
MNW							6/10/2008 0000		10.99	2018.67	0.00	2,018.67	
MNW							7/10/2008 0000		10.77	2018.89	0.00	2,018.89	
MNW							9/11/2008 0000		11.63	2018.03	0.00	2,018.03	
MNW							10/16/2008 0000		12.12	2017.54	0.00	2,017.54	
MNW							11/25/2008 0000		9.91	2019.75	0.00	2,019.75	
MNW							2/12/2009 0000		6.81	2022.85	0.00	2,022.85	
MNW							4/9/2009 0000		7.73	2021.93	0.00	2,021.93	
MNW							7/9/2009 0000		10.08	2019.58	0.00	2,019.58	
MNW							10/29/2009 0000		10.44	2019.22	0.00	2,019.22	
MNW							1/21/2010 0000		9.05	2020.61	0.00	2,020.61	
MNW							5/27/2010 0000		9.49	2020.17	0.00	2,020.17	
MNW							7/25/2011 0000		12.65	2017.01	0.00	2,017.01	
MW-17	978446.8751	592377.7594	2029.76	2032.83	2032.67	A		0					
MNW							6/4/2004 1610		8.3	2024.37	0.00	2,024.37	
MNW							6/7/2004 1140		9.13	2023.54	0.00	2,023.54	
MNW							6/11/2004 1240		9.92	2022.75	0.00	2,022.75	
MNW							6/14/2004 1552		9.51	2023.16	0.00	2,023.16	
MNW							6/25/2004 0827		10.61	2022.06	0.00	2,022.06	
MNW							8/8/2004 0842		9.68	2022.99	0.00	2,022.99	
MNW							2/9/2005 0000		4.3	2028.37	0.00	2,028.37	
MNW							1/11/2007 0000		5.91	2026.76	0.00	2,026.76	
MNW							4/5/2007 0000		7.84	2024.83	0.00	2,024.83	
MNW							7/11/2007 0000		11.76	2020.91	0.00	2,020.91	
MNW							10/11/2007 0000		13.41	2019.26	0.00	2,019.26	
MNW							1/8/2008 0000		5.07	2027.60	0.00	2,027.60	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							4/16/2008 0000		6.42	2026.25	0.00	2,026.25	
MNW							6/10/2008 0000		11.01	2021.66	0.00	2,021.66	
MNW							7/10/2008 0000		10.16	2022.51	0.00	2,022.51	
MNW							9/11/2008 0000		11.02	2021.65	0.00	2,021.65	
MNW							10/16/2008 0000		11.03	2021.64	0.00	2,021.64	
MNW							11/25/2008 0000		6.09	2026.58	0.00	2,026.58	
MNW							2/12/2009 0000		4.39	2028.28	0.00	2,028.28	
MNW							4/9/2009 0000		5.4	2027.27	0.00	2,027.27	
MNW							7/9/2009 0000		9.45	2023.22	0.00	2,023.22	
MNW							10/29/2009 0000		5.37	2027.30	0.00	2,027.30	
MNW							1/21/2010 0000		7.56	2025.11	0.00	2,025.11	
MNW							5/27/2010 0000		8.89	2023.78	0.00	2,023.78	
MNW							7/25/2011 0000		11.72	2020.95	0.00	2,020.95	
MW-18	978548.1407	592379.7648	2031.86	2034.93	2034.81	A		0					
MNW							6/4/2004 1612		7.91	2026.90	0.00	2,026.90	
MNW							6/7/2004 1142		9.2	2025.61	0.00	2,025.61	
MNW							6/11/2004 1325		10.02	2024.79	0.00	2,024.79	
MNW							6/14/2004 1550		10.76	2024.05	0.00	2,024.05	
MNW							6/25/2004 0833		12.09	2022.72	0.00	2,022.72	
MNW							8/8/2004 0850		10.07	2024.74	0.00	2,024.74	
MNW							2/9/2005 0000		5.5	2029.31	0.00	2,029.31	
MNW							1/11/2007 0000		5.39	2029.42	0.00	2,029.42	
MNW							4/5/2007 0000		6.45	2028.36	0.00	2,028.36	
MNW							7/11/2007 0000		12.61	2022.20	0.00	2,022.20	
MNW							10/11/2007 0000		14.14	2020.67	0.00	2,020.67	
MNW							1/8/2008 0000		6.64	2028.17	0.00	2,028.17	
MNW							4/16/2008 0000		5.95	2028.86	0.00	2,028.86	

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MNW Monitoring Well

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TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							6/10/2008 0000		12.14	2022.67	0.00	2,022.67	
MNW							7/10/2008 0000		10.28	2024.53	0.00	2,024.53	
MNW							9/11/2008 0000		12.09	2022.72	0.00	2,022.72	
MNW							10/16/2008 0000		12.12	2022.69	0.00	2,022.69	
MNW							11/25/2008 0000		5.86	2028.95	0.00	2,028.95	
MNW							2/12/2009 0000		4.96	2029.85	0.00	2,029.85	
MNW							4/9/2009 0000		5.31	2029.50	0.00	2,029.50	
MNW							7/9/2009 0000		6.67	2028.14	0.00	2,028.14	
MNW							10/29/2009 0000		5.28	2029.53	0.00	2,029.53	
MNW							1/21/2010 0000		5.9	2028.91	0.00	2,028.91	
MNW							5/27/2010 0000		6.99	2027.82	0.00	2,027.82	
MNW							7/25/2011 0000		11.51	2023.30	0.00	2,023.30	
MW-19	978683.0834	592632.8136	2018.78	2021.78	2021.63	A		0					
MNW							6/4/2004 0000		NM	-	0.00	-	
MNW							6/7/2004 1114		10.31	2011.32	0.00	2,011.32	
MNW							6/8/2004 1330		10.34	2011.29	0.00	2,011.29	
MNW							6/14/2004 1539		11.49	2010.14	0.00	2,010.14	
MNW							6/25/2004 0750		12.84	2008.79	0.00	2,008.79	
MNW							8/8/2004 0823		12.63	2009.00	0.00	2,009.00	
MNW							2/9/2005 0000		11.27	2010.36	0.00	2,010.36	
MNW							1/11/2007 0000		9.04	2012.59	0.00	2,012.59	
MNW							4/5/2007 0000		9.18	2012.45	0.00	2,012.45	
MNW							7/11/2007 0000		14.13	2007.50	0.00	2,007.50	
MNW							10/11/2007 0000		15.76	2005.87	0.00	2,005.87	
MNW							1/8/2008 0000		7.81	2013.82	0.00	2,013.82	
MNW							4/16/2008 0000		8.98	2012.65	0.00	2,012.65	
MNW							6/10/2008 0000		13.28	2008.35	0.00	2,008.35	

NM - No Measurement

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MNW Monitoring Well

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TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							7/10/2008 0000		13.38	2008.25	0.00	2,008.25	
MNW							10/16/2008 0000		14.39	2007.24	0.00	2,007.24	
MNW							2/12/2009 0000		7.92	2013.71	0.00	2,013.71	
MNW							4/9/2009 0000		8.77	2012.86	0.00	2,012.86	
MNW							7/9/2009 0000		12.97	2008.66	0.00	2,008.66	
MNW							10/29/2009 0000		13.28	2008.35	0.00	2,008.35	
MNW							1/21/2010 0000		11.22	2010.41	0.00	2,010.41	
MNW							5/27/2010 0000		10.59	2011.04	0.00	2,011.04	
MNW							7/25/2011 0000		14.28	2007.35	0.00	2,007.35	
MW-20	978782.8374	592761.2151	1999.67	2002.65	2002.47	A		0					
MNW							6/4/2004 1507		3.08	1999.39	0.00	1,999.39	
MNW							6/7/2004 1111		3.14	1999.33	0.00	1,999.33	
MNW							6/11/2004 1155		3.12	1999.35	0.00	1,999.35	
MNW							6/14/2004 1516		3.3	1999.17	0.00	1,999.17	
MNW							6/25/2004 0742		3.63	1998.84	0.00	1,998.84	
MNW							8/8/2004 0826		3.86	1998.61	0.00	1,998.61	
MNW							2/9/2005 0000		3.15	1999.32	0.00	1,999.32	
MNW							1/11/2007 0000		NM	-	NM	-	
MNW							4/5/2007 0000		2.96	1999.51	0.00	1,999.51	
MNW							7/11/2007 0000		3.29	1999.18	0.00	1,999.18	
MNW							10/11/2007 0000		9.1	1993.37	0.00	1,993.37	
MNW							1/8/2008 0000		3.21	1999.26	0.00	1,999.26	
MNW							4/16/2008 0000		2.96	1999.51	0.00	1,999.51	
MNW							7/10/2008 0000		3.45	1999.02	0.00	1,999.02	
MNW							10/16/2008 0000		2.93	1999.54	0.00	1,999.54	
MNW							2/12/2009 0000		2.84	1999.63	0.00	1,999.63	
MNW							4/9/2009 0000		2.87	1999.60	0.00	1,999.60	

NM - No Measurement

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MNW Monitoring Well

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TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							7/9/2009 0000		3.69	1998.78	0.00	1,998.78	
MNW							10/29/2009 0000		2.99	1999.48	0.00	1,999.48	
MNW							1/21/2010 0000		3.06	1999.41	0.00	1,999.41	
MNW							5/27/2010 0000		3.56	1998.91	0.00	1,998.91	
MNW							7/25/2011 0000		5.81	1996.66	0.00	1,996.66	
MW-21	978790.7387	592569.6006	2022.22	2025.21	2025.10	A		0					
MNW							6/4/2004 1502		13.2	2011.90	0.00	2,011.90	
MNW							6/7/2004 1108		13.53	2011.57	0.00	2,011.57	
MNW							6/8/2004 1450		13.65	2011.45	0.00	2,011.45	
MNW							6/14/2004 1517		13.87	2011.23	0.00	2,011.23	
MNW							6/25/2004 0737		14.05	2011.05	0.00	2,011.05	
MNW							8/8/2004 0824		13.49	2011.61	0.00	2,011.61	
MNW							2/9/2005 0000		13.87	2011.23	0.00	2,011.23	
MNW							1/11/2007 0000		12.69	2012.41	0.00	2,012.41	
MNW							4/5/2007 0000		12.62	2012.48	0.00	2,012.48	
MNW							7/11/2007 0000		14.7	2010.40	0.00	2,010.40	
MNW							10/11/2007 0000		16.04	2009.06	0.00	2,009.06	
MNW							1/8/2008 0000		12.09	2013.01	0.00	2,013.01	
MNW							4/16/2008 0000		12.64	2012.46	0.00	2,012.46	
MNW							7/10/2008 0000		13.63	2011.47	0.00	2,011.47	
MNW							10/16/2008 0000		14.57	2010.53	0.00	2,010.53	
MNW							2/12/2009 0000		11.65	2013.45	0.00	2,013.45	
MNW							4/9/2009 0000		12.48	2012.62	0.00	2,012.62	
MNW							7/9/2009 0000		13.36	2011.74	0.00	2,011.74	
MNW							10/29/2009 0000		14.27	2010.83	0.00	2,010.83	
MNW							1/21/2010 0000		13.9	2011.20	0.00	2,011.20	
MNW							5/27/2010 0000		13.6	2011.50	0.00	2,011.50	

NM - No Measurement

Type:
MNW Monitoring Well

The value noted in the column labeled Specific Gravity is an assumed value for free product, if found.

TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							7/25/2011 0000		14.32	2010.78	0.00	2,010.78	
MW-22	978974.0795	592610.2009	2009.99	2013.08	2012.96	A		0					
MNW							6/4/2004 1450		16.91	1996.05	0.00	1,996.05	
MNW							6/7/2004 1101		16.97	1995.99	0.00	1,995.99	
MNW							6/11/2004 1055		17.03	1995.93	0.00	1,995.93	
MNW							6/14/2004 1508		17.11	1995.85	0.00	1,995.85	
MNW							6/25/2004 0726		17.15	1995.81	0.00	1,995.81	
MNW							8/8/2004 0830		17.12	1995.84	0.00	1,995.84	
MNW							2/9/2005 0000		16.65	1996.31	0.00	1,996.31	
MNW							1/11/2007 0000		16.22	1996.74	0.00	1,996.74	
MNW							4/5/2007 0000		15.49	1997.47	0.00	1,997.47	
MNW							7/11/2007 0000		17.18	1995.78	0.00	1,995.78	
MNW							10/11/2007 0000		17.34	1995.62	0.00	1,995.62	
MNW							1/8/2008 0000		16.22	1996.74	0.00	1,996.74	
MNW							4/16/2008 0000		14.09	1998.87	0.00	1,998.87	
MNW							7/10/2008 0000		17.09	1995.87	0.00	1,995.87	
MNW							10/16/2008 0000		16.91	1996.05	0.00	1,996.05	
MNW							2/12/2009 0000		16.44	1996.52	0.00	1,996.52	
MNW							4/9/2009 0000		14.01	1998.95	0.00	1,998.95	
MNW							7/9/2009 0000		16.52	1996.44	0.00	1,996.44	
MNW							10/29/2009 0000		16.39	1996.57	0.00	1,996.57	
MNW							1/21/2010 0000		16.21	1996.75	0.00	1,996.75	
MNW							5/27/2010 0000		12.16	2000.80	0.00	2,000.80	
MNW							7/25/2011 0000		12.35	2000.61	0.00	2,000.61	
MW-23	979083.4516	592505.1994	2014.78	2017.75	2017.57	A		0					
MNW							6/4/2004 1445		5.4	2012.17	0.00	2,012.17	
MNW							6/7/2004 1439		5.89	2011.68	0.00	2,011.68	

NM - No Measurement

Type:
MNW Monitoring Well

The value noted in the column labeled Specific Gravity is an assumed value for free product, if found.

TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							6/14/2004 1505		7.61	2009.96	0.00	2,009.96	
MNW							6/25/2004 0718		10.86	2006.71	0.00	2,006.71	
MNW							8/8/2004 0811		7.64	2009.93	0.00	2,009.93	
MNW							2/9/2005 0000		3.82	2013.75	0.00	2,013.75	
MNW							1/11/2007 0000		4.68	2012.89	0.00	2,012.89	
MNW							4/5/2007 0000		5.25	2012.32	0.00	2,012.32	
MNW							7/11/2007 0000		10.34	2007.23	0.00	2,007.23	
MNW							10/11/2007 0000		15.18	2002.39	0.00	2,002.39	
MNW							1/8/2008 0000		6.51	2011.06	0.00	2,011.06	
MNW							4/16/2008 0000		6.61	2010.96	0.00	2,010.96	
MNW							7/10/2008 0000		10.02	2007.55	0.00	2,007.55	
MNW							10/16/2008 0000		11.94	2005.63	0.00	2,005.63	
MNW							2/12/2009 0000		3.66	2013.91	0.00	2,013.91	
MNW							4/9/2009 0000		4.03	2013.54	0.00	2,013.54	
MNW							7/9/2009 0000		5.86	2011.71	0.00	2,011.71	
MNW							10/29/2009 0000		5.76	2011.81	0.00	2,011.81	
MNW							1/21/2010 0000		4.99	2012.58	0.00	2,012.58	
MNW							5/27/2010 0000		5.33	2012.24	0.00	2,012.24	
MNW							7/25/2011 0000		12.61	2004.96	0.00	2,004.96	
WEBER WELL	978580.3664	592532.0678	2018.52		2018.52	A							
MNW							8/8/2004 0830		8.23	2010.29	0.00		

NM - No Measurement

Type:
MNW Monitoring Well

The value noted in the column labeled Specific Gravity is an assumed value for free product, if found.

TABLE 2
SUBSURFACE SOIL ANALYTICAL RESULTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID				EP-06	EP-21	EP-51	EP-52	MW-11
Sample ID				EP-06	EP-21	EP-51	EP-52	MW-11 9.0-10.0
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				0.0-8.0	8.0-12.0	8.0-12.0	6.0-8.0	9.0-10.0
Date Sampled				10/17/01	10/22/01	10/31/01	10/31/01	06/03/04
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Volatile Organic Compounds								
1,1,1-Trichloroethane	UG/KG	800	5.00E+05					
1,2-Dichloroethene (cis)	UG/KG	300	5.00E+05					
Dichlorodifluoromethane	UG/KG	-	-					
Ethylbenzene	UG/KG	5500	3.90E+05		7,400 J			
Tetrachloroethene	UG/KG	1400	1.50E+05		16,000		37,000	
Toluene	UG/KG	1500	5.00E+05	30,000	2,400 J			
Xylene (total)	UG/KG	1200	5.00E+05		43,000			
Total Volatile Organic Compounds	UG/KG	-	-	30,000	68,800	ND	37,000	ND

Criteria (1)- NYSDEC TAGM: Determination of Soil Cleanup Objectives and Cleanup Levels; HWR-94-4046 January 24, 1994 (Revised).

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

Blsnk cell - Not detected.

Only Detected Results Reported.

TABLE 2
SUBSURFACE SOIL ANALYTICAL RESULTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID				MW-12	MW-13	MW-14	MW-15	MW-16
Sample ID				MW-12 10.0-11.0	MW-13 12.0-12.5	MW-14 9.5-10.0	MW-15 12.0-13.0	MW-16 8.5-9.5
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				10.0-11.0	12.0-12.5	9.5-10.0	12.0-13.0	8.5-9.5
Date Sampled				06/03/04	06/02/04	06/02/04	06/02/04	06/03/04
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Volatile Organic Compounds								
1,1,1-Trichloroethane	UG/KG	800	5.00E+05				5 J	
1,2-Dichloroethene (cis)	UG/KG	300	5.00E+05				6 J	
Dichlorodifluoromethane	UG/KG	-	-					
Ethylbenzene	UG/KG	5500	3.90E+05					
Tetrachloroethene	UG/KG	1400	1.50E+05					
Toluene	UG/KG	1500	5.00E+05					
Xylene (total)	UG/KG	1200	5.00E+05					
Total Volatile Organic Compounds	UG/KG	-	-	ND	ND	ND	11	ND

Criteria (1)- NYSDEC TAGM: Determination of Soil Cleanup Objectives and Cleanup Levels; HWR-94-4046 January 24, 1994 (Revised).

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

Blsnk cell - Not detected.

Only Detected Results Reported.

TABLE 2
SUBSURFACE SOIL ANALYTICAL RESULTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID				MW-17	MW-18	MW-19	MW-20	MW-21
Sample ID				MW-17 12.5-13.5	MW-18 12.5-13.0	MW-19 8.5-9.5	MW-20	MW-21 9.0-9.5
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				12.5-13.5	12.5-13.0	8.5-9.5	8.0-9.0	9.0-9.5
Date Sampled				06/03/04	06/03/04	06/02/04	06/04/04	06/01/04
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Volatile Organic Compounds								
1,1,1-Trichloroethane	UG/KG	800	5.00E+05					
1,2-Dichloroethene (cis)	UG/KG	300	5.00E+05					
Dichlorodifluoromethane	UG/KG	-	-					
Ethylbenzene	UG/KG	5500	3.90E+05					
Tetrachloroethene	UG/KG	1400	1.50E+05					
Toluene	UG/KG	1500	5.00E+05					
Xylene (total)	UG/KG	1200	5.00E+05					
Total Volatile Organic Compounds	UG/KG	-	-	ND	ND	ND	ND	ND

Criteria (1)- NYSDEC TAGM: Determination of Soil Cleanup Objectives and Cleanup Levels; HWR-94-4046 January 24, 1994 (Revised).

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

Blsnk cell - Not detected.

Only Detected Results Reported.

TABLE 2
SUBSURFACE SOIL ANALYTICAL RESULTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID				MW-22	MW-23	SB-01	SB-02	SB-03
Sample ID				MW-22 14.25-.75	MW-23 13.5-14.0	SB-01	SB-02	SB-03
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				14.3-14.8	13.5-14.0	9.0-10.0	13.0-14.0	9.5-10.5
Date Sampled				06/01/04	06/02/04	06/03/04	06/03/04	06/03/04
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Volatile Organic Compounds								
1,1,1-Trichloroethane	UG/KG	800	5.00E+05					2 J
1,2-Dichloroethene (cis)	UG/KG	300	5.00E+05					
Dichlorodifluoromethane	UG/KG	-	-					
Ethylbenzene	UG/KG	5500	3.90E+05					
Tetrachloroethene	UG/KG	1400	1.50E+05					
Toluene	UG/KG	1500	5.00E+05					
Xylene (total)	UG/KG	1200	5.00E+05					
Total Volatile Organic Compounds	UG/KG	-	-	ND	ND	ND	ND	2

Criteria (1)- NYSDEC TAGM: Determination of Soil Cleanup Objectives and Cleanup Levels; HWR-94-4046 January 24, 1994 (Revised).

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

Blsnk cell - Not detected.

Only Detected Results Reported.

TABLE 2
SUBSURFACE SOIL ANALYTICAL RESULTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID				SB-04
Sample ID				SB-04
Matrix				Soil
Depth Interval (ft)				5.0-6.0
Date Sampled				06/03/04
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	
Volatile Organic Compounds				
1,1,1-Trichloroethane	UG/KG	800	5.00E+05	
1,2-Dichloroethene (cis)	UG/KG	300	5.00E+05	
Dichlorodifluoromethane	UG/KG	-	-	9 J
Ethylbenzene	UG/KG	5500	3.90E+05	
Tetrachloroethene	UG/KG	1400	1.50E+05	
Toluene	UG/KG	1500	5.00E+05	
Xylene (total)	UG/KG	1200	5.00E+05	
Total Volatile Organic Compounds	UG/KG	-	-	9

Criteria (1)- NYSDEC TAGM: Determination of Soil Cleanup Objectives and Cleanup Levels; HWR-94-4046 January 24, 1994 (Revised).

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

Blsnk cell - Not detected.

Only Detected Results Reported.

Table 3
Groundwater Analytical Results
Wyoming County Fire Training Center

Monitoring Well MW-01

Volatile Compounds	Units	Sep-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	378.6	D	D	D	D	D	D	D	D	D	D	D	D	D
1,1,2-Trichloroethene	UG/L	95.9	D	D	D	D	D	D	D	D	D	D	D	D	D
Toluene	UG/L	U	D	D	D	D	D	D	D	D	D	D	D	D	D
Tetrachloroethene	UG/L	4,069.1	D	D	D	D	D	D	D	D	D	D	D	D	D
Trichloroethene	UG/L	21.3	D	D	D	D	D	D	D	D	D	D	D	D	D
1,1-Dichloroethane	UG/L	37.4	D	D	D	D	D	D	D	D	D	D	D	D	D
1,1-Dichloroethene	UG/L	23.3	D	D	D	D	D	D	D	D	D	D	D	D	D
1,2-Dichloroethene (total)	UG/L	1,296.2	D	D	D	D	D	D	D	D	D	D	D	D	D
Total VOCs	UG/L	5,921.8	D	D	D	D	D	D	D	D	D	D	D	D	D

Monitoring Well MW-02

Volatile Compounds	Units	Sep-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	45.3	9 J	NS	U	NS	12	NS	U	NS	U	NS	U	NS	U
Toluene	UG/L	U	U	NS	U	NS	U	NS	U	NS	U	NS	U	NS	7
Tetrachloroethene	UG/L	371	15	NS	U	NS	60	NS	16	NS	16	NS	11	NS	25
Trichloroethene	UG/L	76.6	2 J	NS	79	NS	150	NS	43	NS	49	NS	26	NS	39
1,1-Dichloroethane	UG/L	11.3	2 J	NS	U	NS	U	NS	U	NS	U	NS	U	NS	U
1,1-Dichloroethene	UG/L	U	U	NS	U	NS	U	NS	U	NS	U	NS	U	NS	U
1,2-Dichloroethene (total)	UG/L	273.9	23	NS	400	NS	450 E	NS	67	NS	56	NS	55	NS	63
Vinyl Chloride	UG/L	U	3 J	NS	U	NS	U	NS	U	NS	U	NS	U	NS	U
Total VOCs	UG/L	778.1	54	NS	479	NS	672	NS	126	NS	121	NS	92	NS	134

Monitoring Well MW-03

Volatile Compounds	Units	Nov-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	U	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	UG/L	U	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	UG/L	U	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	UG/L	U	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	UG/L	U	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	UG/L	U	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethene (total)	UG/L	U	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl Chloride	UG/L	U	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total VOCs	UG/L	U	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

VOC analysis by EPA Method 8260

UG/L = micrograms per liter

U = not present above PQL

D = destroyed

NS = not sampled

J = Analyte detected below quanitation limits

Table 3 (Cont.)
Groundwater Analytical Results
Wyoming County Fire Training Center

Monitoring Well MW-04

Volatile Compounds	Units	Nov-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	U	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	UG/L	U	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	UG/L	U	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	UG/L	U	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	UG/L	U	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	UG/L	U	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethene (total)	UG/L	U	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl Chloride	UG/L	U	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Total VOCs	UG/L	U	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS

Monitoring Well MW-05

Volatile Compounds	Units	Nov-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	U	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	UG/L	U	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	UG/L	U	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	UG/L	U	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	UG/L	U	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	UG/L	U	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethene (total)	UG/L	U	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
2-Butanone (MEK)	UG/L	U	U	NS	U	NS	88	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl Chloride	UG/L	U	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Total VOCs	UG/L	U	U	NS	U	NS	88	NS	NS	NS	NS	NS	NS	NS	NS

Monitoring Well MW-06

Volatile Compounds	Units	Jun-04	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	27.7	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	UG/L	U	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	UG/L	68	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	UG/L	U	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	UG/L	U	2 J	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	UG/L	21.4	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethene (total)	UG/L	U	4 J	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
2-Butanone (MEK)	UG/L	U	U	NS	U	NS	51	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl Chloride	UG/L	U	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Total VOCs	UG/L	117.1	6	NS	U	NS	51	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

VOC analysis by EPA Method 8260

UG/L = micrograms per liter

U = not present above PQL

NS = not sampled

J = Analyte detected below quanitation limits

Table 3 (Cont.)
Groundwater Analytical Results
Wyoming County Fire Training Center

Monitoring Well MW-07

Volatile Compounds	Units	Nov-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	1,252.1	1300	1,000	380	NS	220	NS	63	NS	210	NS	20	NS	120
Benzene	UG/L	2.1	U	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
Tetrachloroethene	UG/L	7,414.6	1,800	2,200	1,500	NS	1,500	NS	350	NS	1,200	NS	180	NS	830
Trichloroethene	UG/L	148.7	49	65 J	U	NS	U	NS	U	NS	62	NS	U	NS	48
1,1-Dichloroethane	UG/L	155.2	69	66 J	U	NS	U	NS	U	NS	U	NS	U	NS	26
1,1-Dichloroethene	UG/L	U	14	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
1,2-Dichloroethene (total)	UG/L	2,132.9	730	1,100	350	NS	250	NS	99	NS	U	NS	21	NS	130
Chloroethane	UG/L	U	23 J	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
Methyl-tert-butyl-ether	UG/L	2.9	U	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
Methylene Chloride	UG/L	U	U	U	U	NS	U	NS	110	NS	U	NS	26	NS	U
Vinyl Chloride	UG/L	5.1	12	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
Total VOCs	UG/L	11,113.6	3,997	3,531	2,230	NS	1,970	NS	622	NS	1,472	NS	247	NS	1,154

Monitoring Well MW-08

Volatile Compounds	Units	Nov-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	U	U	NS	NS	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	UG/L	U	U	NS	NS	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	UG/L	U	U	NS	NS	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	UG/L	U	U	NS	NS	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	UG/L	U	U	NS	NS	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	UG/L	U	U	NS	NS	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethene (total)	UG/L	U	U	NS	NS	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl Chloride	UG/L	U	U	NS	NS	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Total VOCs	UG/L	U	U	NS	NS	NS	U	NS	NS	NS	NS	NS	NS	NS	NS

Monitoring Well MW-09

Volatile Compounds	Units	Nov-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	U	D	D	D	D	D	D	D	D	D	D	D	D	D
1,1,2-Trichloroethene	UG/L	U	D	D	D	D	D	D	D	D	D	D	D	D	D
Toluene	UG/L	U	D	D	D	D	D	D	D	D	D	D	D	D	D
Tetrachloroethene	UG/L	U	D	D	D	D	D	D	D	D	D	D	D	D	D
Trichloroethene	UG/L	U	D	D	D	D	D	D	D	D	D	D	D	D	D
1,1-Dichloroethane	UG/L	U	D	D	D	D	D	D	D	D	D	D	D	D	D
1,1-Dichloroethene	UG/L	U	D	D	D	D	D	D	D	D	D	D	D	D	D
1,2-Dichloroethene (total)	UG/L	U	D	D	D	D	D	D	D	D	D	D	D	D	D
Total VOCs	UG/L	U	D	D	D	D	D	D	D	D	D	D	D	D	D

Notes:

VOC analysis by EPA Method 8260

UG/L = micrograms per liter

U = not present above PQL

D = destroyed

J = Analyte detected below quanitation limits

Table 3 (Cont.)
Groundwater Analytical Results
Wyoming County Fire Training Center

Monitoring Well MW-10

Volatile Compounds	Units	Nov-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	U	8 J	U	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	UG/L	U	U	U	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	UG/L	U	57	U	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	UG/L	U	U	U	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	UG/L	U	U	U	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	UG/L	U	U	U	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethene (total)	UG/L	U	6 J	U	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
2-Butanone (MEK)	UG/L	U	U	U	U	NS	31	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl Chloride	UG/L	U	U	U	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Total VOCs	UG/L	U	71	U	U	NS	31	NS	NS	NS	NS	NS	NS	NS	NS

Monitoring Well MW-11

Volatile Compounds	Units	Nov-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethene (total)	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl Chloride	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Total VOCs	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS

Monitoring Well MW-12

Volatile Compounds	Units	Nov-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	NI	31	34	24	NS	38	NS	10	NS	19	NS	10	NS	26
Toluene	UG/L	NI	U	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
Tetrachloroethene	UG/L	NI	8 J	9 J	U	NS	12	NS	U	NS	8.7	NS	U	NS	16
Trichloroethene	UG/L	NI	U	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
1,1-Dichloroethane	UG/L	NI	4 J	U	U	NS	5.3	NS	U	NS	U	NS	U	NS	U
1,1-Dichloroethene	UG/L	NI	U	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
1,2-Dichloroethene (total)	UG/L	NI	20	18	15	NS	33	NS	12	NS	19	NS	7.5	NS	20
Vinyl Chloride	UG/L	NI	U	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
Total VOCs	UG/L	NI	63	61	39	NS	88.3	NS	22	NS	46.7	NS	17.5	NS	62

Notes:

VOC analysis by EPA Method 8260

UG/L = micrograms per liter

U = not present above PQL

NI = not installed

NS = not sampled

J = Analyte detected below quanitation limits

Table 3 (Cont.)
Groundwater Analytical Results
Wyoming County Fire Training Center

Monitoring Well MW-13

Volatile Compounds	Units	Nov-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	NI	4 J	U	U	NS	6	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	UG/L	NI	U	U	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	UG/L	NI	U	U	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	UG/L	NI	U	U	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	UG/L	NI	U	U	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	UG/L	NI	U	U	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethene (total)	UG/L	NI	5 J	U	U	NS	7.2	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl Chloride	UG/L	NI	U	U	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Total VOCs	UG/L	NI	9	U	U	NS	13.3	NS	NS	NS	NS	NS	NS	NS	NS

Monitoring Well MW-14

Volatile Compounds	Units	Nov-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	NI	U	NS	U	NS	U	NS	U	NS	U	NS	U	NS	U
Toluene	UG/L	NI	U	NS	U	NS	U	NS	U	NS	U	NS	U	NS	U
Tetrachloroethene	UG/L	NI	U	NS	U	NS	U	NS	U	NS	U	NS	U	NS	U
Trichloroethene	UG/L	NI	U	NS	U	NS	U	NS	U	NS	U	NS	U	NS	U
1,1-Dichloroethane	UG/L	NI	U	NS	U	NS	U	NS	U	NS	U	NS	U	NS	U
1,1-Dichloroethene	UG/L	NI	U	NS	U	NS	U	NS	U	NS	U	NS	U	NS	U
1,2-Dichloroethene (total)	UG/L	NI	U	NS	U	NS	U	NS	U	NS	U	NS	U	NS	U
Vinyl Chloride	UG/L	NI	U	NS	U	NS	U	NS	U	NS	U	NS	U	NS	U
Total VOCs	UG/L	NI	U	NS	U	NS	U	NS	U	NS	U	NS	U	NS	U

Monitoring Well MW-15

Volatile Compounds	Units	Nov-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	NI	210 D	150	420 E	NS	280	NS	300	NS	270	NS	7.2	NS	240
Toluene	UG/L	NI	U	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
Tetrachloroethene	UG/L	NI	100	84	170	NS	180	NS	200	NS	220	NS	12	NS	240
Trichloroethene	UG/L	NI	7 J	6 J	13	NS	U	NS	U	NS	11	NS	U	NS	12
1,1-Dichloroethane	UG/L	NI	22	17	42	NS	36	NS	33	NS	30	NS	U	NS	29
1,1-Dichloroethene	UG/L	NI	2 J	U	11	NS	U	NS	U	NS	U	NS	U	NS	U
1,2-Dichloroethene (total)	UG/L	NI	150	93	410 E	NS	310	NS	280	NS	240	NS	U	NS	U
Chloroethane	UG/L	NI	7 J	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
Vinyl Chloride	UG/L	NI	U	U	U	NS	U	NS	40	NS	U	NS	5.2	NS	U
Total VOCs	UG/L	NI	498	350	1,066	NS	806	NS	853	NS	771	NS	24.4	NS	521

Notes:

VOC analysis by EPA Method 8260

UG/L = micrograms per liter

U = not present above PQL

NI = not installed

NS = not sampled

J = Analyte detected below quanitation limits

Table 3 (Cont.)
Groundwater Analytical Results
Wyoming County Fire Training Center

Monitoring Well MW-16

Volatile Compounds	Units	Nov-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	NI	2 J	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethene (total)	UG/L	NI	2 J	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl Chloride	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Total VOCs	UG/L	NI	4	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS

Monitoring Well MW-17

Volatile Compounds	Units	Nov-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Acetone	UG/L	NI	9 J	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethene (total)	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl Chloride	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Total VOCs	UG/L	NI	9	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS

Monitoring Well MW-18

Volatile Compounds	Units	Nov-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Acetone	UG/L	NI	9 J	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethene (total)	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Methylene Chloride	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Total VOCs	UG/L	NI	9	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS

Notes:
VOC analysis by EPA Method 8260
UG/L = micrograms per liter
U = not present above PQL
J = Analyte detected below quanitation limits
D = Sample diluted
E = Value above quantitation range
NI = not installed
NS = not sampled

Table 3 (Cont.)
Groundwater Analytical Results
Wyoming County Fire Training Center

Monitoring Well MW-19

Volatile Compounds	Units	Nov-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	NI	15	18	25	NS	45	NS	7.9	NS	39	NS	15	NS	36
Toluene	UG/L	NI	U	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
Tetrachloroethene	UG/L	NI	6 J	9 J	9.9	NS	20	NS	U	NS	21	NS	11	NS	25
Trichloroethene	UG/L	NI	U	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
1,1-Dichloroethane	UG/L	NI	U	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
1,1-Dichloroethene	UG/L	NI	U	U	U	NS	U	NS	U	NS	U	NS	U	NS	22
1,2-Dichloroethene (total)	UG/L	NI	8 J	10 J	19	NS	33	NS	U	NS	26	NS	6.5	NS	U
Methyl tert-butyl Ether	UG/L	NI	8 J	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
Methylene Chloride	UG/L	NI	U	U	U	NS	U	NS	19	NS	U	NS	U	NS	U
Total VOCs	UG/L	NI	37	37	53.9	NS	98	NS	26.9	NS	86	NS	32.5	NS	83

Monitoring Well MW-20

Volatile Compounds	Units	Nov-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	NI	U	NS	NS	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	UG/L	NI	U	NS	NS	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	UG/L	NI	U	NS	NS	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	UG/L	NI	U	NS	NS	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	UG/L	NI	U	NS	NS	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	UG/L	NI	U	NS	NS	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethene (total)	UG/L	NI	U	NS	NS	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl Chloride	UG/L	NI	U	NS	NS	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Total VOCs	UG/L	NI	U	NS	NS	NS	U	NS	NS	NS	NS	NS	NS	NS	NS

Monitoring Well MW-21

Volatile Compounds	Units	Nov-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	NI	4 J	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethene (total)	UG/L	NI	3 J	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl Chloride	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Total VOCs	UG/L	NI	7	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

VOC analysis by EPA Method 8260

UG/L = micrograms per liter

U = not present above PQL

NI = not installed

NS = not sampled

J = Analyte detected below quanitation limits

Table 3 (Cont.)
Groundwater Analytical Results
Wyoming County Fire Training Center

Monitoring Well MW-22

Volatile Compounds	Units	Nov-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethene (total)	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl Chloride	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Total VOCs	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS

Monitoring Well MW-23

Volatile Compounds	Units	Nov-01	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethene (total)	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl Chloride	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS
Total VOCs	UG/L	NI	U	NS	U	NS	U	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

VOC analysis by EPA Method 8260

UG/L = micrograms per liter

U = not present above PQL

J = Analyte detected below quanitation limits

NI = not installed

NS = not sampled

Table 3 (Cont.)
Groundwater Analytical Results
Wyoming County Fire Training Center

Spring

Volatile Compounds	Units	Nov-01	Nov-03	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	NS	13	U	NS	21	34	54	64	70	54	U	65	88
Chloroethane	UG/L	NS	2.7	U	NS	U	U	U	U	U	U	U	U	U
Methyl-tert-Butyl Ether	UG/L	NS	1.5	U	NS	U	U	U	U	U	U	U	U	U
Tetrachloroethene	UG/L	NS	9.3	U	NS	U	5.6	13	14	20	16	U	19	31
Trichloroethene	UG/L	NS	1.9	U	NS	U	U	U	U	U	U	U	U	U
1,1-Dichloroethane	UG/L	NS	9	U	NS	U	U	7.8	8.2	9.8	6.3	U	11	13
1,1-Dichloroethene	UG/L	NS	3.9	U	NS	U	U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	UG/L	NS	39	U	NS	17	25	17	51	59	36	U	54	73
Methylene Chloride	UG/L	NS	U	U	NS	U	U	21	U	U	U	U	U	U
Total VOCs	UG/L	NS	80.3	U	NS	38	64.6	112.8	137.2	158.8	112.3	U	149	205

Schell Tap Water

Volatile Compounds	Units	Nov-01	Jun-04	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U
Toluene	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U
Tetrachloroethene	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U
Trichloroethene	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethane	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethene	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U
Vinyl Chloride	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U
Total VOCs	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U

Becker Tap Water

Volatile Compounds	Units	Nov-01	Feb-04	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U
Toluene	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U
Tetrachloroethene	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U
Trichloroethene	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethane	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethene	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U
Vinyl Chloride	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U
Total VOCs	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U

Notes:

VOC analysis by New York State Department of Health Method 502.2

U = not present above PQL

J = Analyte detected below quanitation limits

NS = not sampled

Table 4
Surface Water and Sediment Analytical Results
Wyoming County Fire Training Center

Rear Pond (Surface Water)

Volatile Compounds	Units	Nov-01	Jun-04	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/L	NS	2	U	NS	U	NS	U	NS	U	NS	U	NS	U
Toluene	UG/L	NS	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
Tetrachloroethene	UG/L	NS	12	U	NS	U	NS	U	NS	6.9	NS	6	NS	6.4
Trichloroethene	UG/L	NS	U	7	NS	U	NS	U	NS	U	NS	U	NS	U
1,1-Dichloroethane	UG/L	NS	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
1,1-Dichloroethene	UG/L	NS	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
1,2-Dichloroethene (total)	UG/L	NS	3	17	NS	U	NS	U	NS	U	NS	U	NS	U
Methylene Chloride	UG/L	NS	U	U	NS	U	NS	21	NS	U	NS	U	NS	U
Total VOCs	UG/L	NS	17	24	NS	U	NS	21	NS	6.9	NS	6	NS	6.4

Rear Pond (Sediment)

Volatile Compounds	Units	Nov-01	Jun-04	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09
1,1,1-Trichloroethane	UG/KG	NS	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
Acetone	UG/KG	NS	U	U*	NS	U	NS	U	NS	U	NS	U	NS	U
Methylene Chloride	UG/KG	NS	U	6	NS	U	NS	U	NS	U	NS	U	NS	U
2-Butanone	UG/KG	NS	U	23	NS	U	NS	U	NS	U	NS	U	NS	U
Tetrachloroethene	UG/KG	NS	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
Trichloroethene	UG/KG	NS	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
1,1-Dichloroethane	UG/KG	NS	3	U	NS	U	NS	U	NS	U	NS	U	NS	U
1,1-Dichloroethene	UG/KG	NS	U	U	NS	U	NS	U	NS	U	NS	U	NS	U
1,2-Dichloroethene (total)	UG/KG	NS	4	U	NS	U	NS	U	NS	U	NS	U	NS	U
Vinyl Chloride	UG/KG	NS	28	U	NS	U	NS	U	NS	U	NS	U	NS	U
Total VOCs	UG/KG	NS	35	29	NS	U	NS	U	NS	U	NS	U	NS	U

Notes:

VOC analysis by EPA Method 8260

UG/L = micrograms per liter

UG/KG = micrograms per kilograms

U = not present above PQL

NS = not sampled

* Qualified as non-detect due to blank contamination

Table 5

Wyoming County Fire Training Center
Soil Cleanup Objectives for Volatile Organic Compounds
6NYCRR Subpart 375-6.8(b) Restricted Commercial Use

Contaminant	CAS Number	Protective of Public Health - Commercial	Protective of Ground-Water
1,1,1-Trichloroethane	71-55-6	500 [b]	0.68
1,1-Dichloroethane	75-34-3	240	0.27
1,1-Dichloroethene	75-35-4	500 [b]	0.33
1,2-Dichlorobenzene	95-50-1	500 [b]	1.1
1,2-Dichloroethane	107-06-2	30	0.2 [f]
cis-1,2-Dichloroethene	156-59-2	500 [b]	0.25
trans-1,2-Dichloroethene	156-60-5	500 [b]	0.19
1,3-Dichlorobenzene	541-73-1	280	2.4
1,4-Dichlorobenzene	106-46-7	130	1.8
1,4-Dioxane	123-91-1	130	0.1 [e]
Acetone	67-64-1	500 [b]	0.05
Benzene	71-43-2	44	0.06
Butylbenzene	104-51-8	500 [b]	12
Carbon tetrachloride	56-23-5	22	0.76
Chlorobenzene	108-90-7	500 [b]	1.1
Chloroform	67-66-3	350	0.37
Ethylbenzene	100-41-4	390	1
Hexachlorobenzene	118-74-1	6	3.2
Methyl ethyl ketone	78-93-3	500 [b]	0.12
Methyl tert-butyl ether	1634-04-4	500 [b]	0.93
Methylene chloride	75-09-2	500 [b]	0.05
n-Propylbenzene	03-65-1	500 [b]	3.9
sec-Butylbenzene	135-98-8	500 [b]	11
tert-Butylbenzene	98-06-6	500 [b]	5.9
Tetrachloroethene	127-18-4	150	1.3
Toluene	108-88-3	500 [b]	0.7
Trichloroethene	79-01-6	200	0.47
1,2,4-Trimethylbenzene	95-63-6	190	3.6
1,3,5- Trimethylbenzene	108-67-8	190	8.4
Vinyl chloride	75-01-4	13	0.02
Xylene (mixed)	1330-20-7	500 [b]	1.6

All soil cleanup objectives (SCOs) are in parts per million (ppm).
NS=Not specified. See Technical Support Document (TSD).

Footnotes

[b] The SCOs for commercial use were capped at a maximum value of 500 ppm. See TSD section 9.3.

[e] For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the SCO value.

[f] For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the Department and Department of Health rural soil survey, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.

FIGURES

N

NORTH POND

WYOMING COUNTY FIRE TRAINING CENTER FACILITY

FORMER AGRO PROPERTY

RANGE BUILDING

EARTHEN BERM

FIRING RANGE

REAR POND

APPROXIMATE SITE LIMITS

SCHELL POND

DRUM STORAGE AREA

NORTH FIRE PIT

CINDER BLOCK TRAINING CENTER

SOUTH FIRE PIT

AIRPLANE FUSELAGE

FORMER AST

AGRO-1

FORMER WEBER PROPERTY

MAIN BUILDING

WEBER WELL

FRONT POND

HOUSE

SCHELL RESIDENCE

RESIDENCE

SPRING

WETHERSFIELD ROAD

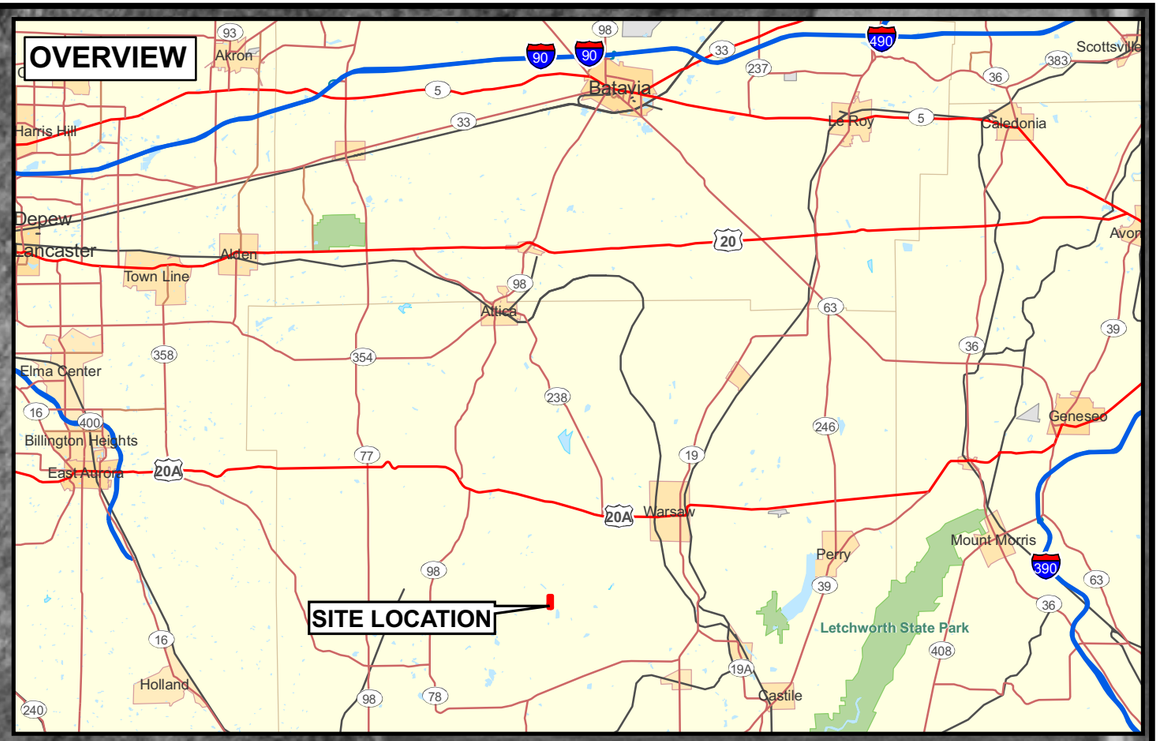
BECKER RESIDENCE

CHAIN LINK FENCE

BECKER WELL

BECKER POND

OVERVIEW



Legend

- Spring Location
- Residential Pumping Well
- Property Line

250 0 250 Feet

WYOMING COUNTY FIRE TRANING CENTER
SITE PLAN

URS

FIGURE 1

N:\11172991.00000\DB\GIS\ArcMap\ortho.mxd 4/1/2010

N:\11172991.00000\DB\GIS\ArcMap\GW CONTOUR MAP 070909.mxd 9/3/2009 BJF

N

WYOMING COUNTY FIRE TRAINING CENTER

SHOOTING RANGE BUILDING

CINDER BLOCK TRAINING CENTER

MAIN BUILDING

DRIVEWAY

REAR POND

FRONT POND

WETHERSFIELD ROAD

MW-05, 2021.22

MW-02, 2021.66

MW-03, 2022.92

MW-04, 2031.05

MW-23, 2011.71

MW-06, 2016.22

MW-22, 1996.44

MW-08, 2013.45

MW-07, 2022.32

MW-21, 2011.74

MW-20, 1998.78

MW-19, 2008.66

MW-18, 2028.14

MW-10, 2003.17

FRONT POND, 2030.17

MW-16, 2019.58

MW-15, 2010.28

MW-14, 2002.48

MW-17, 2023.22

MW-11, 2022.54

MW-12, 2009.72

MW-13, 2002.81

Legend

- Monitoring Well
- Groundwater Flow Direction
- 2028 Groundwater Elevation Contour
- 2028 Topographic Elevation Contour
- Permeable Reactive Wall Location
- MW-11, 2,022.54 (Well Location / Groundwater Elevation (ft))

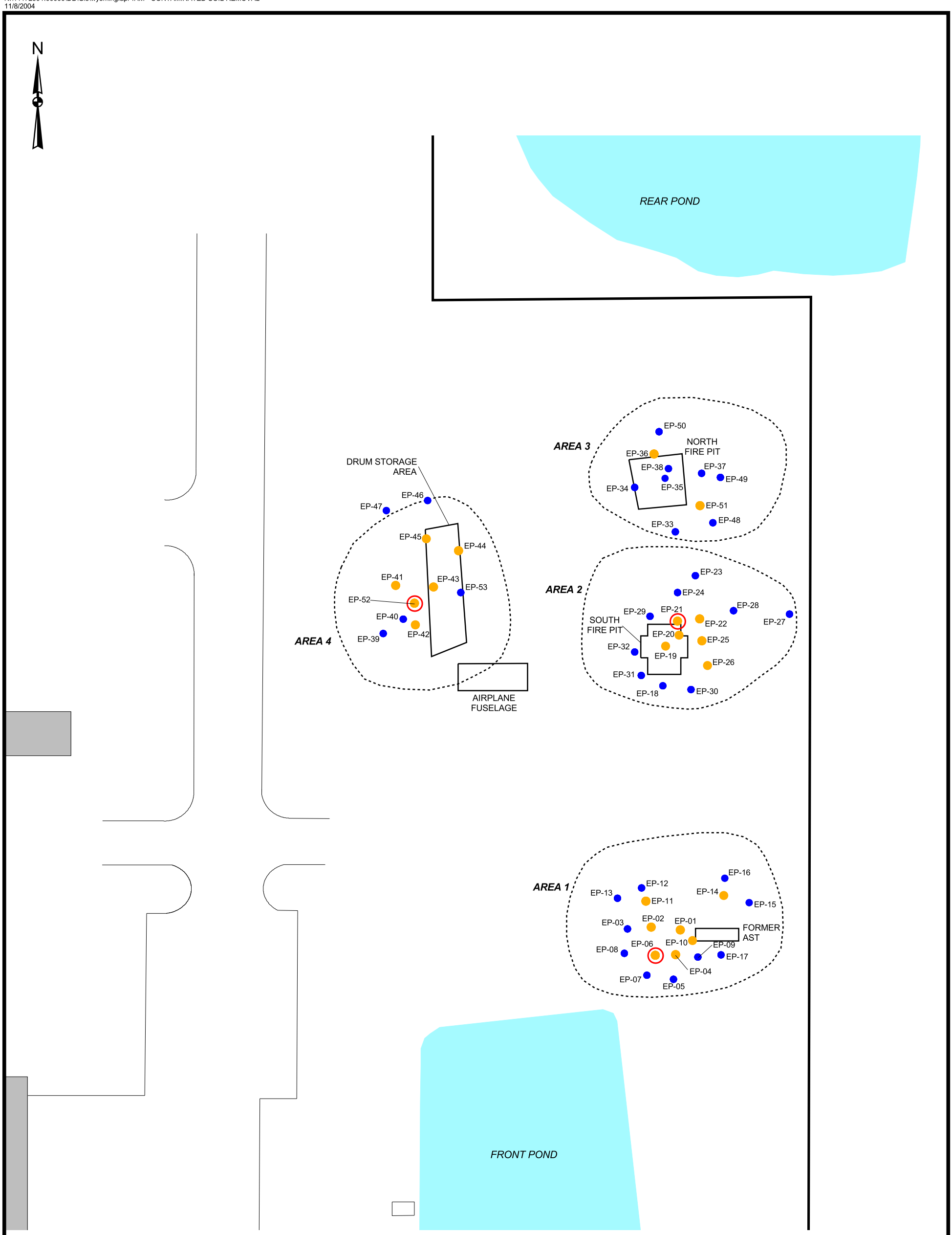
90 0 90 Feet

URS

WYOMING COUNTY FIRE TRAINING CENTER
GROUNDWATER ELEVATION CONTOUR MAP (07/09/09)

FIGURE 2

N:\11172991.00000\DB\Gis\wyoming.apr IRM - CONTAMINATED SOIL REMOVAL
11/8/2004



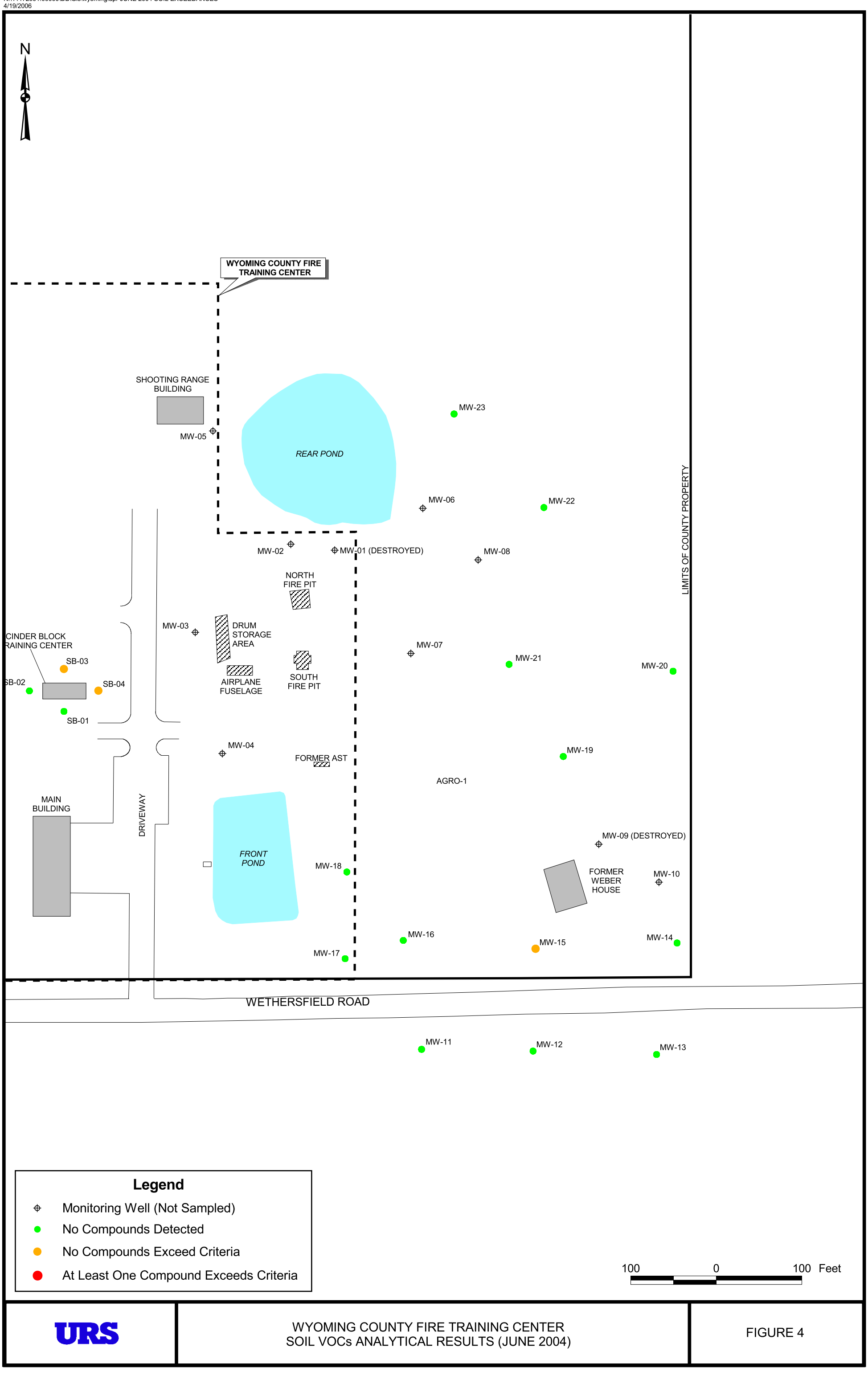
Legend

- OVA Reading < 10 ppm
- OVA Reading > 10 ppm
- VOCs Exceed TAGM 4046 Criteria

40 0 40 Feet

URS	WYOMING COUNTY FIRE TRAINING CENTER LIMITS OF SOIL CONTAMINATION (2001 RI) (ABOVE THE SHALLOW GROUNDWATER SURFACE)	FIGURE 3

N:\11172991.00000\DB\Gis\wyoming.apr JUNE 2004 SOIL EXCEEDANCES
4/19/2006



URS

WYOMING COUNTY FIRE TRAINING CENTER
SOIL VOCs ANALYTICAL RESULTS (JUNE 2004)

FIGURE 4

N:\11172991.00000\DB\Gis\wyoming.apr 2001 GROUNDWATER EXCEEDANCES
4/19/2006

N

WYOMING COUNTY FIRE TRAINING CENTER

SHOOTING RANGE BUILDING

MW-05

MW-01

1,1,1-Trichloroethane, 378.6
1,1,2-Trichloroethane, 95.9
1,1-Dichloroethane, 37.4
1,1-Dichloroethene, 23.3
1,2-Dichloroethene (cis), 1296.2
Tetrachloroethene, 4069.1
Trichloroethene, 21.3

REAR POND

MW-06

1,1,1-Trichloroethane, 27.7
1,2-Dichloroethene (cis), 21.4
Tetrachloroethene, 68.0

MW-02

1,1,1-Trichloroethane, 45.3
1,1-Dichloroethane, 11.3
1,2-Dichloroethene (cis), 273.9
Tetrachloroethene, 371.0
Trichloroethene, 76.6

MW-08

NORTH FIRE PIT

MW-07

1,1,1-Trichloroethane, 1252.1
1,1-Dichloroethane, 155.2
1,2-Dichloroethene (cis), 2132.9
Benzene, 2.1
Tetrachloroethene, 7414.6
Trichloroethene, 148.7
Vinyl chloride, 5.1

MW-03

DRUM STORAGE AREA

AIRPLANE FUSELAGE

SOUTH FIRE PIT

CINDER BLOCK TRAINING CENTER

LIMITS OF COUNTY PROPERTY

MW-04

FORMER AST

WEBER WELL

1,1,1-Trichloroethane, 576.3
1,1-Dichloroethane, 27.7
1,2-Dichloroethene (cis), 313.6
Tetrachloroethene, 1525.9
Trichloroethene, 72.3

AGRO-1

1,1,1-Trichloroethane, 247.8
1,1-Dichloroethane, 67.4
1,2-Dichloroethene (cis), 46.8
Tetrachloroethene, 148.9

MAIN BUILDING

DRIVEWAY

FRONT POND

MW-09

MW-10

WEBER HOUSE

WETHERSFIELD ROAD

SPRING

Legend

- Spring Location
- No Compounds Detected
- No Compounds Exceed Criteria
- At Least One Compound Exceeds Criteria

MW-02
1,1,1 - Trichloroethane, 45.3

Location ID
Compound Exceeding Criteria
Concentration (UG/L)

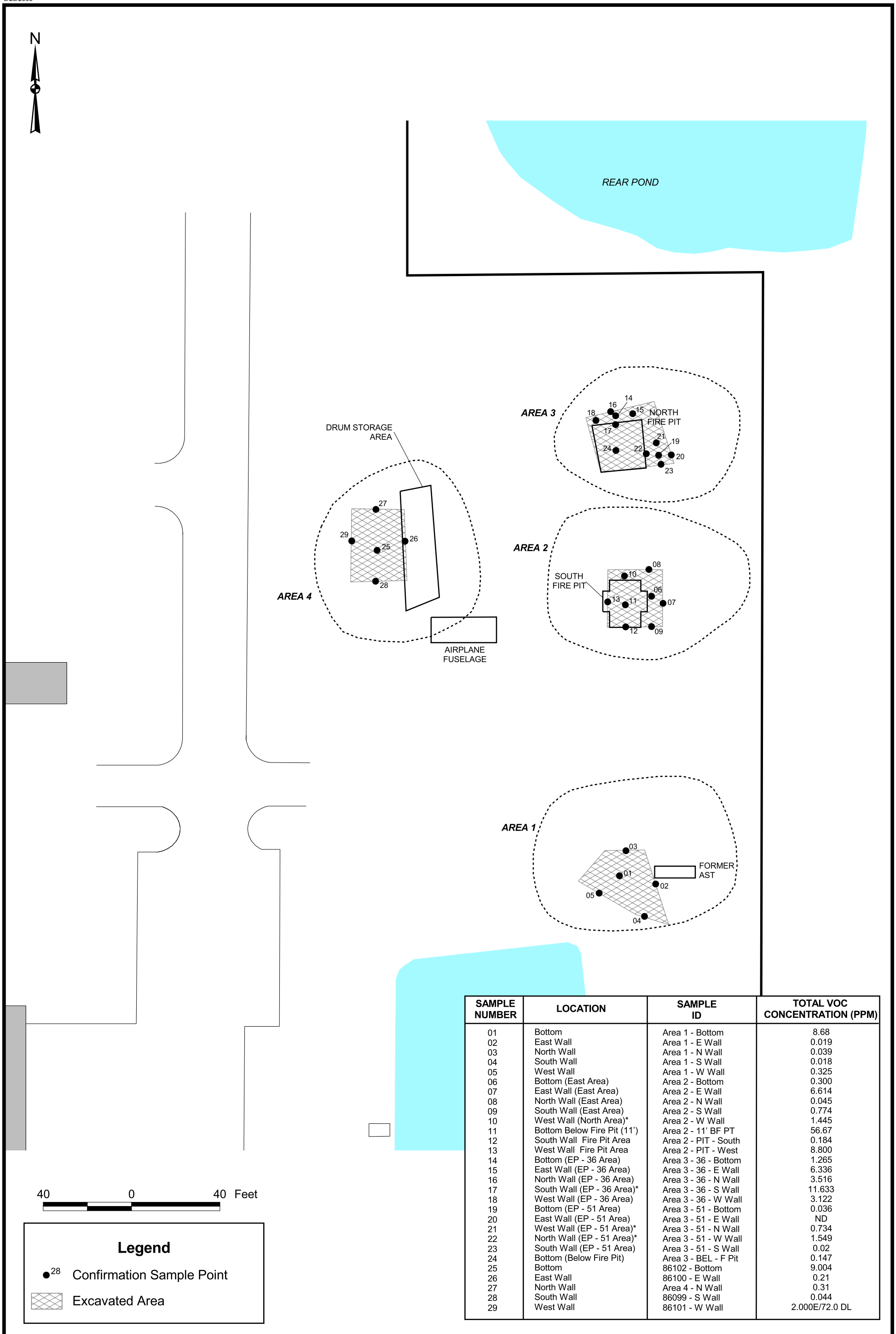
100 0 100 Feet

URS

WYOMING COUNTY FIRE TRAINING CENTER
GROUNDWATER ANALYTICAL RESULTS (SEPTEMBER - NOVEMBER 2001)

FIGURE 5

N:\11172991.00000\DB\Gis\wyoming.apr CONFIRMATORY SAMPLE RESULTS
3/28/2005



SAMPLE NUMBER	LOCATION	SAMPLE ID	TOTAL VOC CONCENTRATION (PPM)
01	Bottom	Area 1 - Bottom	8.68
02	East Wall	Area 1 - E Wall	0.019
03	North Wall	Area 1 - N Wall	0.039
04	South Wall	Area 1 - S Wall	0.018
05	West Wall	Area 1 - W Wall	0.325
06	Bottom (East Area)	Area 2 - Bottom	0.300
07	East Wall (East Area)	Area 2 - E Wall	6.614
08	North Wall (East Area)	Area 2 - N Wall	0.045
09	South Wall (East Area)	Area 2 - S Wall	0.774
10	West Wall (North Area)*	Area 2 - W Wall	1.445
11	Bottom Below Fire Pit (11')	Area 2 - 11' BF PT	56.67
12	South Wall Fire Pit Area	Area 2 - PIT - South	0.184
13	West Wall Fire Pit Area	Area 2 - PIT - West	8.800
14	Bottom (EP - 36 Area)	Area 3 - 36 - Bottom	1.265
15	East Wall (EP - 36 Area)	Area 3 - 36 - E Wall	6.336
16	North Wall (EP - 36 Area)	Area 3 - 36 - N Wall	3.516
17	South Wall (EP - 36 Area)*	Area 3 - 36 - S Wall	11.633
18	West Wall (EP - 36 Area)	Area 3 - 36 - W Wall	3.122
19	Bottom (EP - 51 Area)	Area 3 - 51 - Bottom	0.036
20	East Wall (EP - 51 Area)	Area 3 - 51 - E Wall	ND
21	West Wall (EP - 51 Area)*	Area 3 - 51 - N Wall	0.734
22	North Wall (EP - 51 Area)*	Area 3 - 51 - W Wall	1.549
23	South Wall (EP - 51 Area)	Area 3 - 51 - S Wall	0.02
24	Bottom (Below Fire Pit)	Area 3 - BEL - F Pit	0.147
25	Bottom	86102 - Bottom	9.004
26	East Wall	86100 - E Wall	0.21
27	North Wall	Area 4 - N Wall	0.31
28	South Wall	86099 - S Wall	0.044
29	West Wall	86101 - W Wall	2.000E/72.0 DL

URS

WYOMING COUNTY FIRE TRAINING CENTER
IRM - CONTAMINATED SOIL REMOVAL
EXTENT OF REMEDIAL EXCAVATION PERFORMED

FIGURE 6

N:\11172991.00000\DB\GIS\ArcMap\TREATED SOIL DISPOSAL.mxd 9/23/2009 BJF

N

MW-05

REAR POND

2025

SW-01

MW-02

MW-01

FORMER SVE CELL

FORMER SVE CELL

FORMER SVE CELL

AREA 3

AREA 2

AREA 4

FORMER NORTH FIRE PIT

FORMER SOUTH FIRE PIT

MW-03

APPROXIMATE LIMITS OF TREATED SOIL DISPOSAL

FORMER CINDER BLOCK TRAINING CENTER

AREA 1

2035

MW-04

FORMER AST

FRONT POND

MAIN BUILDING

MW-18

Legend

2010 Topographic Elevation Contour

Excavated Area

40 0 40 Feet

URS

WYOMING COUNTY FIRE TRAINING CENTER
TREATED SOIL DISPOSAL AREA

FIGURE 7

N:\11172991.00000\DB\Gis\wyoming.apr REMEDIAL ALTERNATIVE
5/2/2007

N

Inset Map

FIRE PIT

SOUTH FIRE PIT

MW-07, 2,024.24

MW-21, 2,022

IW 15 IW 16 IW 3 IW 7 IW 20 IW 17 IW 14 IW 8 IW 4 IW 22 IW 19 IW 2 IW 1 IW 5 IW 13 IW 9 IW 23 IW 21 IW 11 IW 12 IW 6 IW 18 IW 10

2020 2025 2030

WYOMING COUNTY FIRE TRAINING CENTER

2040 2035 2030 2025

SHOOTING RANGE BUILDING

MW-05

REAR POND, 2020.02

MW-23

MW-06

MW-22

LIMITS OF COUNTY PROPERTY

MW-02

MW-01 (DESTROYED)

AREA 2

See Inset Map

MW-08

NORTH FIRE PIT

SOUTH FIRE PIT

MW-07

DRUM STORAGE AREA

MW-03

AIRPLANE FUSELAGE

CINDER BLOCK TRAINING CENTER

MW-21

MW-20

MW-04

FORMER AST

MW-19

AGRO-1

MAIN BUILDING

DRIVEWAY

FRONT POND, 2031.20

MW-18

WEBER WELL

MW-09 (DESTROYED)

MW-10

AREA 1

MW-16

MW-15

MW-14

MW-17

A

A'

WETHERSFIELD ROAD

MW-11

MW-12

MW-13

B

B'

SPRING

2035 2030 2025 2020 2015 2010 2005 2000 1995 1990

Legend

- Injection Well (ex. IW-1)
- Monitoring Well
- Spring Location
- Permeable Reactive Wall Location
- Limit of In-Situ Chemical Oxidation
- 2010 Topographic Elevation Contour

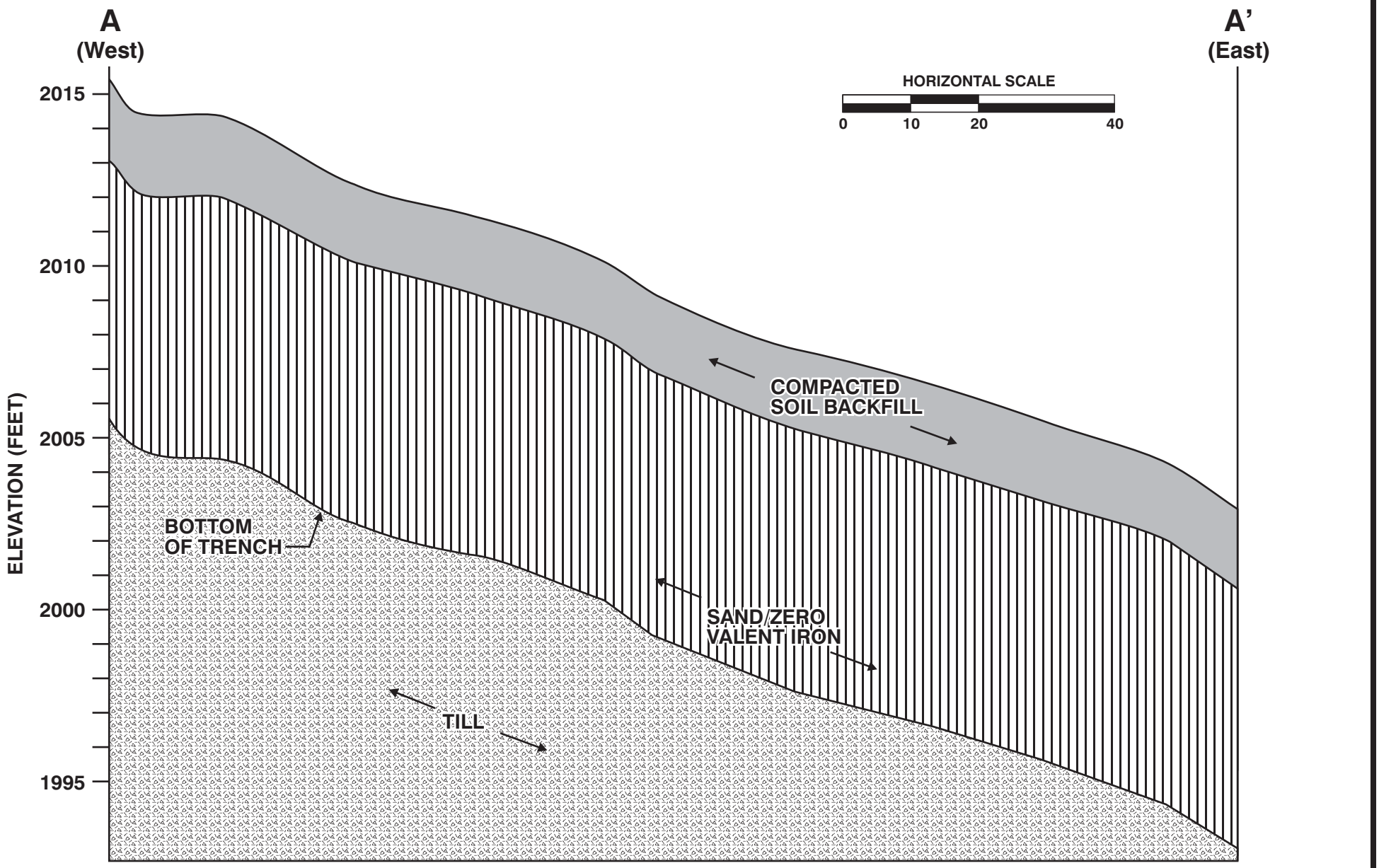
100 0 100 Feet

URS

WYOMING COUNTY FIRE TRAINING CENTER
REMEDIAL ALTERNATIVE (AS BUILT)

FIGURE 8

AG19745A-11172991-121410-GCM

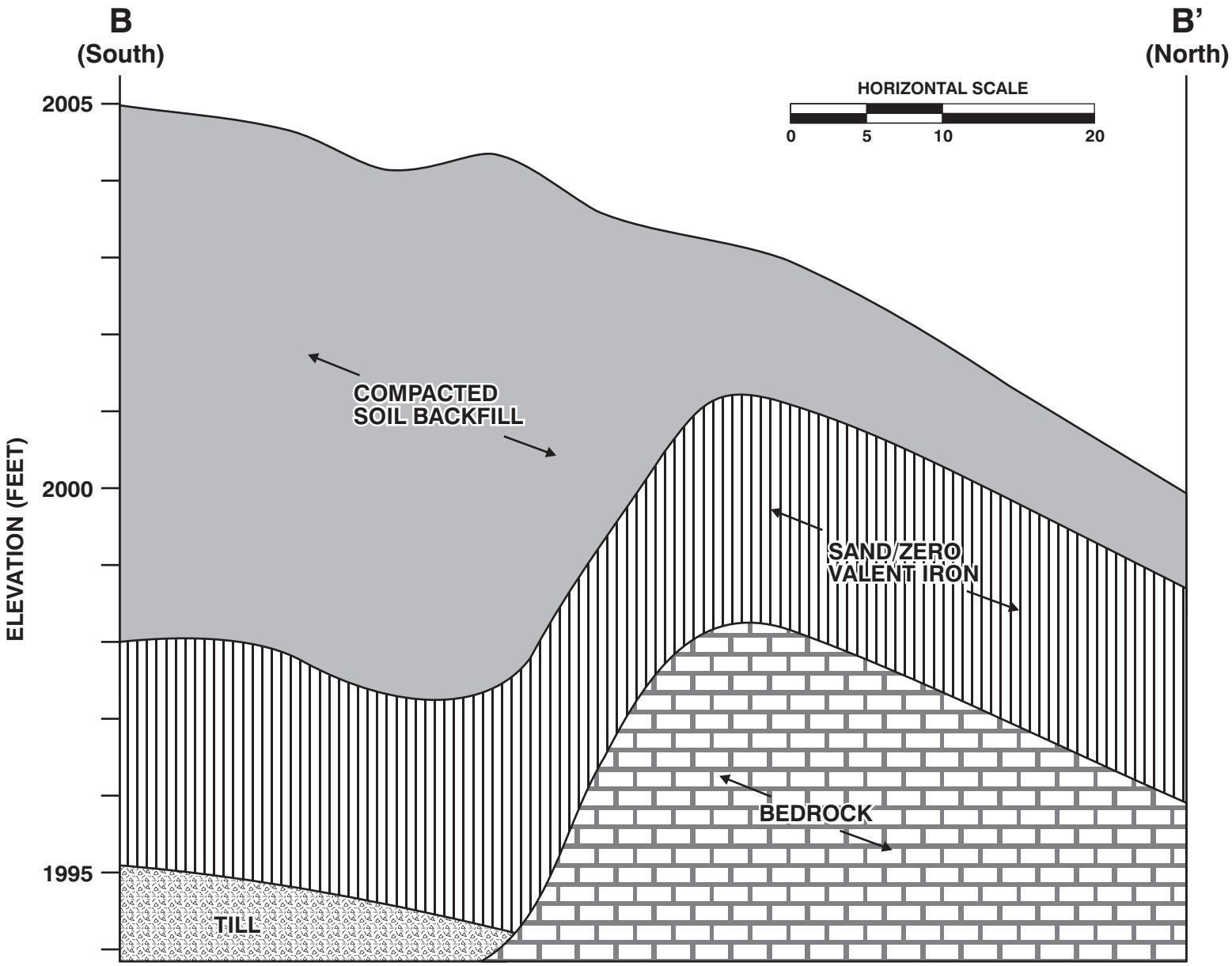


URS

WYOMING COUNTY FIRE TRAINING CENTER
NORTH PERMEABLE REACTIVE WALL CROSS SECTION

FIGURE 9

AG19737-11172991-041907-GCM



URS

WYOMING COUNTY FIRE TRAINING CENTER
SOUTH PERMEABLE REACTIVE WALL CROSS SECTION

FIGURE 10

N

NORTH POND

REAR POND
(SURFACE WATER)

VOCs:
Tetrachloroethene, 6.4

WYOMING COUNTY FIRE TRAINING CENTER

FORMER AGRO PROPERTY

LIMITS OF COUNTY PROPERTY

MW-07

VOCs:
1,1-Dichloroethane, 26
1,1,1-Trichloroethane, 120
1,2-Dichloroethene (total), 130
Tetrachloroethene, 830
Trichloroethene, 48

SHOOTING RANGE BUILDING

MW-05

REAR POND

MW-23

ROCK WELL2

MW-06

MW-22

SCHELL POND

MW-02

VOCs:
1,2-Dichloroethene (total), 63
Tetrachloroethene, 25
Toluene, 7
Trichloroethene, 39

MW-01

MW-08

MW-03

MW-19

VOCs:
1,1-Dichloroethene, 22
1,1,1-Trichloroethane, 36
Tetrachloroethene, 25

CINDER BLOCK TRAINING CENTER

MW-21

MW-20

MW-04

FORMER WEBER PROPERTY

MAIN BUILDING

DRIVEWAY

FRONT POND

MW-18

ROCK WELL1

MW-09

RESW-01

SCHELL RESIDENCE

MW-10

FORMER WEBER HOUSE

MW-16

MW-17

MW-14

SEEP

DITCH

WETHERSFIELD ROAD

MW-11

MW-13

BECKER RESIDENCE

UNDERGROUND PIPE

BECKER WELL

MW-15

VOCs:
1,1,1-Trichloroethane, 240
1,1-Dichloroethane, 29
Tetrachloroethene, 240
Trichloroethene, 12

MW-12

VOCs:
1,1,1-Trichloroethane, 26
1,2-Dichloroethene (total), 20
Tetrachloroethene, 16

SPRING

VOCs:
1,1-Dichloroethane, 13
1,1,1-Trichloroethane, 88
1,2-Dichloroethene (total), 73
Tetrachloroethene, 31

BECKER POND

Legend

- Spring
- Former Supply From Spring (Abandoned)
- Monitoring Well (Not Sampled)
- Monitoring Well (Damaged - Not Usable)
- No Compounds Detected
- No Compounds Exceed Criteria
- At Least One Compound Exceeds Criteria

MW-15
Tetrachloroethene, 240

Location ID — Detected Compound — Concentration (UG/L)

200 0 200 Feet

WYOMING COUNTY FIRE TRAINING CENTER
GROUNDWATER CONTAMINATION SUMMARY (JULY 2009)

URS

FIGURE 11

N:\11172991.00000\DB\GIS\ArcMap\2009_Quarter3_Results_rev.mxd 10/15/2009 11:21:01 AM Lumb, M

N

NORTH POND

WYOMING COUNTY FIRE TRAINING CENTER

FORMER AGRO PROPERTY

LIMITS OF COUNTY PROPERTY

SHOOTING RANGE BUILDING

MW-05

REAR POND

MW-23

ROCK WELL2

SED-01/SW-01

MW-06

MW-22

MW-02

MW-01 (DESTROYED)

MW-08

SCHELL POND

SED-02/SW-02

CINDER BLOCK TRAINING CENTER

SB-03

SB-02

SB-04

SB-01

MW-03

MW-07

MW-21

MW-20

MW-04

MW-19

AGRO-1

MAIN BUILDING

DRIVEWAY

FRONT POND

MW-18

ROCK WELL1

MW-09 (DESTROYED)

FORMER WEBER PROPERTY

RESW-01

WEBER WELL

MW-10

SCHELL HOUSE

MW-16

MW-15

FORMER WEBER HOUSE

MW-14

SEEP

DITCH

MW-17

WETHERSFIELD ROAD

MW-11

MW-12

MW-13

SPRING

FORMER SUPPLY FROM SPRING

BECKER RESIDENCE

UNDERGROUND PIPE

BECKER WELL

POND INLET

BECKER POND

Legend

- Existing Monitoring Well
- Surface Water / Sediment Sample Location
- Spring Location
- Existing Water Supply Well
- Former Supply From Spring (Abandoned)
- Soil Boring Location

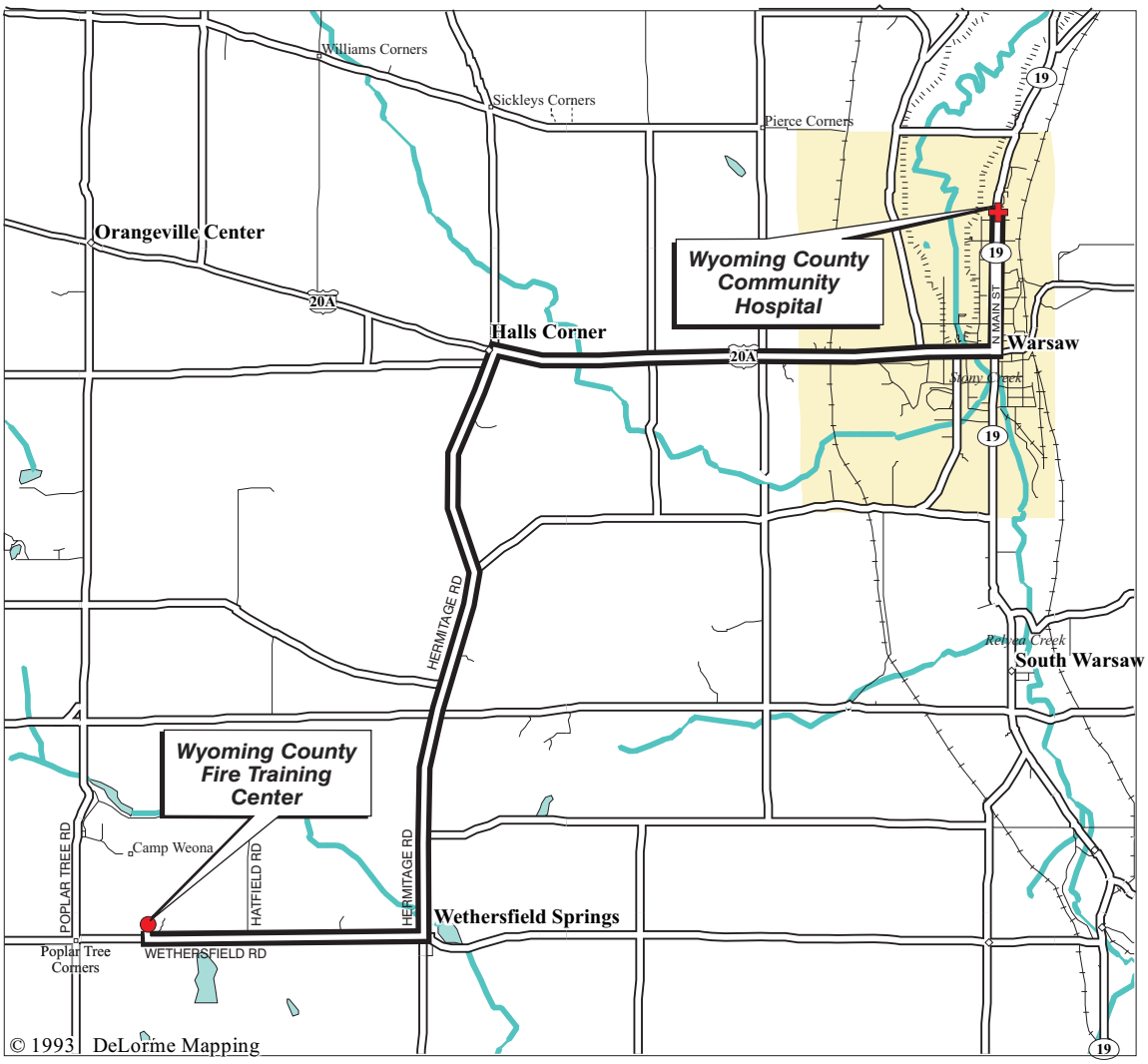
200 0 200 Feet

WYOMING COUNTY FIRE TRAINING CENTER GROUNDWATER MONITORING WELL NETWORK AND SAMPLING LOCATION PLAN

URS

FIGURE 12

N:\11172991.00000\DB\GIS\ArcMap\MW_SURFACE WATER SAMPLING LOCATIONS (REVISED).mxd 7/24/2009



APPROXIMATE SCALE IN FEET

1000 0 1000

Start out going East on Wethersfield Rd toward Hatfield Rd for approximately 1.74 miles. Then turn left onto Hermitage Rd. approximately 3.92 miles. Then turn right onto US-20A for approximately 3.62 miles. Then turn left onto NY-19/ N. Main St. for approximately 1.07 miles and the Hospital will be on the right hand side.

Wyoming County
Community Hospital
400 N. Main St.
Warsaw, NY 14569

Main: (585) 786-2233
Fax: (585) 786-1226

AG18068-11172991-041603-CYT

URS

WYOMING COUNTY FIRE TRAINING CENTER ROUTE TO THE HOSPITAL

FIGURE 13

APPENDICES

APPENDIX A

METES AND BOUNDS

AND

DECLARATION OF COVENANTS AND RESTRICTIONS

METES AND BOUNDS

SUGGESTED DESCRIPTION OF LAND OF
COUNTY OF WYOMING
SITUATE ON LOT 32, RANGE 2, TOWNSHIP 8
TOWN OF WETHERFIELD
COUNTY OF WYOMING, STATE OF NEW YORK

J.GILLEN MAP 2009-124-S
"VOLUNTARY SITE"

Commencing in the center of Wethersfield Road on Lot 32 in the Town of Wethersfield at the southeast corner of land described in a deed from Irvin Domes to County of Wyoming in Liber 374 at page 411. Said point being 2864.5 east of the southwest corner of Lot 32 at the intersection of the centerlines of Wethersfield Road and Poplar Tree Road.

Thence N00-37-00E leaving the road along the east line of Liber 374 at page 411 a distance of 259.00 feet to an iron pin at the point of beginning of the parcel herein to be described.

Thence N90-00-00W passing thru lands deeded to County of Wyoming as aforesaid a distance of 214.82 feet to an iron pin.

Thence N03-20-00E 291.48 feet to an iron pin.

Thence N90-00-00E to and along a north line of Liber 374 at page 411 a distance of 201.00 feet to an iron pin at a northeast corner thereof.

Thence S00-37-00W along the east line of Liber 374 at page 411 a distance of 291.00 feet to the point of beginning.

Containing within said bounds 1.39 acres of land.
Intending to describe a portion of the land conveyed by Irvin Domes to County of Wyoming in Liber 374 at page 411.

SUGGESTED DESCRIPTION OF LAND OF
FORMER WEBER PROPERTY
SITUATE ON LOT 32, RANGE 2, TOWNSHIP 8
TOWN OF WETHERFIELD
COUNTY OF WYOMING, STATE OF NEW YORK

Beginning at the southeast corner of land described in a deed from Mark & Dawn Weber to County of Wyoming in liber 688 at page 758, and being in the center of Wethersfield road

Thence N 90°00'00" W along the center of the road a distance of 200.00 feet to the southwest corner thereof, and being 3058 feet east of the intersection of the centerlines of Wethersfield Road and Poplar Tree Road;

Thence N 00°37'00" E leaving the road a distance of 218.00 feet;

Thence N 90°00'00" E a distance of 197.95 feet;

Thence S 00°04'40" W a distance of 217.99 feet to the point of beginning,

Containing within said bounds 1.00 Acres of land.

SUGGESTED DESCRIPTION OF LAND OF
FORMER ARGO PROPERTY
SITUATE ON LOT 32, RANGE 2, TOWNSHIP 8
TOWN OF WETHERSFIELD
COUNTY OF WYOMING, STATE OF NEW YORK

Beginning in the center of Wethersfield Road at the southwest corner of land deeded by Vincent Argo and others to County of Wyoming in liber 688 at page 761, and being the southeast corner of land deeded to the County of Wyoming in liber 374 at page 411, said point being 2864.5 feet east of the southwest corner of Lot 32 at the intersection of the centerlines of Wethersfield Road and Poplar Tree Road.

Thence N 00°37'00" E leaving the road along the west line of liber 688 at page 761 a distance of 550.00 feet;

Thence N 90°00'00" W a distance of 165.00 feet;

Thence N 00°37'00" E a distance of 290.00 feet;

Thence N 90°00'00" E a distance of 550.60 feet to the east line of liber 688 at page 761;

Thence S 00°04'40" W a distance of 621.97 feet to the northeast corner of land deeded by Mark & Dawn Weber to the County of Wyoming in liber 688 at page 758;

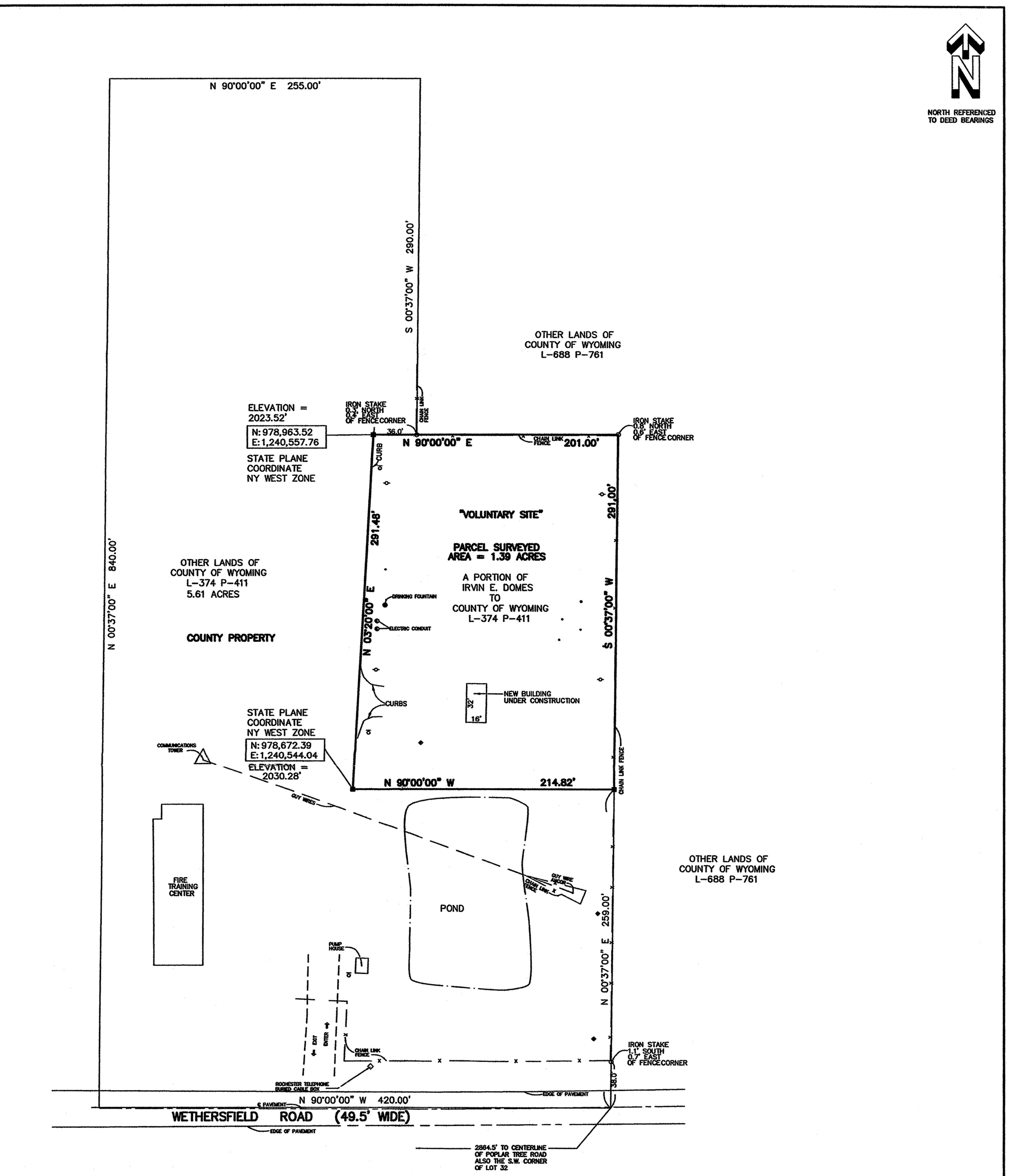
Thence N 90°00'00" W a distance of 197.95 feet to the northwest corner of liber 688 at page 758;

Thence S 00°37'00" W a distance of 218.00 feet to the center of Wethersfield Road;

Thence N 90°00'00" W along the center of the road a distance of 193.50 feet to the point of beginning,

Containing within said bounds 7.61 Acres of land.

Intending to describe a portion of the land conveyed by Vincent Argo and others to County of Wyoming in liber 688 at page 761.



STATE OF NEW YORK
JOHN F. GILLEN
License No. 049649
Licensed Land Surveyor

LEGEND OF SYMBOLS
- LIGHT POST
- FIRE HYDRANT
- MONITORING WELL
- GROUND WATER TEST WELL
- FOUND IRON STAKE
- SET IRON STAKE

2009-124-S

MAP REVISED 2-9-2011

LAND SEPARATION MAP – LAND OF COUNTY OF WYOMING
SITUATE ON LOT 32, RANGE 2, TOWNSHIP 8 TOWN OF WETHERSFIELD COUNTY OF WYOMING, STATE OF NEW YORK

JOHN F. GILLEN–LAND SURVEYOR NO. 49649
7 PERRY AVE., P.O. BOX 53 WARSAW N.Y.
(585)786-3960

SEPTEMBER 22, 2009 SCALE 1 INCH = 60 FEET

17 X 22

YMCA OF GREATER BUFFALO
L–226 P–346

WOODED

S89°37'40"E 778.00'

N89°37'40"W
656.00'

WOODED

WOODED

WOODED

N00°36'00"E 1851.95'
REC. 1851.9'

PARCEL SURVEYED
AREA = 41.23 ACRES

REC. 2686.6'
2686.60'
S00°04'40"W 2468.60'
S00°04'40"W
2682.30'

SANDRA L. DEHN
TO
MARK H. & DAWN M. WEBER
L–643 P–138 12–21–1995

POND

OLD WIRE FENCE IN TREES & POSTS ALONG LINE

UNRESTRICTED USE AREA

VINCENT P. & MARY A. ARGO
MARK H. & DAWN M. WEBER
GILBERT P. JUDD
TO
COUNTY OF WYOMING
L–688 P–761 10–28–2003

CURRENT OWNER
COUNTY OF WYOMING

WOODED

WOODED

BRUSH

REC. 255.0'
N90°00'00"E 255.04'

550.60'

NORTH LINE
RESTRICTED USE AREA

CHAINLINK FENCE

235.55'

42.1' 32.0' 32.1' 20.4' 31.4'

290.00'

HSE # 3647

BRUSH

REC. 290.0'
N00°37'00"E

POND

WELL

RESTRICTED AREA
FORMER ARGO PROPERTY
AREA = 7.61 ACRES

N90°00'00"W 165.00'

REC. 165.0'

GAR.

24.1' 23.2'

13.36'

CHAINLINK FENCE

NIAGARA MOHAWK EASEMENT
L–500 P–86

S00°37'00"W
840.00'

550.00'

REC. 550.0'
N00°37'00"E

OVERHEAD UTILITY LINES

REC. 200.0'
S90°00'00"W 197.95'

MONITORING WELL

WELL

218.00'

CURRENT OWNER
COUNTY OF WYOMING

27.76'

2.25'

RESTRICTED AREA
FORMER WEBER PROPERTY
AREA = 1.0 ACRES
MARK H. & DAWN M. WEBER
TO
COUNTY OF WYOMING
L–688 P–758 10–28–2003

217.99

N00°04'40"E

621.97'

S00°04'40"W

JOHN SCHELL
L–644 P–266

LANDWEST INC.
L–663 P–317

IRVIN E. DOMES
TO
COUNTY OF WYOMING
L–374 P–411

LOT 32

POOL

APPROXIMATE LOCATION
PERMEABLE
REACTIVE WALL

EASEMENT TO ROCHESTER TELEPHONE
CORP. L–382 P–570
(CABLE TO BE BURIED WITHIN
35' FROM THE CENTER OF HIGHWAY)

GRAVEL DRIVE

S00°37'00"W

40.0' 710.0' 1070.0' 375.0'

FRANK WOOD
TO
THE COUNTY OF WYOMING
L–218 P–124

LOT 24

38.0'

S90°00'00"W 420.00'

S90°00'00"W 193.50'

S90°00'00"W 200.00'

S90°00'00"W 656.00'

℄ OF TRAVELED ROAD

24.75'

WETHERSFIELD ROAD

N90°00'00"W 393.50'

(WIDTH VARIES)

2864.5' TO CENTERLINE
OF POPLAR TREE ROAD
ALSO THE S.W. COR.
OF LOT 32

LOT 31

APPROXIMATE LOCATION
PERMEABLE REACTIVE WALL
BASED ON URS SURVEY DATA
(NOT FIELD VERIFIED)

LOT 23

REVISED 2–9–2011 TO SHOW
RESTRICTED AREA

NOTE:
NEW IRON STAKES SHOWN THUS: (■)
EXISTING IRON STAKES SHOWN THUS: (○)

REFERENCE DATA:
CROSSROADS ABSTRACT CO., INC.
ABSTRACT NO. WY12454 DATED 9–12–2003

STATE OF NEW YORK
JOHN F. GILLEN
No. 049649
LICENSED LAND SURVEYOR

2003–184–S

SURVEY MAP – LAND OF VINCENT ARGO & MARK WEBER SITUATE ON LOT 32, RANGE 2, TOWNSHIP 8 TOWN OF WETHERSFEILD COUNTY OF WYOMING, STATE OF NEW YORK

JOHN F. GILLEN–LAND SURVEYOR NO. 49649
7 PERRY AVE., P.O. BOX 53 WARSAW N.Y.
(585)786–3960

OCT. 10, 2003 SCALE 1 INCH = 100 FEET

DECLARATION OF COVENANTS AND RESTRICTIONS

VOLUNTARY SITE

COUNTY OF WYOMING
OFFICE OF THE CLERK
RHONDA PIERCE, COUNTY CLERK
143 NORTH MAIN STREET, WARSAW, N.Y. 14569
Email: rpierce@wyomingco.net
PHONE: (585) 786-8810 FAX: (585) 786-3703

WYOMING COUNTY CLERK RECORDING PAGE

INSTRUMENT # 2806 TYPE Declaration of Covenants & Restrictions NUMBER OF PAGES 17

(INCLUDING THIS PAGE)

RETURN TO: Eric T. Dadd, Wyo. Co. Atty
11 Exchange Street
Attica, NY 14011-0238

SPACE BELOW RESERVED FOR COUNTY CLERK'S USE ONLY

MORTGAGE AMOUNT SECURED: $_____

TAX DISTRICT _____
(Check if to be apportioned)

DOCUMENT # 2806
MISCELLANEOUS RECORD
08/12/2011 01:55:29 P.M.
RECEIPT: 5656 FEE: $.00
WYOMING COUNTY CLERK
LIBER: 74 PAGE: 1
of: MISC RECORD BOOK

RECORDING TAX RECEIPT

Basic $_____

Additional $_____

Special $_____

Local $_____

TOTAL $_____

STATE OF NEW YORK
COUNTY OF WYOMING

State of New York
County of Wyoming

I do hereby certify that I have received the amounts cited above on the within Mortgage being the amount of the recording tax imposed thereon and paid at the time of recording.

Rhonda Pierce

Rhonda Pierce, Wyoming County Clerk

DO NOT DETACH THIS PAGE: This sheet constitutes the Clerk's endorsement required by Section 319 of the Real Property Tax Law of the State of New York.

Rhonda Pierce

Rhonda Pierce, Wyoming County Clerk

DECLARATION of COVENANTS and RESTRICTIONS

THIS COVENANT, made the 26th day of July 2011, by the County of Wyoming (the "County"), a municipal corporation having an office for the transaction of business at 143 North Main Street, Warsaw, New York 14569.

WHEREAS, the County is the owner of property located at 3651 Wethersfield Road in the Town of Wethersfield, County of Wyoming, State of New York, which is part of lands conveyed by Irwin E. Domes to the County by deed dated February 10, 1970 and recorded in the Wyoming County Clerk's Office on February 16, 1970 in Liber 374 of Deeds at Page 411, and which is identified by tax parcel number 107.-2-3 ("County Property"); and

WHEREAS, a portion of the County Property is the subject of Voluntary Cleanup Agreement B9-0623-02-09 ("Voluntary Site"), dated October 24, 2002, executed by the Chairman of its Board of Supervisors as part of the New York State Department of Environmental Conservation (the "Department") Voluntary Cleanup Program (for purposes of this Declaration references to "County Property" are meant to include the Voluntary Site); and

WHEREAS, the Department set forth a remedy to eliminate or mitigate all significant threats to the environment presented by hazardous waste disposal at the Voluntary Site and such remedy requires that certain areas of the County Property be subject to restrictive covenants and the Site Management Plan dated June 2011 ("Site Management Plan").

NOW, THEREFORE, the County, for itself and its successors and/or assigns, covenants that:

First, the County Property including the Voluntary Site subject to this Declaration of Covenants and Restrictions are as shown on the legal descriptions attached to this Declaration as Exhibit "A" and on the survey attached to this Declaration as Exhibit "B" and made a part hereof.

Second, unless prior written approval by the New York State Department of Environmental Conservation or, if the Department shall no longer exist, any New York State agency or agencies subsequently created to protect the environment of the State and the health of the State's citizens, hereinafter referred to as "the Relevant Agency," is first obtained, no person shall engage in any activity that will, or that reasonably is anticipated to, prevent or interfere significantly with any proposed, ongoing or completed program at the Voluntary Site, or that will, or is reasonably foreseeable to, expose the public health or the environment to a significantly increased threat of harm or damage.

Third, the owner of the County Property shall prohibit the County Property from ever being used for purposes other than for industrial or commercial use without the express written waiver of such prohibition by the Department or the Relevant Agency.

Fourth, the owner of the County Property shall prohibit the use of the groundwater underlying the County Property without treatment rendering it safe for drinking water or industrial purposes, as appropriate, and provided the user first obtains permission to do so from the Department or the Relevant Agency.

Fifth, the owner of the County Property shall comply with the Site Management Plan (SMP) with respect to the Voluntary Site and the remaining County property as specified in the SMP. The cover page and table of contents for the SMP are attached as Exhibit "C", and continue in full force and effect any institutional and engineering controls the Department required the County to put into place and maintain unless the owner first obtains permission to discontinue such controls from the Department or the Relevant Agency.

Sixth, in the event that buildings are constructed on the County Property a Department approved evaluation of potential sub-slab impacts will be required. Provision for mitigation, such as installation of a vapor barrier and subslab vapor system or other engineering controls shall be implemented on all structures prior to occupancy absent written prior approval of the Department or the Relevant Agency.

Seventh, the owner of the County Property shall allow the Department, its agents, employees, or other representatives of the State to enter and inspect the County Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

Eighth, this Declaration is and shall be deemed a covenant that shall run with the land and shall be binding upon all future owners of the County Property and shall provide that the owner, and its successors and assigns, consents to the enforcement by the Department or the Relevant Agency of the prohibitions and restrictions that are required to be recorded, and hereby covenants not to contest the authority of the Department or the Relevant Agency to seek enforcement.

Ninth, any deed of conveyance of the County Property, or any portion thereof, shall recite, unless the Department or the Relevant Agency has consented to the termination of such covenants and restrictions, that said conveyance is subject to this Declaration of Covenants and Restrictions.

Tenth, the owner of the County Property shall notify the Department of any transfer of title of all or part of the County Property.

IN WITNESS WHEREOF, the undersigned has executed this instrument the day written below.

County of Wyoming

By _____

STATE OF NEW YORK)
) ss:
COUNTY OF ~~ERIE~~ WYOMING)

On the 26th day of July, in the year 2011, before me the undersigned, personally appeared A. Douglas Berwanger, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ capacity(ies), and that by his/~~her/their~~ signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Amy S Roth
Notary Public, State of New York

AMY S. ROTH
Notary Public, State of New York
No. 01RO5068765
Qualified in Wyoming County
Commission Expires November 04, 2014

H1570310

EXHIBIT A

EXHIBIT A

SUGGESTED DESCRIPTION OF LAND OF
COUNTY OF WYOMING
SITUATE ON LOT 32, RANGE 2, TOWNSHIP 8
TOWN OF WETHERFIELD
COUNTY OF WYOMING, STATE OF NEW YORK

J.GILLEN MAP 2009-124-S
"VOLUNTARY SITE"

Commencing in the center of Wethersfield Road on Lot 32 in the Town of Wethersfield at the southeast corner of land described in a deed from Irvin Domes to County of Wyoming in Liber 374 at page 411. Said point being 2864.5 east of the southwest corner of Lot 32 at the intersection of the centerlines of Wethersfield Road and Poplar Tree Road.

Thence N00-37-00E leaving the road along the east line of Liber 374 at page 411 a distance of 259.00 feet to an iron pin at the point of beginning of the parcel herein to be described.

Thence N90-00-00W passing thru lands deeded to County of Wyoming as aforesaid a distance of 214.82 feet to an iron pin.

Thence N03-20-00E 291.48 feet to an iron pin.

Thence N90-00-00E to and along a north line of Liber 374 at page 411 a distance of 201.00 feet to an iron pin at a northeast corner thereof.

Thence S00-37-00W along the east line of Liber 374 at page 411 a distance of 291.00 feet to the point of beginning.

Containing within said bounds 1.39 acres of land.
Intending to describe a portion of the land conveyed by Irvin Domes to County of Wyoming in Liber 374 at page 411.

SUGGESTED DESCRIPTION OF LAND OF
COUNTY OF WYOMING
SITUATE ON LOT 32, RANGE 2, TOWNSHIP 8
TOWN OF WETHERSFIELD
COUNTY OF WYOMING, STATE OF NEW YORK

J. GILLEN MAP 2009-124-S
"UNRESTRICTED AREA"

Beginning in the center of Wethersfield Road on Lot 32 in the Town of Wethersfield at the southeast corner of lands described in a deed from Irvin Domes to County of Wyoming in liber 374 at page 411. Said point being 2864.5 feet east of the southwest corner of Lot 32 at the intersection of the centerlines of Wethersfield Road and Poplar Tree Road.

Thence N 90°00'00" W along the center of the road a distance of 420.00 feet to the southwest corner of liber 374 at page 411;

Thence N 00°37'00" E leaving the road a distance of 840.00 feet to the northwest corner thereof;

Thence N 90°00'00" E a distance of 255.00 feet;
Thence S 00°37'00" W a distance of 290.00 feet;
Thence N 90°00'00" W a distance of 36.00 feet;
Thence S 03°20'00" W a distance of 291.48 feet;
Thence N 90°00'00" E a distance of 214.82 feet;
Thence S 00°37'00" W a distance of 259.00 feet;
to the point of beginning,

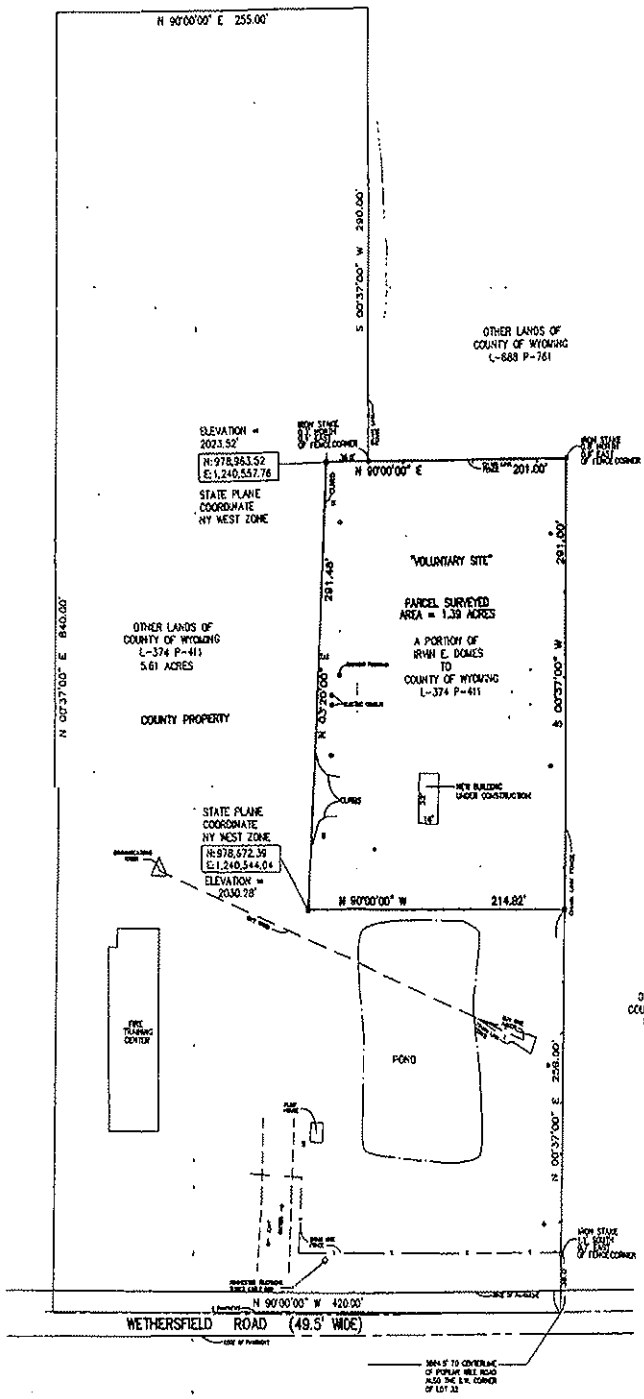
Containing within said bounds 5.61 Acres of land.

Intending to describe a portion of the land conveyed by Irvin Domes to County of Wyoming in liber 374 at page 411.

EXHIBIT B

LIBER 74 PAGE 9

LIBER 74 PAGE



LEGEND OF SYMBOLS
- LIGHT POST
- FIRE HYDRANT
- MONITORING WELL
- GROUND WATER TEST WELL
- FOUND IRON STAKE
- SET IRON STAKE

LAND SEPARATION MAP – LAND OF
COUNTY OF WYOMING
SITUATE ON LOT 32, RANGE 2, TOWNSHIP 8
TOWN OF WETHERSFIELD
COUNTY OF WYOMING, STATE OF NEW YORK

JOHN F. GILLEN–LAND SURVEYOR NO. 49649
7 PERRY AVE., P.O. BOX 53 WARSAW N.Y.
(585)786–3960

SEPTEMBER 22, 2009 SCALE 1 INCH = 60 FEET

2009-124-S

MAP REVISED 2-9-2011

altered

EXHIBIT C

EXHIBIT C

Final
Site Management Plan for Wyoming County Fire Training Area

Wethersfield, New York

NYSDEC Site No. V-00604-9

FINAL

Site Management Plan for the Wyoming County Fire Training Area Wethersfield, New York

Prepared For:

Wyoming County
143 North Main Street
Warsaw, New York 14569

Prepared By:

URS Corporation
77 Goodell Street
Buffalo, New York 14203

June 2014

G-38001

FINAL

Wyoming County Fire Training Center

WYOMING COUNTY, NEW YORK

Site Management Plan

NYSDEC Site Number: V-00604-9

Prepared for:

Wyoming County
143 North Main Street
Warsaw, New York 14569

Prepared by:

URS CORPORATION
77 Goodell Street
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Revisions to Final Approved Site Management Plan:

Revision #	Submitted Date	Summary of Revision	DEC Approval Date

JUNE 2011

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DECLARATION OF COVENANTS AND RESTRICTIONS

FORMER WEBER PROPERTY

COUNTY OF WYOMING
OFFICE OF THE CLERK
RHONDA PIERCE, COUNTY CLERK
143 NORTH MAIN STREET, WARSAW, N.Y. 14569
Email: rpierce@wyomingco.net
PHONE: (585) 786-8810 FAX: (585) 786-3703

WYOMING COUNTY CLERK RECORDING PAGE

INSTRUMENT # 2805 TYPE Declaration of Covenants & Restrictions NUMBER OF PAGES 8

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Attica, NY 14011-0238

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RECEIPT: 5656 FEE: $.00
WYOMING COUNTY CLERK
LIBER: 73 PAGE: 975
of: MISC RECORD BOOK

RECORDING TAX RECEIPT

Basic $_____

Additional $_____

Special $_____

Local $_____

TOTAL $_____

STATE OF NEW YORK
COUNTY OF WYOMING

State of New York
County of Wyoming

I do hereby certify that I have received the amounts cited above on the within Mortgage being the amount of the recording tax imposed thereon and paid at the time of recording.

Rhonda Pierce
Rhonda Pierce, Wyoming County Clerk

DO NOT DETACH THIS PAGE: This sheet constitutes the Clerk's endorsement required by Section 319 of the Real Property Tax Law of the State of New York.

Rhonda Pierce
Rhonda Pierce, Wyoming County Clerk

DECLARATION of COVENANTS and RESTRICTIONS

THIS COVENANT, made the 26th day of July 2011, by the County of Wyoming (the "County"), a municipal corporation having an office for the transaction of business at 143 North Main Street, Warsaw, New York 14569.

WHEREAS, the County is the owner of property located at 3689 Wethersfield Road in the Town of Wethersfield, County of Wyoming, State of New York, which was conveyed by Mark Weber to the County by deed dated October 28, 2003, and recorded in the Wyoming County Clerk's Office on October 28, 2003 at Page 758 Liber 688 of Deeds and which is identified by tax parcel number 107.-2-4.2 (the "Property"); and

WHEREAS, the County entered into Voluntary Cleanup Agreement B9-0623-02-09 on October 24, 2002 to address environmental issues on a portion of adjacent property identified as 3651 Wethersfield Road, tax parcel number 107.-2-3, pursuant to the New York State Department of Environmental Conservation (the "Department") Voluntary Cleanup Program ("Voluntary Site"); and

WHEREAS, the Department set forth a remedy to eliminate or mitigate all significant threats to the environment presented by hazardous waste disposal at the Voluntary Site and such remedy requires that certain areas of the Property be subject to restrictive covenants; and

WHEREAS, for the adjacent Voluntary Site, in the Office of the Wyoming County Clerk, the County recorded a Declaration of Covenants and Restrictions which requires compliance with a Site Management Plan dated June 2011 ("Site Management Plan"). Copies of the Site Management Plan may be obtained from the Department; and

WHEREAS, in the interests of safeguarding public health and the environment and to allow inspection and maintenance of monitoring wells located on the Property, the County has agreed that the Property shall be subject to certain prohibitions and restrictions.

NOW, THEREFORE, the County, for itself and its successors and/or assigns, covenants that:

First, the Property subject to this Declaration of Covenants and Restrictions is as shown on the legal description attached to this Declaration as Exhibit "A" and is identified as "Restricted Area Former Weber Property" on the survey attached to this Declaration as Exhibit "B" and made a part hereof.

Second, unless prior written approval by the New York State Department of Environmental Conservation or, if the Department shall no longer exist, any New York State agency or agencies subsequently created to protect the environment of the State and the health of

the State's citizens, hereinafter referred to as "the Relevant Agency," is first obtained, no person shall engage in any activity that will, or that reasonably is anticipated to, prevent or interfere significantly with any proposed, ongoing or completed program at the Voluntary Site or that will, or is reasonably foreseeable to, expose the public health or the environment to a significantly increased threat of harm or damage.

Third, the owner of the Property shall prohibit the use of the groundwater underlying the Property without treatment rendering it safe for drinking water or industrial purposes, as appropriate, unless the user first obtains permission to do so from the Department or the Relevant Agency.

Fourth, the owner of the Property shall not interfere with the County's compliance with the Site Management Plan, shall allow the County, the Department, its agents, employees, or other representatives of the State to enter and inspect the Property as required by the Site Management Plan for the Voluntary Site, and shall not interfere with the monitoring wells present on the Property and shall not interfere with the reactive wall.

Fifth, in the event that buildings are constructed on the Property an evaluation of potential sub-slab impacts which complies with New York State law and regulations must be performed. If required by New York State law or regulations, provision for mitigation, such as installation of a vapor barrier and subslab vapor system or other engineering controls must be implemented on all structures prior to occupancy.

Sixth, the owner of the Property shall notify the Department of any transfer of title of all or part of the Property.

Seventh, this Declaration is and shall be deemed a covenant that shall run with the land and shall be binding upon all future owners of the Property and shall provide that the owner, and its successors and assigns, consents to the enforcement by the Department or the Relevant Agency of the prohibitions and restrictions that are required to be recorded, and hereby covenants not to contest their authority to seek enforcement.

Eighth, any deed of conveyance of the Property, or any portion thereof, shall recite, unless the Department or the Relevant Agency has consented to the termination of such covenants and restrictions, that said conveyance is subject to this Declaration of Covenants and Restrictions.

IN WITNESS WHEREOF, the undersigned has executed this instrument the day written below.

County of Wyoming

By A. Douglas Berwanger

STATE OF NEW YORK)
) ss:
COUNTY OF ~~ERIE~~ WYOMING)

On the 26th day of July, in the year 2011, before me the undersigned, personally appeared A. Douglas Berwanger, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that (he)/~~she/they~~ executed the same in (his)/~~her/their~~ capacity(ies), and that by (his)/~~her/their~~ signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Amy S Roth
Notary Public, State of New York

AMY S. ROTH
Notary Public, State of New York
No. 01RO5068765
Qualified in Wyoming County
Commission Expires November 04, 2014

EXHIBIT A

EXHIBIT A

SUGGESTED DESCRIPTION OF LAND OF
FORMER WEBER PROPERTY
SITUATE ON LOT 32, RANGE 2, TOWNSHIP 8
TOWN OF WETHERFIELD
COUNTY OF WYOMING, STATE OF NEW YORK

Beginning at the southeast corner of land described in a deed from Mark & Dawn Weber to County of Wyoming in liber 688 at page 758, and being in the center of Wethersfield road

Thence N 90°00'00" W along the center of the road a distance of 200.00 feet to the southwest corner thereof, and being 3058 feet east of the intersection of the centerlines of Wethersfield Road and Poplar Tree Road;

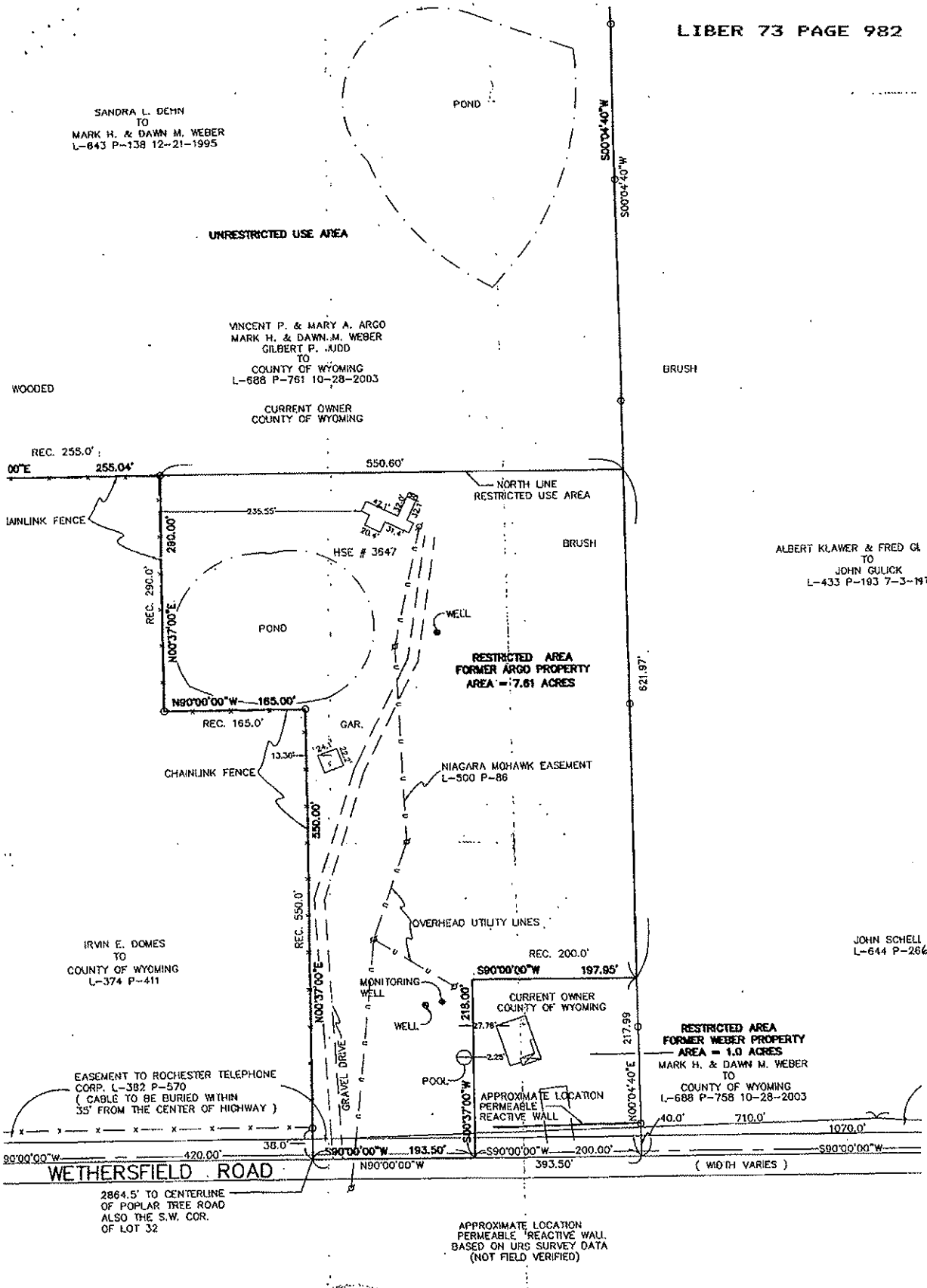
Thence N 00°37'00" E leaving the road a distance of 218.00 feet;

Thence N 90°00'00" E a distance of 197.95 feet;

Thence S 00°04'40" W a distance of 217.99 feet to the point of beginning,

Containing within said bounds 1.00 Acres of land.

EXHIBIT B



REVISED 2-9-2011 TO SHOW
RESTRICTED AREA

NOTE:
NEW IRON STAKES SHOWN THUS: (■)
EXISTING IRON STAKES SHOWN THUS: (⊙)

REFERENCE DATA:
CROSSROADS ABSTRACT CO., INC.
ABSTRACT NO. WY12454 DATED 9-12-2003

A Portion of Survey Map
2003-184-S

STATE OF NEW YORK
JOHN F. GILLEN
No. 049649
LAND SURVEYOR

SURVEY MAP - LAND OF VINCENT ARGO & MARK WEBER SITUATE ON LOT 32, RANGE 2, TOWNSHIP 8 TOWN OF WETHERSFEILD COUNTY OF WYOMING, STATE OF NEW YORK

JOHN F. GILLEN-LAND SURVEYOR NO. 49649
7 PERRY AVE., P.O. BOX 53 WARSAW N.Y.
(585)786-3960

OCT. 10, 2003 SCALE 1 INCH = 100 FEET

altered

DECLARATION OF COVENANTS AND RESTRICTIONS

FORMER ARGO PROPERTY

COUNTY OF WYOMING
OFFICE OF THE CLERK
RHONDA PIERCE, COUNTY CLERK
143 NORTH MAIN STREET, WARSAW, N.Y. 14569
Email: rpierce@wyomingco.net
PHONE: (585) 786-8810 FAX: (585) 786-3703

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Special $_____

Local $_____

TOTAL $_____

STATE OF NEW YORK
COUNTY OF WYOMING

State of New York
County of Wyoming

I do hereby certify that I have received the amounts cited above on the within Mortgage being the amount of the recording tax imposed thereon and paid at the time of recording.

Rhonda Pierce
Rhonda Pierce, Wyoming County Clerk

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Rhonda Pierce
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DECLARATION of COVENANTS and RESTRICTIONS

THIS COVENANT, made the 26th day of July 2011, by the County of Wyoming (the "County"), a municipal corporation having an office for the transaction of business at 143 North Main Street, Warsaw, New York 14569

WHEREAS, the County is the owner of property located at 3647 Wethersfield Road in the Town of Wethersfield, County of Wyoming, State of New York, which was conveyed by Vincent (LB) ~~Argo~~ Agro to the County by deed dated September 24, 2003 and recorded in the Wyoming County Clerk's Office on October 28, 2003 at Page 761 Liber 688 of Deeds and which is identified by tax parcel number 107.-2-4.1 (the "Property"); and

WHEREAS, the County entered into Voluntary Cleanup Agreement B9-0623-02-09 on October 24, 2002 to address environmental issues on a portion of adjacent property identified as 3651 Wethersfield Road, pursuant to the New York State Department of Environmental Conservation (the "Department") Voluntary Cleanup Program ("Voluntary Site"); and

WHEREAS, the Department set forth a remedy to eliminate or mitigate all significant threats to the environment presented by hazardous waste disposal at the Voluntary Site and such remedy requires that certain areas of the Property be subject to restrictive covenants; and

WHEREAS, for the adjacent Voluntary Site in the Office of the Wyoming County Clerk, the County recorded a Declaration of Covenants and Restrictions which requires compliance with a Site Management Plan dated June 2011 ("Site Management Plan"). Copies of the Site Management Plan may be obtained from the Department; and

WHEREAS, in the interests of safeguarding public health and the environment and to allow inspection and maintenance of monitoring wells located on the Property, the County has agreed that certain areas of the Property shall be subject to certain prohibitions and restrictions.

NOW, THEREFORE, the County, for itself and its successors and/or assigns, covenants that:

First, the Property subject to this Declaration of Covenants and Restrictions is as shown on the legal description attached to this Declaration as Exhibit "A" and the survey attached to this Declaration as Exhibit "B" and made a part hereof and is identified as "Restricted Area Former Argo Property".

Second, unless prior written approval by the New York State Department of Environmental Conservation or, if the Department shall no longer exist, any New York State agency or agencies subsequently created to protect the environment of the State and the health of the State's citizens, hereinafter referred to as "the Relevant Agency," is first obtained, no person shall engage in any activity that will, or that reasonably is anticipated to, prevent or interfere

significantly with any proposed, ongoing or completed program at the Voluntary Site or that will, or is reasonably foreseeable to, expose the public health or the environment to a significantly increased threat of harm or damage.

Third, the owner of the Restricted Area Former Argo Property shall prohibit the use of the groundwater underlying the Property without treatment rendering it safe for drinking water or industrial purposes, as appropriate, unless the user first obtains permission to do so from the Department or the Relevant Agency.

Fourth, the owner of the Restricted Area Former Argo Property shall not interfere with the County's compliance with the Site Management Plan, shall allow the County, the Department, its agents, employees, or other representatives of the State to enter and inspect as required by the Site Management Plan for the Voluntary Site, and shall not interfere with the monitoring wells present on the Restricted Area Former Argo Property.

Fifth, in the event that buildings are constructed on the Restricted Area Former Argo Property an evaluation of potential sub-slab impacts which complies with New York State law and regulations must be performed. If required by New York State law and regulations, provision for mitigation, such as installation of a vapor barrier and subslab vapor system or other engineering controls must be implemented on all structures prior to occupancy.

Sixth, the owner of the Restricted Area Former Argo Property shall notify the Department of any transfer of title of all or part of its ownership interest.

Seventh, this Declaration is and shall be deemed a covenant that shall run with the land and shall be binding upon all future owners of the Restricted Area Former Argo Property and shall provide that the owner and its successors and assigns, consents to the enforcement by the Department or the Relevant Agency of the prohibitions and restrictions that are required to be recorded, and hereby covenants not to contest their authority to seek enforcement.

Eighth, any deed of conveyance of the Restricted Area Former Argo Property, or any portion thereof, shall recite, unless the Department or the Relevant Agency has consented to the termination of such covenants and restrictions, that said conveyance is subject to this Declaration of Covenants and Restrictions.

IN WITNESS WHEREOF, the undersigned has executed this instrument the day written below.

County of Wyoming

By A. Douglas Berwanger

STATE OF NEW YORK)
) ss:
COUNTY OF ~~ERIE~~ WYOMING)

On the 26th day of July, in the year 2011, before me the undersigned, personally appeared A. Douglas Berwanger, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ capacity(ies), and that by his/~~her/their~~ signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Amy S Roth
Notary Public B State of New York

AMY S. ROTH
Notary Public, State of New York
No. 01RO5068765
Qualified in Wyoming County
Commission Expires November 04, 2014

EXHIBIT A

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SUGGESTED DESCRIPTION OF LAND OF
FORMER ARGO PROPERTY
SITUATE ON LOT 32, RANGE 2, TOWNSHIP 8
TOWN OF WETHERSFIELD
COUNTY OF WYOMING, STATE OF NEW YORK

Beginning in the center of Wethersfield Road at the southwest corner of land deeded by Vincent Argo and others to County of Wyoming in liber 688 at page 761, and being the southeast corner of land deeded to the County of Wyoming in liber 374 at page 411, said point being 2864.5 feet east of the southwest corner of Lot 32 at the intersection of the centerlines of Wethersfield Road and Poplar Tree Road.

Thence N 00°37'00" E leaving the road along the west line of liber 688 at page 761 a distance of 550.00 feet;

Thence N 90°00'00" W a distance of 165.00 feet;

Thence N 00°37'00" E a distance of 290.00 feet;

Thence N 90°00'00" E a distance of 550.60 feet to the east line of liber 688 at page 761;

Thence S 00°04'40" W a distance of 621.97 feet to the northeast corner of land deeded by Mark & Dawn Weber to the County of Wyoming in liber 688 at page 758;

Thence N 90°00'00" W a distance of 197.95 feet to the northwest corner of liber 688 at page 758;

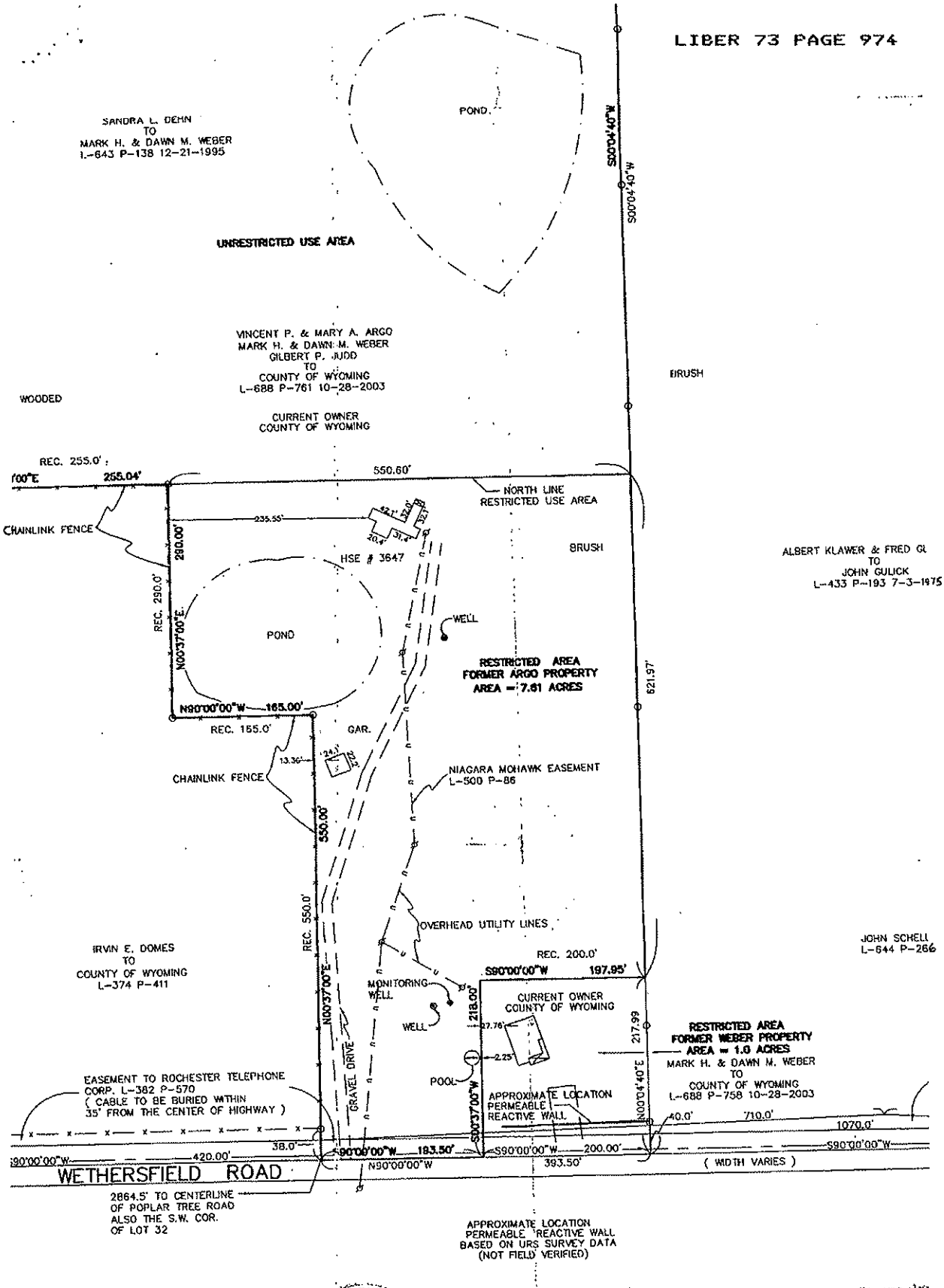
Thence S 00°37'00" W a distance of 218.00 feet to the center of Wethersfield Road;

Thence N 90°00'00" W along the center of the road a distance of 193.50 feet to the point of beginning,

Containing within said bounds 7.61 Acres of land.

Intending to describe a portion of the land conveyed by Vincent Argo and others to County of Wyoming in liber 688 at page 761.

EXHIBIT B



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RESTRICTED AREA

NOTE:
NEW IRON STAKES SHOWN THUS: (■)
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REFERENCE DATA:
CROSSROADS ABSTRACT CO., INC.
ABSTRACT NO. WY12454 DATED 9-12-2003

STATE OF NEW YORK
JOHN F. GILLEN
No. 049649
LICENSED LAND SURVEYOR

SURVEY MAP – LAND OF VINCENT ARGO & MARK WEBER SITUATE ON LOT 32, RANGE 2, TOWNSHIP 8 TOWN OF WETHERSFEILD COUNTY OF WYOMING, STATE OF NEW YORK

JOHN F. GILLEN–LAND SURVEYOR NO. 49649
7 PERRY AVE., P.O. BOX 53 WARSAW N.Y.
(585)786-3960

OCT. 10, 2003 SCALE 1 INCH = 100 FEET

A Portion of Survey Map
2003-184-S

altered

APPENDIX B

SAMPLE

HEALTH AND SAFETY PLAN

AND COMMUNITY AIR MONITORING PLAN

HEALTH AND SAFETY PLAN
FOR
SOIL MANAGEMENT ACTIVITIES
AT THE
WYOMING COUNTY FIRE TRAINING AREA
WETHERSFIELD, NEW YORK

Prepared For:

WYOMING COUNTY
143 NORTH MAIN STREET
WARSAW, NEW YORK 14569

Prepared By:

URS CORPORATION – NEW YORK
77 GOODELL STREET
BUFFALO, NEW YORK 14203

SEPTEMBER 2009

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1.0 INTRODUCTION

Wyoming County (County) has operated a fire training center located at 3651 Wethersfield Road in the Town of Wethersfield, New York (Figure 1). Remedial activities consisting of drum removal, AST removal and contaminated soil excavation were conducted at the site in July/August of 2001. A site investigation program, conducted in September/October of 2001, identified four areas of concern (AOCs) wherein the soils were contaminated with volatile organic compounds (VOCs) consisting primarily of toluene, tetrachloroethene (PCE) and its breakdown compounds. Additionally, the data showed that groundwater at the site and the two adjacent County-owned parcels located immediately east of the site, had also been impacted by VOCs. These two parcels, formerly known as the Agro and Weber properties, were acquired by the County in October, 2003.

URS coordinated a formal interim remedial measure (IRM) consisting of the removal of contaminated soil in the four AOCs was conducted at the site in September – November, 2003. This IRM effectively removed the known source areas for VOCs in soils at the site.

URS Corporation (URS) was also retained to develop and implement a Supplemental Hydrogeologic Investigation Work Plan to further delineate the nature and extent of groundwater contamination associated with historical operations at the Fire Training Center. The scope of the Supplemental Investigation includes the installation of piezometers and monitoring wells, collection and analysis of groundwater samples, and evaluation of data.

1.1 Site Description

The Wyoming County Fire Training Center (WCFTC) facility is located on the north side of Wethersfield Road approximately one-half mile east of the intersection of Poplar Hill Road in the Town of Wethersfield, Wyoming County (Figure 1).

The overall WCFTC facility includes several permanent structures/installations and is completely enclosed by a chain link fence about its perimeter. The main features of the WCFTC facility are the Training Center building and attached garage in the southwest section of the property, two smaller support buildings, a storm water retention pond and several fire training

Legend

- Residential Pumping Well
- Spring Location
- Property Line

250 0 250 Feet

WYOMING COUNTY FIRE TRAINING CENTER
SITE PLAN

URS

FIGURE 1

N:\41172991.00000\DB\Gis\wyominc.apr SITEPLAN (11x17L) 6/5/2007

structures across the remaining portions of the property. The site, prior to site remediation activities included a steel AST used for storage of flammable liquids, two subgrade concrete fire pits connected to the AST via underground piping and, a drum storage area that was utilized for storage of drums containing flammable liquids. These features are all located on about one acre in the eastern portion of the WCFTC facility (Figure 1), the site.

The site topography is generally flat, with a graded bank along the eastern boundary. Vegetative cover consists primarily of turf grass. The property to the east and northeast slopes more steeply to the northeast.

Surrounding land uses are generally agricultural and recreational with low-density residential housing along Wethersfield Road. The two neighboring parcels to the east, formerly known as the Agro and Weber properties (Figure 1-2), were recently acquired by the County. As a result, the seasonal home and permanent residence located on these parcels are no longer occupied. The former Agro property, adjacent to the eastern and northern boundaries of the WCFTC, has approximately two-hundred feet of frontage on Wethersfield Rd. and widens to the east and west some distance from the road. The former Weber property, 3689 Wethersfield Rd., is situated immediately to the east of the former Agro property and occupies similar frontage.

The Becker property, 3718 Wethersfield Road, is the closest occupied residence to the WCFTC. The Becker residence is situated on the south side of Wethersfield Road, approximately 1,000 feet to the southeast.

A mixture of vegetation is present on nearby parcels, ranging from mature trees to brush and lawn areas. There are two ponds present on the Agro property, the closest being located immediately northeast of the subject property.

The site and immediately surrounding properties are depicted on Figure 1.

In 2002, the County executed a Voluntary Cleanup Agreement (VCA) for the site with the state of New York.

1.2 Purpose

Based on the data from the previous investigations and the remedial activities at the Site, the majority of the impacted soil has been removed and/or remediated. The purpose of soil management at the Site is to protect workers from possible exposure to residual contaminants in the soil during intrusive activities at the Site.

1.3 Anticipated Field Activities

This Health and Safety Plan (HASP) includes appropriate health and safety procedures to be followed by personnel involved in intrusive activities at and in the vicinity of the former fire training areas at the WCFTC located at 3651 Wethersfield Road, Town of Weathersfield, Wyoming County, New York. Activities at the Site include but are not limited to:

- Excavation of footers for buildings
- General grading of surficial soils
- Installation of buried utilities (e.g., telephone lines, electrical lines, etc.)
- Other activities that may result in soil disturbances

The procedures presented in this plan comply with the following regulatory or guidance documents:

AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH)

ACGIH-0028	2002 TLVs and BEIs – Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices.
ACGIH-0376	Guide to Occupational Exposure Values – 2002.
ACGIH-0460	Guidelines for the Selection of Chemical Protective Clothing, 3rd Edition.

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR Part 1904	Recording and Reporting Occupational Injuries and Illnesses.
29 CFR Part 1910	Occupational Safety and Health Standards, especially Part 1910.120-Hazardous Waste Site Operations and Emergency Response.
29 CFR Part 1926	Safety and Health Regulations for Construction, especially Part 1926.65-Hazardous Waste Site Operations and Emergency Response.
49 CFR Part 171	General Information, Regulations, and Definitions.
49 CFR Part 172	Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA)

No Publication No.	(1984) Standard Operating Safety Guides, Office of Emergency and Remedial Response.
USEPA Order 1440.2	(1981) Health and Safety Requirements for Employees Engaged in Field Activities.

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

NIOSH Pub. No. 85 115	(October 1985) NIOSH/OSHA/USCG/USEPA, Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities.
NIOSH Pub. No. 97-140	(June 1997) NIOSH Pocket Guide to Chemical Hazards.

It is recommended that personnel who will be involved in intrusive activities at the Site complete the appropriate waste site worker training as required by OSHA 1910.120(e)(2), 1910.120(e)(3), and 1910.120(e)(8), as applicable, and the required medical surveillance as required by OSHA 1910.120(f).

2.0 RESPONSIBILITIES

The following is a summary of the health and safety responsibilities of various personnel involved in intrusive activities at the Site.

2.1 Project Health and Safety Officer

The responsibilities of the Project Health and Safety Officer (HSO) are to develop and coordinate the Site Health and Safety Program, and to provide necessary direction and supervision to the Site HSO. The Project HSO will conduct the initial site-specific training session (Onsite Health and Safety Briefing), and will review and confirm changes in personal protection requirements when site conditions are found to be different from those originally anticipated.

2.2 Site Health and Safety Officer

The responsibilities of the Site HSO are as follows:

- Implement this HASP
- Enforce day-to-day health and safety protocols in effect on the site
- Require that all workers who will be involved in intrusive activities on the site have had appropriate waste site worker training and medical examinations, and review and maintain training and medical certifications on site
- Require that all personnel entering the site understand the provisions of this HASP
- Conduct periodic training sessions in proper use and maintenance of personal protective equipment and safety practices
- Conduct periodic emergency response drills
- Conduct daily health and safety meetings each morning
- Direct and advise Contractor personnel, visitors, and Subcontractor HSO on all aspects, especially changes, related to health and safety requirements at the site
- Conduct necessary health and safety monitoring
- Administer the air monitoring program (if applicable)

- Monitor site conditions and determine all necessary changes in levels of personal protection and, if warranted, execute work stoppages
- Report changes in site conditions and changes in personal protection requirements to the Project HSO
- Prepare accident/incident reports

The Site HSO reports directly to the Project HSO. A qualified backup for the Site HSO will be designated prior to the initiation of onsite activities.

2.3 Contractor Personnel

Contractor personnel will be responsible for understanding and complying with site health and safety requirements. Contractor personnel on site will be trained in first aid and CPR, and will be certified by the American Red Cross. Contractor personnel will have completed the required waste site worker training to comply with 29 CFR, Part 1910.120.

3.0 TRAINING REQUIREMENTS

All personnel involved in intrusive activities on site may be required to be certified in health and safety practices for hazardous waste operations as specified in the Federal OSHA Regulations (29 CFR 1910.120) (revised March 6, 1990). Paragraph (e) (2) of the above-referenced regulations requires that each employee, at the time of job assignment, receive a minimum of 40 hours of initial instruction off the site, and a minimum of three days of supervised field experience.

Paragraph (e) (3) of the above-referenced regulations requires that all onsite management and supervisory personnel directly responsible for, or who supervise employees engaged in hazardous waste operations, must initially receive eight hours of additional specialized training. Management and supervisory training must emphasize health and safety practices related to managing hazardous waste work.

Paragraph (e)(8) of the above-referenced regulations requires that workers and supervisors receive eight hours of refresher training annually on the items specified in Paragraph (e)(1) and/or (e)(3).

Additionally, all personnel must receive adequate site-specific training, in the form of an Onsite Health and Safety Briefing given by the Project HSO prior to participating in onsite field work. This will involve a review of this Health and Safety Plan with emphasis on the following:

- Protection of the adjacent community from hazardous substances which may be released during intrusive activities

- Attention to health effects and hazards of substances known to be present on site

- Attention to physical hazards on site, and the importance of knowing proper means of avoiding these hazards

- Health hazards, protective measures, emergency and first aid measures, fire and explosion information, reactivity, incompatible materials, and emergency procedures

for spills of hazardous chemicals brought onto the site for use during normal field operations

- Hazards and protection against heat/cold
- The need for vigilance in personal protection, and the importance of attention to proper use, fit, and care of personal protective equipment
- The effectiveness and limitations of personal protective equipment
- Prescribed decontamination procedures
- Site control, including work zones, access, and security
- The proper observance of daily health and safety practices, such as the entry and exit of work zones and site, proper hygiene during lunch, break, etc.
- Recognition in oneself or in others of physical conditions requiring immediate medical attention, and application of simple first aid measures
- Emergency procedures to be followed (with rehearsals) in cases of fire, explosion, or sudden release of hazardous gases

Health and Safety Meetings will be conducted daily by the Site HSO and will cover protective clothing and other equipment to be used that day, potential chemical and physical hazards, emergency procedures, and conditions and activities from the previous day.

All visitors entering the Exclusion Zone or Contamination Reduction Zone will be required to receive the necessary site-specific training from the Site HSO and must be equipped with the proper personal protective equipment.

4.0 MEDICAL SURVEILLANCE REQUIREMENTS

It is recommended that Contractor engaged in intrusive activities for 30 days or more per year participate in the Medical Surveillance Program, which involves undergoing a medical examination once every year. The examination must be conducted by a physician who is board-certified in occupational medicine. The physician will have been made familiar with the job-related duties of each worker examined. Contractor personnel involved in intrusive activities at the Site should participate in a Medical Surveillance Program as required by 29 CFR 1910.120(f) and 10 CFR 20.

Components of the Medical Surveillance Program are shown in Table 4-1. The physician must state whether the individual is fit to conduct work on hazardous waste sites using personal protection, or whether he or she must work within certain restrictions; personnel may be excluded from this site for medical reasons. Copies of the medical examination reports will be given to each employee who will be encouraged to forward copies to their personal physician.

Any person exposed to high levels of hazardous substances will be required to undergo a repeat medical exam at or before the conclusion of the project to determine possible health impacts. Any person suffering a lost-time injury or illness must have medical approval prior to returning to work on site. When employment is terminated for any reason, the employee must receive an exit medical examination.

All medical records will be held by the employer for the period of employment plus at least 30 years, in accordance with OSHA regulations on confidentiality and any other applicable regulations and will be made available to OSHA upon request.

TABLE 4-1

COMPONENTS OF MEDICAL SURVEILLANCE PROGRAM

- Medical and occupational history

- Physical examination, with particular attention to the cardiopulmonary system, general physical fitness, skin, blood-forming, hepatic, renal, and nervous systems

- Urinalysis, to include:
    - radiological bioassay
    - color
    - appearance
    - specific gravity
    - pH
    - ketones
    - protein
    - glucose
    - blood
    - bilirubin
    - leukocyte esterase
    - nitrite
    - white blood cell (WBC) count
    - red blood cell (RBC) count
    - casts
    - bacteria
    - epithelial cells
    - crystals
    - yeasts

- Blood analysis, to include:
    - complete blood count
    - hemoglobin
    - albumin, globulin, total protein
    - bilirubin - direct and total
    - g-glutamyl transpeptidase
    - serum glutamic oxalacetic transaminase
    - lactic dehydrogenase
    - alkaline phosphatase
    - sodium
    - potassium
    - chloride
    - magnesium
    - calcium
    - phosphorus
    - uric acid
    - blood urea nitrogen (BUN)
    - creatinine

TABLE 4-1 (continued)

- cholesterol
- triglycerides
- glucose
- iron
- heavy metals - arsenic, lead, mercury, and zinc protoporphyrin

- Pulmonary function test

- Additional tests as appropriate, including:
  - chest X-ray
  - electrocardiogram
  - stress test

5.0 SITE HAZARD EVALUATION

5.1 Chemical Hazards

The primary chemicals of concern on site are volatile organic compounds (VOCs), based on detections of these compounds in soil and groundwater samples from previous investigations. The health and safety characteristics and occupational exposure values of these compounds are summarized in Table 5-1. The risk of exposure to these contaminants can be by the dermal or respiratory route, depending on the type of contaminant and activity being conducted.

5.2 Physical Hazards

Physical hazards range from the dangers of tripping and falling on uneven ground to those associated with the operation of heavy equipment such as drilling rigs. Physical hazards also include scattered debris, scrap metal, and concrete.

Field activities that involve drilling involve contact with various types of machinery. At least two people on site must be currently American Red Cross-certified in first aid and CPR. Personnel trained and certified in first aid should be prepared to take care of cuts and bruises as well as other minor injuries. A first aid kit approved by the American Red Cross will be present and available during all field activities.

Animals and some insects may bite and thereby pose a health hazard in the form of irritation, illness, or poisoning. Anyone bitten should be given immediate first aid as necessary, and shall be transported to the nearest medical facility (if necessary). Members of the field investigation team will be properly briefed regarding the potential for encountering insects and animals. The potential threat of the deer tick and the possibility of contracting Lyme disease is a serious matter. The likelihood of contracting Lyme disease will be greatly decreased by field personnel wearing long pants, long sleeved shirts, and hard hats. All field personnel will be instructed to take a shower daily upon returning to the hotel or place of residence to further decrease the likelihood of contracting Lyme disease.

TABLE 5-1

HAZARD CHARACTERISTICS OF CHEMICAL CONTAMINANTS ON SITE

Substance	Toxicity/Carcinogenicity	Occupational Exposure Values*
Ethylbenzene	Moderately toxic by ingestion, inhalation, and skin contact. Irritant and narcotic in high concentrations. Confirmed animal carcinogen.	100 ppm (TLV-TWA and PEL) 125 ppm (STEL) (1) (TLV)
Tetrachloroethylene (Perchloroethylene)	Moderately toxic. Irritating to skin and eyes. Confirmed animal carcinogen.	25 ppm (TLV-TWA) 100 ppm (PEL and STEL (1) (TLV)) 200 ppm (Ceiling) (2) (PEL)
Toluene	Moderate toxicity via the oral, inhalation, and intraperitoneal routes, low toxicity via the dermal route.	50 ppm (Skin) (3) (TLV-TWA) 200 ppm (PEL) 300 ppm (Ceiling) (2) (PEL)
Xylenes	Moderate toxicity via the oral, inhalation, intraperitoneal, and subcutaneous routes.	100 ppm (TLV-TWA and PEL) 150 ppm (STEL) (1) (TLV)

* Occupational Exposure Values (TLVs and PELs) are 8-hour Time-Weighted Averages (TWAs) unless otherwise noted.

NOTES:

(1) STEL – 15 minute TWA exposure which should not be exceeded at any time during a work day.
(2) Ceiling – The concentration that should not be exceeded during any part of the working exposure.
(3) Skin-Listed substances followed by the designation "skin" refer to the potential significant contribution to the overall exposure by the cutaneous route, including mucous membranes and the eyes, either by contact with vapors or, or probable greater significance, by direct contact with the substance.
(4) IDLH – Immediately Dangerous to Life and Health

Definitions

Permissible Exposure Limits (PELs) – Measure of toxicity of a substance, exposure limits that are published and enforceable by the Occupational Safety and Health Administration (OSHA) as legal standards, cannot be exceeded, 8 hour exposure is assumed, expressed as concentration of a substance per unit air volume, mg/m^3, ppm.

Threshold Limit Values (TLVs) – Refers to airborne concentrations of substances as issued by the American Conference of Governmental Industrial Hygienists (ACGIH) and represents conditions under which it is believed that nearly all workers may be repeatedly exposed, day after day, without adverse effect.

Threshold Limit Value – Time Weighted Average (TLV-TWA) – The Time-Weighted Average concentration for a conventional 8-hour work day and a 40-hour workweek, to which it is believed nearly all workers may be repeatedly exposed, day after day, without adverse effect.

TABLE 5-1 (Continued)

References

- American Conference of Governmental Industrial Hygienists. *Guide to Occupational Exposure Values-2002*. Cincinnati, Ohio.
- American Conference of Governmental Industrial Hygienists. *2002 TLVs and BEIs - Threshold Limit Values for Chemical Substances and Physical Agents*, Cincinnati, Ohio.
- 29 CFR, Part 1910.1000, Tables Z-1 and Z-2, Limits for Air Contaminants, July 1, 1995.
- National Institute for Occupational Safety and Health. *NIOSH Pocket Guide to Chemical Hazards*. Publication No. 97-140, June 1997. Cincinnati, Ohio.
- Hawley, Gessner G. *The Condensed Chemical Dictionary*, Tenth Edition, New York: Van Nostrand Reinhold, 1981.
- Sax, R. Irving. *Dangerous Properties of Industrial Materials*, Sixth Edition, New York: Van Nostrand Reinhold, 1984.

Improper lifting by workers is one of the leading causes of industrial injuries. Therefore, all members of the field crew should be trained in the proper methods of lifting heavy objects. All workers should be cautioned against lifting objects too heavy for one person.

6.0 TEMPERATURE STRESS

6.1 Heat Stress

The combination of high ambient temperature, high humidity, physical exertion, and personal protective apparel which limits the dissipation of body heat and moisture can cause heat stress. The Site HSO is responsible for monitoring heat stress in the field team personnel.

The following prevention, recognition, and treatment strategies will be implemented to protect personnel from heat stress. Personnel will be trained to recognize the symptoms of heat stress, implement proper preventative measures, and apply the appropriate treatment.

A. Prevention

1. Provide plenty of liquids. Available in the Support Zone will be a 50% solution of fruit punch in water, or the like, or plain water.

2. Provide cooling devices. A portable, pump-activated sprayer and containers of tap water will be available in the Contamination Reduction Zone to reduce body temperature, cool protective clothing, and/or act as a quick-drench shower in case of an exposure incident.

3. Adjust the work schedule. During hot summer days, labor-intensive tasks which pose a high potential risk of heat stress can be performed during the coolest part of the day.

B. Recognition and Treatment

Any person who observes any of the following forms of heat stress, either in themselves or in another worker, will report this information to the Site HSO immediately after implementing treatment, if possible.

1. Heat Rash (prickly heat):

   Cause: Continuous exposure to hot and humid air, aggravated by chafing clothing.

   Symptoms: Eruption of red pimples around sweat ducts, accompanied by intense itching and tingling.

   Treatment: Remove source of irritation and cool the skin with water or wet cloths.

2. Heat Syncope (fainting):

   Cause: Sun rays beating down on victim's head and prolonged upright position can lead to mild dehydration and contraction of the blood vessels resulting in a temporary deficiency in flow of blood to the brain.

   Symptoms: Brief loss of consciousness.

   Treatment: Have the worker assume a horizontal position and drink one to two liters of fluid (not alcohol). Elevate the legs and cover the head.

3. Heat Cramps (heat prostration):

   Cause: Profuse perspiration accompanied by inadequate replenishment of body water and electrolytes.

   Symptoms: Sudden development of pain and/or muscle spasms in the abdominal region.

   Treatment: Move the worker to the Contamination Reduction Zone. Remove protective clothing. Provide fluids orally. Decrease body temperature and allow a period of rest in a cool location.

4. Heat Exhaustion (heat toxemia, sunstroke):

Cause: Overexertion in a hot environment and profuse perspiration accompanied by inadequate replenishment of body water and electrolytes. Warning – this is a serious condition.

Symptoms: Muscular weakness, fatigue, staggering gait, nausea, dizziness, shallow breathing, pale and clammy skin, and approximately normal body temperature.

Treatment: Perform the following while simultaneously making arrangements for transport to a medical facility: Move the worker to the Contamination Reduction Zone. Remove protective clothing. Lie the worker down on his or her back, in a cool place, and raise the feet 6 to 12 inches. Keep warm, but loosen all clothing. If conscious, provide sips of a salt water solution using one teaspoon of salt in 12 ounces of water. Transport the worker to a medical facility.

5. Heat Stroke:

Cause: Same as heat exhaustion. This is an extremely serious condition.

Symptoms: Dry, red, hot skin, dry mouth, dizziness, nausea, headache, rapid pulse high temperature. Temperature continues to rise unless treatment is implemented.

Treatment: The basic principle is to lower the body temperature rapidly.

1. Move the victim out of the sun.
2. Remove clothes.
3. Soak victim completely with water; wet hair as well.

4. Place victim in front of a fan or in a breeze, if possible.
5. If ice is available, apply directly to the victim, especially under the arms and on the head.
6. Monitor body temperature with available thermometers. Temperature should start to decrease within minutes.
7. As temperature approaches 101^{o}F, stop cooling measures and initiate transport to a hospital or declare an emergency response. The temperature should continue to fall, often to subnormal, during this period.

Other considerations in treating heat stroke are:

1. Rub skin briskly during cooling process.
2. If cardiac arrest occurs, perform CPR (ONLY IF CERTIFIED) and continue cooling.
3. If a seizure occurs, continue cooling; the seizure will stop.
4. No drugs of any kind are to be given to the victim.

C. Heat Stress - Predisposing Factors

Preventing heat stress is clearly preferred to treatment. The following factors increase the individual's risk of heat stress:

- Physically unfit
- Age
- Not accustomed to heat
- Sunburn

- Alcohol and drugs
- Dehydration
- Heavy or non-breathable clothing
- Not covering one's head

6.2 Cold Stress

Personnel can be susceptible to cold stress while conducting field work during cold weather months. To guard against cold stress and to prevent cold injuries, appropriate warm clothing should be worn, warm shelter must be previously identified and readily available, rest periods should be adjusted as needed, and the physical conditions of onsite field personnel should be closely monitored. All personnel working on site must be able to recognize the signs and symptoms of cold stress and apply first aid as needed. The Site HSO is responsible for monitoring the signs and symptoms of cold stress among field personnel.

The development of cold stress and cold injuries is influenced by three factors: the ambient temperature, the velocity of the wind, and the amount of sunshine. Fingers, toes, and ears are the most susceptible parts of the body affected by cold.

A. Frost Nip:

Cause: Frost nip is the first sign of frostbite and is the only form of local cold injury that can be definitively treated in the field.

Symptoms: A whitened area of the skin which is slightly burning or painful.

Treatment: Rewarming the affected part.

B. Frost Bite:

Cause: Local damage is caused by exposure to low temperature environmental conditions. It results at temperatures when ice crystals form, either superficially or deeply, in the fluids and

underlying soft tissues of the skin. The nose, cheeks, ears, fingers, and toes are most commonly affected.

Symptoms: Skin is cold, hard, white, and numb. There may also be blisters. The affected parts will feel intensely cold; however, there may not be any pain. The victim may not know that he or she is frost-bitten.

As time goes on, the victim may experience mental confusion and impairment of judgment. The victim may stagger and eyesight may fail. The victim may fall and become unconscious. Shock is evident and breathing may cease. If death occurs, it is usually due to heart failure.

Treatment: Generally, definitive thawing should not be performed in the field**,** because if re-freezing occurs, it could result in severe damage. The victim should be transported to a medical facility after the following measures are instituted:

Do Not:

- Do not walk on a thawed foot or toes or use thawed hands.
- Do not allow victim to smoke or drink alcohol.
- Do not rub affected area with anything.
- Do not break any blisters.
- Do not apply heat of any kind.

Do:

- Do place victim in protected environment.
- Do prevent further heat loss (warmer clothes).
- Do protect from further damage (warm covering).

C. Mild Hypothermia:

Symptoms: The single most important sign of mild hypothermia is a change in behavior. Some signs that can be observed are:

- Decrease in work efficiency
- Decreased level of communication
- Forgetfulness
- Poor judgment
- Poor motor skills (difficulty in handling objects, dropping tools)

The target organ of mild hypothermia is the brain. During mild hypothermia, most of the body's protective mechanisms for temperature control are intact. Shivering is usually present and "goose flesh" and pale skin persist. When asked directly, the victim will usually say that he feels cold. A worker impaired by mild hypothermia can be a danger to himself and co-workers.

Treatment:

- The victim should be moved indoors or into a heated vehicle.
- Remove all wet or damp clothing, dry skin, and apply dry clothing.
- The head should be covered with a hat or blanket.
- Blankets should be put on the victim.
- The victim should be given hot fluids (no alcohol).
- If possible, monitor the victim's temperature at 15-minute intervals.

D. Moderate Hypothermia: For field purposes, this may be defined as the stage at which the patient is clearly incapable of functioning effectively, but is conscious.

Symptoms: The victim's body temperature is well below normal and some mental changes may occur which include:

- Disorientation to people, place, and time

- Hallucinations
- Inappropriate laughing or crying
- Bizarre behavior for that individual

During moderate hypothermia, shivering is absent, "goose flesh" disappears, and the heart rate may slow down. The victim does not "feel" cold.

Treatment:

- First, treat the patient for mild hypothermia.
- Provide warming with hot blowers or heaters.
- Use human body heat.
- Watch for signs of returning to normal (e.g., shivering, goose flesh, teeth chattering).
- Monitor mental status.

After these steps are initiated, the victim should be taken to a medical facility. The patient should not return to work for at least 48 hours.

E. Severe Hypothermia:

Symptoms: Characterized by a decrease in the body temperature which results in a deep coma in which even vital signs become very weak and finally undetectable. Most occupational cases occur when the victim is alone or lost. These victims, for all practical purpose, appear to be dead, but the saying "not dead until warm and dead" applies to severe hypothermia. Many of these victims can survive.

Treatment:

1. The patient is not to be considered dead.
2. Remove wet clothes, dry skin, and apply dry clothes.
3. Activate rewarming.
4. Prepare to transfer the victim to a medical facility.

5. If the patient is pulse-less and is not breathing, perform CPR (ONLY IF CERTIFIED), while enroute to the medical facility.

6. Very cold victims often tolerate long periods of arrest, even without CPR. The victim must be handled very carefully because of extreme susceptibility to even minor trauma.

7.0 SITE CONTROL

In order to keep unauthorized personnel from entering the work area during intrusive activities, and for good control of overall site safety, three work zones will be established. The three work zones are the Support Zone, the Contamination Reduction Zone, and the Exclusion Zone. Actual Exclusion Zone size will be determined by optimal size of work area and by local obstructions.

7.1 Support Zone

The Support Zone for the project will be established in a mobile office trailer or similar structure. The support facilities will contain personal protective equipment (disposable suits, gloves, boots, etc.), a first aid kit, a fire extinguisher, a stretcher, an eyewash station, sampling equipment, sample containers, and 50% solution of fruit punch or the like in water (or plain drinking water).

7.2 Contamination Reduction Zones

A Contamination Reduction Zone will lie adjacent to the Exclusion Zone. During intrusive operations, materials brought to the surface may come in contact with workers' boots or protective clothing and equipment. A mobile decontamination area will be set up adjacent to any soil handling areas. All personnel will be required to decontaminate themselves and light equipment prior to leaving the Exclusion Zone.

7.3 Exclusion Zone

The Exclusion Zone is the area around intrusive activities. The exact size of any Exclusion Zone will be determined by optimal size of work area and by local obstructions. All personnel leaving the Exclusion Zone will be required to do so via the Contamination Reduction Zone, and to carry out proper decontamination procedures.

7.4 Site Visitation

It is possible that officials from NYSDEC and other regulating bodies and jurisdictions will visit the site during intrusive activities. It is also possible that an OSHA representative will wish to inspect the operations. All such officials must meet the requirements of OSHA-approved training and site-specific training before going into any Exclusion Zone. All visitors must read this HASP prior to entering an Exclusion Zone. Visitors other than NYSDEC, OSHA, New York State Department of Health (NYSDOH), or Town or County government representatives will be subject to the additional requirement of having to receive written permission from Wyoming County to enter an Exclusion Zone. A Daily Site Visitors Log will be kept and all visitors to the site will sign in and provide their affiliation, the date of visit, affirmation that they have read and understood the HASP, arrival time, departure time, and purpose of visit.

8.0 PERSONAL PROTECTION

Since personnel working on site may be exposed to chemical contaminants released during intrusive activities or may come in contact with contaminants in soils or groundwater, various levels of protection must be available. Components of all levels of personal protection that will be available are listed in Table 8-1. The anticipated levels of protection for various field activities are given in Table 8-2.

In the event that unexpected levels of organic vapors are encountered during intrusive activities, any personnel working at Level D or D+ protection will don their respirators (change to Level C). The Site HSO will consult with the Project HSO to decide if and when Level D or D+ protection may be resumed, or if a higher level of personal protection is required.

Some modification in safety equipment (e.g., switching from poly-coated disposable coveralls to standard disposable coveralls) may be implemented in order to balance concerns for full contaminant protection against concerns for the possibility of heat stress resulting from the need to wear more restrictive protective equipment. Such modifications may be implemented only if approved in advance by the Site HSO, following consultation with the Project HSO. Protective equipment which fully complies with the requirements of all required levels of protection will be immediately available at all times on the site.

Level C respiratory protection will normally be provided using NIOSH-approved full-face respirators, with Type GMC-H combination filter cartridges approved for removal of organic vapors, particulates, gases, and fumes. The filter cartridges will be changed at the end of each work day or when breakthrough occurs, whichever comes first. Contractor personnel involved in intrusive activities should be fit-tested for respirators. Due to difficulties in achieving a proper seal between face and mask, persons with facial hair will not be allowed to work in areas requiring respiratory protection.

TABLE 8-1

COMPONENTS OF PERSONAL PROTECTION LEVELS

Level D Protection	Level D+ Protection	Level C Protection
• **ANSI-Approved Safety glasses with shields (or goggles)**	• ANSI-Approved Safety glasses with side shields (or goggles)	• Level D+ items, adding:
• ANSI-Approved Hard hat	• ANSI-Approved Hard hat	• Full-face air-purifying respirator (to be worn)
• Ordinary coveralls	• Face shield (optional)	• Duct-taping of gloves and boots to disposable coveralls
• **Ordinary work gloves**	• Disposable poly-coated coveralls (Tyvek or equivalent)	
• **ANSI-Approved Steel-toe, steel-shank work shoes or boots (chemical resistant)**	• Inner gloves of snug-fitting latex or vinyl	
• Outer boots or neoprene or butyl rubber (optional)	• Outer gloves of neoprene or nitril	
	• Outer boots of neoprene or butyl rubber	
	• ANSI-Approved Steel-toe, steel-shank work shoes or boots (chemical resistant)	
	• **Full-face air-purifying respirator (immediately available)**	

1. The use of optional equipment is dependent upon site conditions.
2. Respirator to be fitted with NIOSH-approved Type GMC-H combination respirator cartridges approved for organic vapors, particulates, gasses, and fumes.

TABLE 8-2

PLANNED LEVELS OF PERSONAL PROTECTION FOR EACH MAJOR ACTIVITY

Field Activity	Level of Protection*
A. Non-Intrusive Activities	
1. Setting up Support Facilities/Mobilization/Demobilization	D
2. Land Surveying	D
3. Support Zone Activities	D
B. Intrusive Activities	
1. Excavating Footers for Buildings	D/D+
2. Installing Buried Utilities	D/D+
3. Soil Grading	D/D+
4. Equipment Decontamination	D/D+

* These are the levels of protection at which work will commence during the various activities on the site. Due to onsite conditions, and as directed by the Site Health and Safety Officer, it may become necessary to upgrade, or it may be possible to downgrade, the level of personal protection.

9.0 AIR MONITORING

Real-time air monitoring will be performed during all investigative and remediation activities by trained personnel. While sampling and remediation activities are in progress, monitoring frequencies will be as summarized in Table 9-1. Air monitoring equipment will be calibrated daily and all data will be recorded in the field notebook and transferred to Instrument Reading Logs. Each day, investigative activities will not begin until the instruments are calibrated and background levels are taken and recorded. Air will be monitored for total volatile organic vapors with a photoionization detector (PID) (MiniRAE™ 2000, or equivalent). Explosive atmosphere, oxygen content, carbon monoxide, and hydrogen sulfide (LEL/O_2/CO/H_2S) levels will be monitored with a multi-gas meter (QRAE™ Multigas Monitor, or equivalent). Particulates will be monitored using a MIE pDR-1000AN dust/aerosol monitor, or equivalent. All real-time air monitoring results and meteorological data (e.g., temperature range, wind speed, wind direction, etc. obtained from onsite measurements and/or national weather service, radio, or airport) will be recorded in the field notebook and will be transferred to Instrument Reading Logs.

9.1 Total Volatile Organic Vapors

Air monitoring for total volatile organic vapors will be performed during all investigative and remediation activities using a PID (MiniRAE™ 2000, or equivalent). When readings less than 1 part per million (ppm) above background in the breathing zone are observed consistently, monitoring will take place at least every 10 minutes or for every sample retrieved and Level D protection will be utilized. When readings between 1 ppm and 5 ppm above background in the breathing zone are observed consistently, monitoring will be continuous and Level D+ protection will be utilized. If readings from 5 to 10 ppm above background in the breathing zone are observed, and all other action levels indicate that intrusive or remedial activities can proceed, monitoring will be continuous and Level C protection will be utilized. If volatile organic vapor readings exceed 10 ppm above background in the breathing zone, or other instrument readings necessitate work suspension, intrusive and remedial activities will be halted and the level of protection used by onsite personnel will be reassessed. Monitoring frequencies during investigative activities will be as summarized in Table 9-1.

TABLE 9-1
ACTION LEVELS DURING INVESTIGATIVE ACTIVITIES

Organic Vapors (PID)	Combustibles	Oxygen	Hydrogen Sulfide	Particulates	Responses
0-1 ppm Above Background, Sustained Reading	0-10% LEL	19.5-23.5%	0-5 ppm	<0.10 mg/m³	• Continue soil handling activities. • Level D protection. • Continue monitoring every 10 minutes or whenever an odor is detected.
1-5 ppm Above Background, Sustained Reading	0-10% LEL	19.5-23.5%	5-10 ppm	0.10–0.25 mg/m³	• Continue soil handling activities. • Level D+ protection. • Continuous monitoring for organic vapors in the work area and at the Exclusion Zone perimeter. • Continuous monitoring for LEL, O_2, and H_2S in the work area.
5-10 ppm Above Background Sustained Reading	0-10% LEL	19.5 – 23.5%	5-10 ppm	0.25-1.0 mg/m³	• Continue soil handling activities. • Level C protection. • Continuous monitoring for organic vapors in the work area and at the Exclusion Zone perimeter. • Continuous monitoring for LEL, 0_2, and H_2S in the work area. • Employ dust suppression measures if particulate readings >0.25 mg/m³ above background are sustained over 15 minute period.
>10 ppm Above Background, Sustained Reading	>10% LEL	<19.5% or >23.5%	>10 ppm	>1.0 mg/m³	• Temporarily suspend soil handling activities. • Withdraw from area; shut off all engine ignition sources. • Continuous monitoring for organic vapors at Exclusion Zone perimeter if organic vapor readings >10 ppm. • Continuous LEL monitoring in breathing zone if LEL reading >10%. • Employ dust suppression measures if particulate readings >0.25 mg/m³ above background are sustained over 15 minute period. • Consult with Project HSO.

Notes:

Air monitoring for action levels will occur in the breathing zone.
If action levels for any one of the monitoring parameters is exceeded, the appropriate responses listed in the right hand column should be taken.

9.2 LEL/O_2/CO/H_2S Monitoring

A QRAE™ Multigas Monitor, or equivalent, will be used to monitor for explosive atmosphere, percent oxygen, carbon monoxide, and hydrogen sulfide content. Readings greater than 10% LEL, less than 19.5% oxygen, greater than 23.5% oxygen, greater than 35 ppm carbon monoxide, or greater than 10 ppm hydrogen sulfide will require temporary suspension of intrusive or remedial activities until the Project HSO determines a safe re-entry level.

9.3 Particulate Monitoring

A MIE pDR-1000AN dust/aerosol monitor, or equivalent, will be used to monitor for particulate matter less than 10 microns in diameter (PM_{10}). Readings greater than 0.1 mg/m^3 will require temporary suspension of intrusive or remedial activities until the Project HSO determines a safe re-entry level.

9.4 Work Stoppage Responses

The following responses will be initiated whenever one or more of the action levels necessitating a work stoppage is exceeded:

- The Site HSO will be consulted immediately.
- All personnel (except as necessary for continued monitoring and contaminant mitigation, if applicable) will be cleared from the work area (e.g., from within the Exclusion Zone).

Any chemical release to air, water, or soil must be reported to the Site HSO at once. Any exposure resulting from protective equipment failure must be immediately reported to the Site HSO and to the Project HSO in writing within 24 hours.

9.5 Community Air Monitoring Plan

Based on the Site's size, location, and setting, no impact to nearby residents is expected as a result of the planned supplemental investigation. There are only two occupied residences

within ½ mile of the work area, and these are located at least 150 feet from the boundary of the proposed work areas. Nonetheless, as a precautionary measure, residences within one-half mile will be notified, in writing, at least one week prior to the performance of any intrusive site work. Notification, continuous downwind air monitoring for volatile organic vapors during Site work, and fugitive emissions control measures described below will assure no measurable impacts.

Real time air monitoring will be conducted in the active work zone (i.e. 25 foot radius from boring location) with a PID and a dust/aerosol monitor during all intrusive and remedial operations. If total volatile organic vapors exceed 5 ppm above background levels in the work zone or PM_{10} levels exceed 0.1 mg/m3 above background levels in the work zone, work activities will be halted until volatile organic vapor levels fall below 5 ppm, particulate levels fall below 0.1 mg/m^3, or PPE will be upgraded in accordance with the Site Specific Health and Safety Plan (SSHASP).

Additionally, air monitoring will be initiated at the perimeter of the site or 200 feet, whichever is less, downwind from the active work area. If total volatile organic vapors exceed 5 ppm above background levels, intrusive or remedial activities will be halted and monitoring will be continued under the provisions of a Vapor Emission Response Plan (Section 9.5.1). The Vapor Emission Response Plan includes an intensification of perimeter monitoring and a temporary shut down of investigation or remediation activities. When the volatile organic vapor levels drop below 5 ppm above background, work activities can resume. If organic vapor levels are greater than 5 ppm above background, but are less than 25 ppm above background in the active work zone, activities can resume provided the volatile organic vapor levels at the site perimeter or 200 feet downwind of the active work zone, whichever is less, is below 5 ppm above background.

Respirable dust (particulate) must be monitored at one upwind and one downwind location during all intrusive or remedial activities. Temporary particulate monitoring stations will be set up and moved to the appropriate locations on a daily basis based on wind direction. If downwind particulate levels exceed the upwind particulate levels by 0.1 mg/m^3, then dust suppression measures must be employed.

Any air monitoring that results in a work stoppage will be reported to the NYSDEC, the New York State Department of Health (NYSDOH) and the County.

9.5.1 Vapor Emission Response Plan

If the ambient air concentration of volatile organic vapors exceeds 5 ppm above background at the perimeter of the Active Work Zone, work activities will be halted and monitoring continued or PPE will be upgraded in accordance with SSHASP. If the volatile organic vapor level decreases below 5 ppm above background, work activities can resume. If the volatile organic vapor levels are greater than 5 ppm over background but less than 10 ppm over background at the perimeter of the Active Work Zone activities can resume provided the volatile organic vapor level at the site perimeter or 200 feet downwind of the Active Work Zone or half the distance to the nearest residential or commercial structure, whichever is less, is below 5 ppm over background.

If the volatile organic vapor level is above 10 ppm at the perimeter of the Active Work Zone, activities must be shut down. When work shutdown occurs, downwind air monitoring as directed by the Site HSO will be implemented to ensure that vapor emission does not impact the nearest residential or commercial structure at levels exceeding those specified in the Major Vapor Emission Response Plan (Section 9.5.2).

9.5.2 Major Vapor Emission Response Plan

If any volatile organic vapor levels greater than 5 ppm over background are identified at the site perimeter or 200 feet downwind from the Active Work Zone or half the distance to the nearest residential or commercial property, whichever is less, all intrusive or remedial activities will be halted.

If, following the cessation of intrusive or remedial activities, or as the result of an emergency, volatile organic vapor levels persist above 5 ppm above background at the site perimeter, 200 feet downwind from the Active Work Zone or half the distance to the nearest residential or commercial property, then the air quality will be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20-foot zone).

If efforts to abate the emission source are unsuccessful and volatile organic vapor levels approaching 5 ppm persist for more than 30 minutes in the 20-foot zone, then the Major Vapor Emission Response Plan shall automatically be placed into effect. Also, the Major Vapor Emission Response Plan shall be immediately placed into effect if 20-foot zone volatile organic vapor levels are greater than 10 ppm above background.

Upon activation of the Major Vapor Emission Response Plan, the following activities will be undertaken.

- All Emergency Response authorities will immediately be contacted by the Site HSO and advised of the situation.
- Air monitoring will be conducted at 30-minute intervals within the 20-foot zone. If two successive readings below action levels are measured, air monitoring may be halted or modified by the Sit HSO.

9.6 Calibration of Air Monitoring Instruments

Photoionization Detector: The photoionization detector will be calibrated to a benzene surrogate daily (prior to field activities) and the results will be recorded in the field notebook and transferred to Instrument Reading Logs.

LEL/O_2/CO/H_2S Meter: Once a day, the LEL/O_2/CO/H_2S meter will be calibrated to a methane gas, carbon monoxide, and hydrogen sulfide gas standard. Prior to each use, the oxygen sensor will be air-calibrated at an upwind location. This calibration involves adjusting the meter to read 20.9%, the concentration of oxygen in ambient air.

10.0 DECONTAMINATION PROCEDURES

10.1 Decontamination of Personnel

Non-disposable protective clothing, boots, and gloves, will be decontaminated in the Contamination Reduction Zone before entering the Support Zone by a thorough soap-and-water wash. Personnel performing intrusive tasks involving handling of contaminated soils will be advised that all clothing worn under protective clothing (i.e., underwear, shirts, socks, trousers) should be laundered separately from street clothing before re-wearing. If protective clothing is breached and personal clothing becomes contaminated, the personal clothing will be disposed.

10.2 Decontamination of Equipment

Decontamination of sampling equipment by soap-and-water wash will take place in the Contamination Reduction Zone. Other light equipment (such as tools, containers, monitoring instruments, radios, clipboards, etc.) will be segregated and deposited on plastic drop cloths or in plastic-lined containers placed in the Contamination Reduction Zone and will be wiped off with damp cloths.

Decontamination of heavy equipment and vehicles, will be carried out on a decontamination pad by high-pressure water in the Contamination Reduction Zone. Appropriate personal protection equipment (PPE) must be used during all decontamination activities.

11.0 STANDARD OPERATING PROCEDURES, ENGINEERING CONTROLS, AND WORK PRACTICES

11.1 Project Safety Goal

Safety is the highest priority. A goal of zero accidents has been established for any intrusive activities. The process of planning the project work will be done in a manner that will identify, evaluate, and control the site hazards and help realize the goal of zero accidents.

11.2 Safety Equipment

Activities performed at the site will require, at the minimum, the use of personal protective safety equipment or Level D PPE.

11.2.1 Hard Hats

Hard hats complying with ANSI Code Z89.1 must be worn properly, with the brim facing forward, at all times in the work zones at the site; they may be removed only inside designated office or break areas. Hard hats will be stored outside the work area to decrease the chance of contamination when not in use.

11.2.2 Hearing Protection

Hearing protection will be provided and worn if noise levels reach or exceed 85 dB(A). Hearing protection must be able to lower noise levels to below 85 dB(A). Ear plugs will be discarded after each use unless they are fitted to an individual or are designed for reuse, in which case an individual may reuse his or her own ear plugs. Earmuffs may be reused after proper cleaning and decontamination. Earmuffs will be stored outside the work area to decrease the chance of contamination when not in use.

11.2.3 Work Gloves

Work gloves must be worn when handling soil or materials in the work area. The gloves must be puncture-resistant to glass, sharps, or other objects that may be encountered during removal. The gloves cannot interfere with a worker's dexterity. Work gloves may be reused.

11.2.4 Steel-Toed Safety Shoes

All personnel involved in onsite work activities must wear steel-toed safety shoes.

11.2.5 Safety Glasses

Safety glasses will be worn at all times in the work zones; safety glasses may be removed only inside designated break areas or when wearing respiratory protection. Safety glasses must be cleaned and decontaminated periodically. Safety glasses must be stored outside the work area to decrease the chance of contamination when not in use.

11.3 Fire Prevention and Protection

This section details fire prevention and protection procedures/resources at the project:

- The Fire Department is the available fire-fighting services.
- There will be fire extinguishers mounted on all drilling equipment, as well as in vehicles.
- There will be no smoking in work areas. Smoking will only be permitted in designated areas.
- At a minimum, one fire extinguisher rated at least I0- A:B:C will be located in each work area.

- All fire extinguishers will be inspected monthly by site personnel and annually by licensed personnel.

Project personnel are only permitted to extinguish fires in their incipient stages and only if they have received fire extinguisher training within the last year. Fighting fires is prohibited by project personnel and will only be performed by the local fire department.

11.4 Housekeeping

Housekeeping will be a priority at the project site. The following provisions will be in place to ensure that housekeeping is maintained at a high standard:

- The importance of housekeeping and the expectation that good housekeeping will be maintained will be a regular topic of the morning safety meetings.
- Job sites will be cleaned up on a daily basis.
- Subcontractors will be informed of their responsibilities to maintain their housekeeping.
- Adequate trash receptacles will be positioned at several locations and regularly emptied. Contaminated trash must be segregated from sanitary trash for proper disposal. Hazardous waste containers will be labeled according to Resource Conservation and Recovery Act (RCRA) regulations.
- Housekeeping is an operational/safety item that will be regularly considered during routine inspections.

11.5 Operation of Motor Vehicles

All Contractor and Subcontractor personnel operating motor vehicles at the Site will hold a valid driver's license and comply with the requirements of all federal, state, and local traffic regulations. Only vehicles that are in good condition and safe to operate will be used.

All personnel will drive defensively and wear seat belts while vehicles are in motion. Since backing accidents are the type of accident most frequently associated with this type of project, the following guidelines will be observed:

- Backing of vehicles will be avoided when possible. If this type of maneuver is unavoidable, extra care will be taken while backing vehicles.
- When parking vehicles, vehicles will be backed into the space whenever possible.
- If a parked vehicle must be backed out, the driver will physically walk to the back of the vehicle to observe the area before entering the vehicle.
- Spotters will be used to back vehicles whenever possible.

11.6 First Aid and Medical Facilities

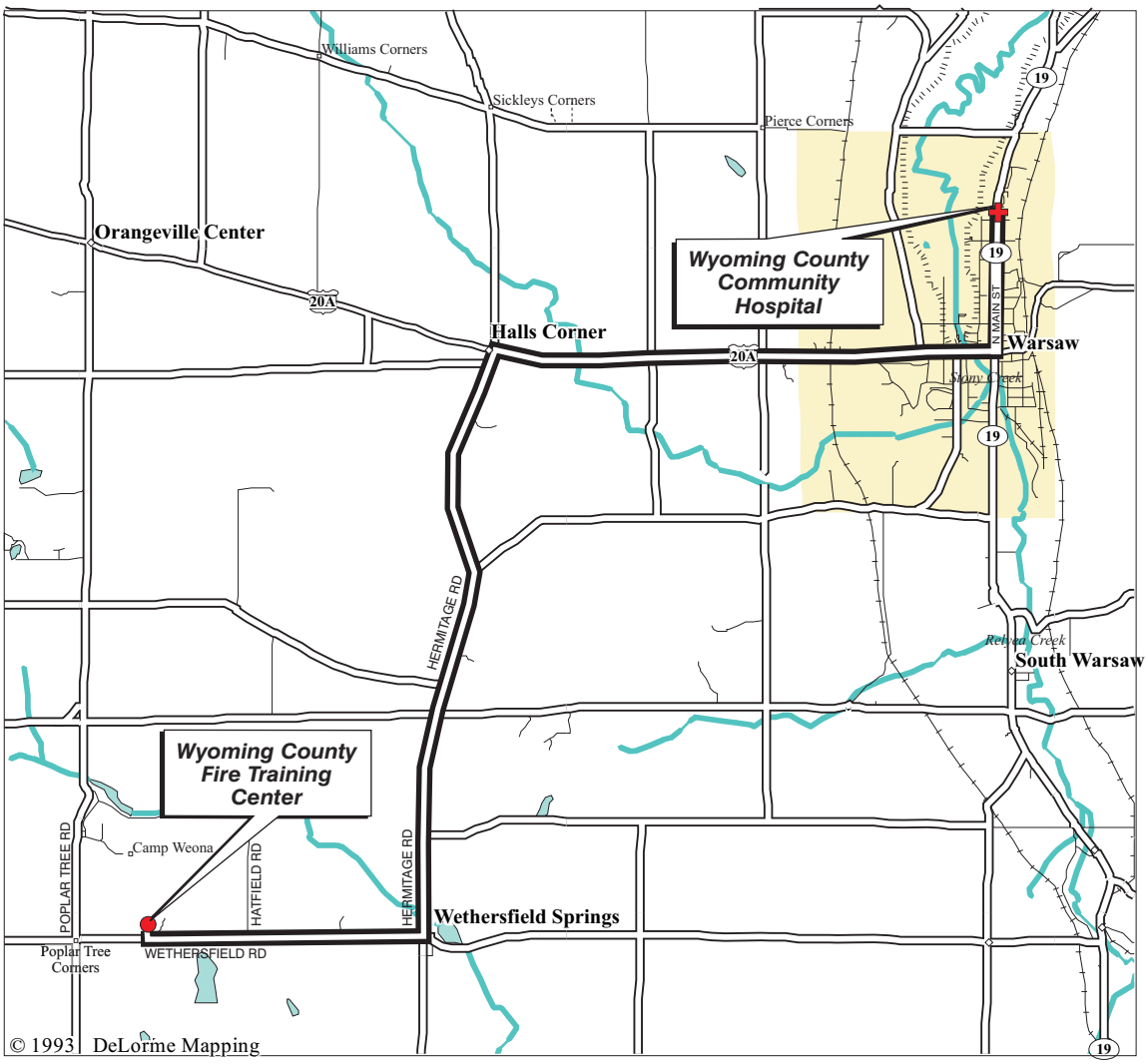
A first aid kit should be provided and maintained in the Contractor's office trailer. Emergency phone numbers should be posted in the vehicle. A map showing the route to the nearest hospital is presented in Figure 13. The name, address, and telephone number of the hospital is:

Wyoming County Community Hospital
400 N. Main Street
Warsaw, New York
(585) 786-2233

11.7 General Work Practices

The following list presents general work rules that will be enforced by the WCFTC Project Manager (PM) and Site HSO. Personnel will comply with the applicable requirements stated below.

- Employees will not be allowed on site without the prior knowledge and consent of the PM.



APPROXIMATE SCALE IN FEET

1000 0 1000

Start out going East on Wethersfield Rd toward Hatfield Rd for approximately 1.74 miles. Then turn left onto Hermitage Rd. approximately 3.92 miles. Then turn right onto US-20A for approximately 3.62 miles. Then turn left onto NY-19/ N. Main St. for approximately 1.07 miles and the Hospital will be on the right hand side.

Wyoming County
Community Hospital
400 N. Main St.
Warsaw, NY 14569

Main: (585) 786-2233
Fax: (585) 786-1226

AG18068-11172991-041603-CYT

URS

WYOMING COUNTY FIRE TRAINING CENTER ROUTE TO THE HOSPITAL

FIGURE 13

- Onsite personnel must use the buddy system when wearing respiratory protective equipment.
- Only those vehicles and equipment required to complete work tasks should be permitted within the Exclusion Zone (backhoes, dump trucks, and similar heavy equipment). All non-essential vehicles should remain within the Support Zone.

- Loose jewelry, clothing, or long hair is not permitted on or near equipment with moving parts.

- Wind indicators will be set up so as to be visible from the Exclusion Zone.

- Personnel will not enter a restricted area unless authorized and all personnel will enter work areas only through the Contamination Reduction Zone. All personnel leaving an Exclusion Zone must exit through the CRZ.

- All personnel going on site must be thoroughly briefed on anticipated hazards, and trained on equipment to be worn, safety procedures, emergency procedures, and communications.

- All regulated work zones, as established on the site, will be observed. All required PPE will be worn prior to entering these zones.

- Whenever possible, contact with contaminated (or potentially contaminated) surfaces will be avoided-walk around (not through) puddles and discolored surfaces, and do not kneel or set equipment on potentially contaminated ground.

- Containers, such as drums, will be moved only with the proper equipment and will be secured to prevent dropping or loss of control during transport.

- Field survey instruments, such as PIDs, should be covered with plastic or similar covering to minimize the potential for contamination.

- Legible and understandable labels will be affixed prominently to the containers of waste materials.
- Food, beverages, unapplied cosmetics, and tobacco products will not be allowed in regulated work zones. These are only allowed in designated areas.

- No matches or lighters will be permitted in the Exclusion Zone or Contamination Reduction Zone.

- Beards, facial hair, or other facial obstructions that interfere with respirator fit will not be permitted.

- Field crewmembers will be familiar with the physical characteristics of the site operations including:

  - Wind direction in relation to the contaminated area;
  - Accessibility to associates, equipment, and vehicle;
  - Areas of known or suspected contamination;
  - Work zones;
  - Communications;
  - Site access, and
  - Nearest water sources.

- The number of personnel and equipment in the Exclusion Zone should be minimized but only to the extent consistent with workforce requirements of safe site operations.

- Field personnel are to observe each other for signs and symptoms of toxic material exposures. These signs and symptoms include, but are not limited to:

  - Changes in complexion and skin discoloration.
  - Changes in coordination.
  - Changes in demeanor.
  - Excessive salivation and papillary response.

- Changes in speech pattern.

- Field personnel are to advise each other of nonvisible effects of toxic material exposures such as:

  - Headaches.
  - Dizziness.
  - Nausea.
  - Blurred vision.
  - Cramps.
  - Irritation of eyes, skin, or respiratory tract.

- Any detected effects of toxic exposure will be reported to the Site HSO immediately.

- If onsite activities, including decontamination, continue later than dusk, adequate lighting must be provided.

- Field activities will be suspended during severe weather such as high winds, thunderstorms, lightning, tornado warnings, and winter storm warnings.

- Damaged PPE or clothing will be immediately repaired or replaced, as appropriate.

- Personnel must thoroughly wash their hands and face before eating, smoking, drinking, or applying cosmetics.

- Unauthorized removal of materials from the site is prohibited.

- Spills will be prevented to the extent possible. In the event that a spill occurs, contain liquid if possible.

- Splashing of contaminated materials will be prevented.

- Possession of controlled substances and prohibited items, such as alcohol, firearms, or weapons, while working on site is strictly prohibited.
- Operations involving the potential for fire hazards will be conducted in a manner that will minimize the risk of fire.

- Overhead and underground utility hazards will be identified or located prior to conducting operations.

12.0 EMERGENCY PROCEDURES

The most likely incidents for which emergency measures might be required are:

- an exposure-related worker illness
- a sudden release of hazardous gases/vapors during drilling
- an explosion or fire occurring during drilling
- slipping, tripping, or falling resulting in personal injury
- spill of contaminated liquid or solid

Emergency procedures established to respond to these incidents are covered under the sections that follow.

12.1 Communications

Communications will be centered in the field vehicle, which will contain cellular telephones for direct outside communications with emergency response organizations.

12.2 Escape Routes

Flags will be positioned around the site to indicate wind direction. In the event of a sudden release of hazardous gases, or a fire, all personnel will be required to move upwind or at 90 degrees away from the location of the release or fire, toward the site exit point. This may require personnel to move from the Exclusion Zone directly into an offsite area without proper decontamination. At the conclusion of the emergency, they should perform proper decontamination.

12.3 Evacuation Signal

In the event of a sudden release or fire requiring immediate evacuation of the site, three quick blasts will be sounded on an air horn. The horns will be kept in a conspicuous place for quick access by personnel. An air horn will also be kept in the Contamination Reduction Zone.

Wyoming County and the Project HSO will be notified by telephone, and later by written report, whenever a site evacuation is executed.

12.4 Other Signals

Emergency hand signals for use by personnel wearing air-purifying respirators are summarized in Table 12-1.

12.5 Fire

In the event of a fire that cannot be controlled with available equipment, the local fire department (Warsaw Village Town Hall Fire) will be summoned immediately by the Site HSO or his designee, who shall apprise them of the situation upon their arrival. Wyoming County will also be notified. (See Table 12-2 for telephone numbers of emergency response agencies.)

12.6 First Aid

At the startup of field activities, the Project HSO will contact hospital personnel regarding the potential hazards at the site. First aid for personal injuries will be administered, if possible, at the site by the Site HSO or his designee. If a site worker should require further treatment, he or she will be transported to the hospital in the URS vehicle located on site or an ambulance will be summoned.

All accidents, however insignificant, will be reported to the Site HSO, who will report the accident to the Project HSO. All personnel designated to administer first aid will have received a minimum of eight hours training in first aid and CPR, and be certified by the American Red Cross.

In the event of a serious personal injury requiring offsite medical attention, the injured person will first be moved to the Contamination Reduction Zone, where an attempt will be made to go through the decontamination procedures, including removal of protective clothing. If the injury is life-threatening, decontamination will be of secondary importance, and the injured party will be taken directly to the hospital. If a head, neck, back or spinal injury is suspected, the injured person will not be moved and an ambulance will be summoned to the site.

TABLE 12-1

EMERGENCY HAND SIGNALS

• Hand gripping throat	- Can't breathe.
• Grip partner's wrist, or place both hands around wrist	- Leave area immediately, no debate!
• Hands on top of head	- Need assistance.
• Thumbs up	- I am all right, OK, I understand.
• Thumbs down	- No, negative.

TABLE 12-2

EMERGENCY TELEPHONE NUMBERS

Emergency Response Agencies	
Fire-Warsaw Village Town Hall Fire	585-786-2468
Police-Wyoming County Sheriff	585-786-8989
New York State Police (Nunda)	585-468-3800
Medical Facilities	
Wyoming County Community Hospital 400 N. Main Street Warsaw, New York	585-786-2233
Environmental and Health Agencies	
New York State Department of Environmental Conservation Regional Headquarters	716-851-7200
New York State Department of Health Toxic Substances	716-847-4385
URS Corporation	
Robert Henschel, Project Manager	716-923-1225
Sheldon Nozik, Project Health and Safety Officer	716-923-1160
Scott McCone, Site Health and Safety Officer	716-923-1144
(Cellular telephone numbers for field personnel will be provided at startup of field activities.)	
Client Representatives	
Dennis Halstead, Wyoming County Emergency Services	585-786-8936
Doug Berwanger, Wyoming County, Board of Supervisors Chairman	585-786-8800

In the event of a serious personal injury requiring offsite medical attention, the injured person will first be moved to the Contamination Reduction Zone, where an attempt will be made to go through the decontamination procedures, including removal of protective clothing. If the injury is life-threatening, decontamination will be of secondary importance, and the injured party will be taken directly to the hospital. If a head, neck, back, or spinal injury is suspected, the injured person will not be moved and an ambulance will be summoned to the site.

12.7 Emergency Assistance

The name, telephone number, and location of police, fire, hospital, and other agencies whose services might be required, or from whom information might be needed, will be kept in the support zone. The list is presented in Table 12-2. A map showing the route to the nearest hospital is presented in Figure 13.

If an ambulance should have to be called to the site, the injured person should meet the ambulance outside the Exclusion Zone if possible. If a head or spinal injury is suspected or the person is unconscious for any reason, medical personnel may have to come into the Exclusion Zone.

12.8 Spills

The potential for spills to occur during onsite work at the site is minimal, since the direct handling of hazardous waste containers (drums, tanks, etc.) is not expected to be part of the scope of work. In the event that residual materials are spilled on site, the following procedures will be implemented:

12.8.1 Liquid Spills

If a liquid (decontamination water, well development water, etc.) is spilled on a permeable surface, 2 inches of surface soil will be removed where the spill occurred and drummed. The area will later be either backfilled with clean soil or regraded. If liquid is spilled on an impermeable surface, a sorbent material will be applied to the spill area. The sorbent material will be swept up and drummed, and the spill area washed down with clean water.

12.8.2 Soil Spills

Contaminated soil spilled on a permeable surface will be shoveled into a drum, and the top 2 inches of soil where the spill occurred will also be removed and drummed. The area will then be either backfilled with clean topsoil or regraded. If soil is spilled on an impermeable

surface, the material will be shoveled (or swept) back into a drum, and the area washed with clean water.

12.9 Accident Investigation and Reporting

12.9.1 Accident Investigation

All accidents requiring first aid which occur incidental to activities on site will be investigated. Standard OSHA formats will be used for reporting any accidents/injuries/illness that occur on the site. The investigation format will be as follows:

- interviews with witnesses,
- pictures, if applicable, and
- necessary actions to alleviate the problem.

12.9.2 Accident Reports

In the event that an accident or some other incident such as an explosion or exposure to toxic chemicals occurs during the course of the project, the Project HSO and Wyoming County will be telephoned within one hour and receive a written notification within 24 hours. The report shall include the following items:

- Name, telephone number, and location of the contractor, if not URS personnel.
- Name and title of person(s) reporting.
- Date and time of accident/incident.
- Location of accident/incident, (i.e., building number, facility name).
- Brief summary of accident/incident giving pertinent details including type of operation ongoing at the time of the accident/incident.
- Cause of accident/incident.
- Casualties (fatalities, disabling injuries).
- Details of any existing chemical hazard or contamination.
- Estimated property damage, if applicable.

- Nature of damage; effect on contract schedule.
- Action taken by contractor/URS to ensure safety and security.
- Other damage or injuries sustained (public or private).

13.0 CONFINED SPACE ENTRY

Because it is not presently part of the scope of work, confined space entry requirements will not be necessary. If it does become necessary, the Wyoming County will be notified prior to any confined space entry and all confined space entry will be performed in accordance with 29 CFR 1910.146.

APPENDIX C

SITE-WIDE INSPECTION FORM

APPENDIX C

WYOMING COUNTY FIRE TRAINING CENTER – SITE MANAGEMENT PLAN

NYSDEC SITE NO. V-00604-9

SITE-WIDE INSPECTION FORM

Date: _____ **Inspector:** _____

Weather: _____ **Signature:** _____

Temperature:_____ **Company:** _____

Quarter: First Second Third Fourth
(Circle One)

Item Inspected	**Maintenance Needed (Y/N)**	**Comments**
General Site Access		
Soil Cover/Grass Cover		
Monitoring Wells		
Treated Soil Disposal Area		
Drainage Swales/Channels		
North Permeable Reactive Wall		
South Permeable Reactive Wall		

APPENDIX D

MONITORING WELL

BORING AND CONSTRUCTION LOGS

MONITORING WELL BORING LOGS

NATURE'S WAY
ENVIRONMENTAL CONSULTANTS & CONTRACTORS, INC.
CRITTENDEN (716) 937-6527
SENECA FALLS (315) 568-1664

DATE: 1/7/01-11/13/01 HOLE NUMBER: Rock Well 1 TOC ELEVATION: GROUND ELEVATION:

PROJECT: Subsurface Investigation at the Wyoming County Fire Training Center
Wethersfield Road, Wethersfield, New York

PREPARED FOR: Wyoming County

BORING LOCATION: See Map

SN	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION	OVM	Well	REMARKS
1	1						Moist, dark brown (SANDY-SILT) topsoil / fill with little very fine size sand 1.0	0.0	0.0	Topsoil / fill to 1.0 foot over silty glacial drift to 5.0 feet over loamy glacial drift to 12.0 feet over clayey glacial till to 20.0 feet over coarse silty glacial till to 24.0 feet over loamy glacial till to 34.6 feet over weathered shale rock to 40.0 feet over shale bedrock to 64.0 fet over siltstone bedrock to completion
		5								
			10		15					
				15						
2	10							0.0		
		10								
			12		22					
				16						
3	6							0.0	4" Steel Casing	
		11								
			13		25					
				17						
4	7							0.0	2" Stainless Steel Riser Pipe	
		12								
			15		27					
				20						
7	6							0.0		
		11								
			14		26					
				15						
	-							0.0	Cement / Bentonite Grout	
		8								
			10		18					
				15						
-	50/3"						12.0	0.0		
		-					Moist, gray, gravelly (CLAYEY-SILT) with 15 to 30% gravel with some clay, very dense, massive soil structure			
			-							
				-						
9	30							0.0		
		29			58					
			31							
				39						
9	28							0.0		
		27			51					
			24							
				29						
10	18							0.0		
		30								
			50/4"							
							20.0			

LOGGED BY: Dale M. Gramza / Senior Geologist PAGE 1 OF 4

NATURE'S WAY
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SENECA FALLS
(315) 568-1664

TOC ELEVATION: _____ GROUND ELEVATION: _____

DATE: 11/7/01-11/13/01 HOLE NUMBER: Rock Well 1

PROJECT: Subsurface Investigation at the Wyoming County Fire Training Center
Wethersfield Road, Wethersfield, New York

PREPARED FOR: Wyoming County

BORING LOCATION: See Map

SN	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION	OVM	Well	REMARKS
11	24						Extremely moist, highly mottled, brown, gravelly (SANDY-SILT) with 15 to 25% gravel, little very fine size sand, very dense, massive soil structure	0.0		
		32			76					
			44					0.0		
				50/4"						
12	18									
		24			61					
			37							
				50/3"						
23	100/3"						24.0			
							Moist, faintly mottled, gray, gravelly (SAND-SILT-CLAY) with 15 to 25% gravel, little clay and very fine size sand, very dense, massive soil structure	0.0	4" Steel Casing	
14	16							0.0	2" Stainless Steel Riser Pipe	
		39			78					
			45							
				59						
15	19							0.0	Cement / Bentonite Grout	
		41								
			63		104					
				50/3"						
20	23							0.0		
		45								
			75/3"							
17	24							0.0		
		41								
			60		101					
				50/3"						
15	38							0.0		
		50/3"								
19	28							0.0		
		77								
			100/3"							
								0.0		
							40.0			

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NATURE'S WAY
ENVIRONMENTAL CONSULTANTS & CONTRACTORS, INC.
CRITTENDEN
(716) 937-6527
SENECA FALLS
(315) 568-1664

DATE: 1/7/01-11/13/01 HOLE NUMBER: Rock Well 1 TOC ELEVATION: GROUND ELEVATION:

PROJECT: Subsurface Investigation at the Wyoming County Fire Training Center
Wethersfield Road, Wethersfield, New York

PREPARED FOR: Wyoming County

BORING LOCATION: See Map

SN	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION	OVM	Well	REMARKS
		RUN	#1				Shale bedrock, gray, moderately hard to moderately soft, can be etched with a fingernail, very thinly bedded 1/4 to 2 inches with iron stained vertical fractures and bedding planes		Cement / Bentonite Grout 45.0	
		RUN	#2						Bentonite Seal	
		RUN	#3						55.5 #2 Size Sand 57.5 2" 10 Slot Continuous Wrap Stainless Steel Screen	

40 45 50 55

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NATURE'S WAY
ENVIRONMENTAL CONSULTANTS & CONTRACTORS, INC.

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(315) 568-1664

DATE: 1/7/01-11/13/01 HOLE NUMBER: Rock Well 1 TOC ELEVATION: GROUND ELEVATION:

PROJECT: Subsurface Investigation at the Wyoming County Fire Training Center
Wethersfield Road, Wethersfield, New York

PREPARED FOR: Wyoming County

BORING LOCATION: See Map

SN	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION	OVM	Well	REMARKS
		RUN	#4				64.0 Siltstone bedrock, gray, moderately hard, very thin to thinly bedded 1/2 to 4 inches thick, encountered numerous iron stained vertical fractures from 64.0 to 70.0 feet		2" 10 Slot Continuous Wrap Stainless Steel Screen	Note: Below 64.0 feet - lost approximately 200 gallons of water while coring to 72.5 feet
							72.5 Coring Completed at 72.5 feet		#2 Size Sand	
									Well Installation Completed at 72.5 feet	

60 65 70 75

CORE DATA

RUN #	Int. (ft)	Len. Rec. (ft)	Rec. %	RQD %
1	40.0 to 47.5	7.5 5.0	67	0
2	47.5 to 54.0	6.5 5.4	83	0
3	54.0 to 62.5	8.5 6.5	76	0
4	62.5 to 72.5	10.0 10.0	100	10

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SENECA FALLS
(315) 568-1664

HOLE NUMBER: EP/MW 1-01

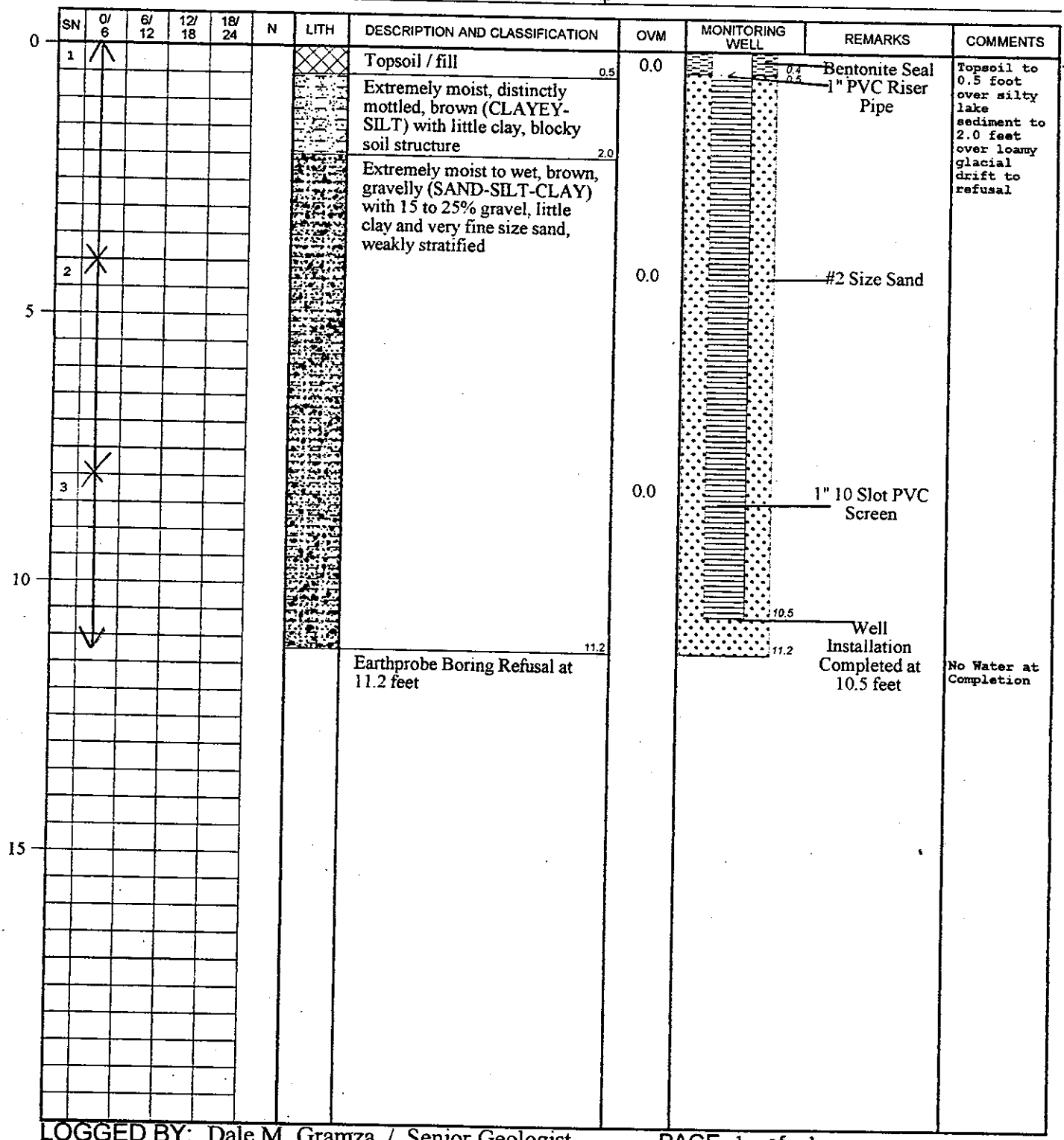
DATE: 10/31/01

ELEVATION:

PROJECT: Subsuface Investigation at the Wyoming County Fire Training Center
Wethersfield Road, Wethersfield, New York

PREPARED FOR: Wyoming County

BORING LOCATION: See Map



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CRITTENDEN
(716) 937-6527
SENECA FALLS
(315) 568-1664

HOLE NUMBER: EP/MW 2-01

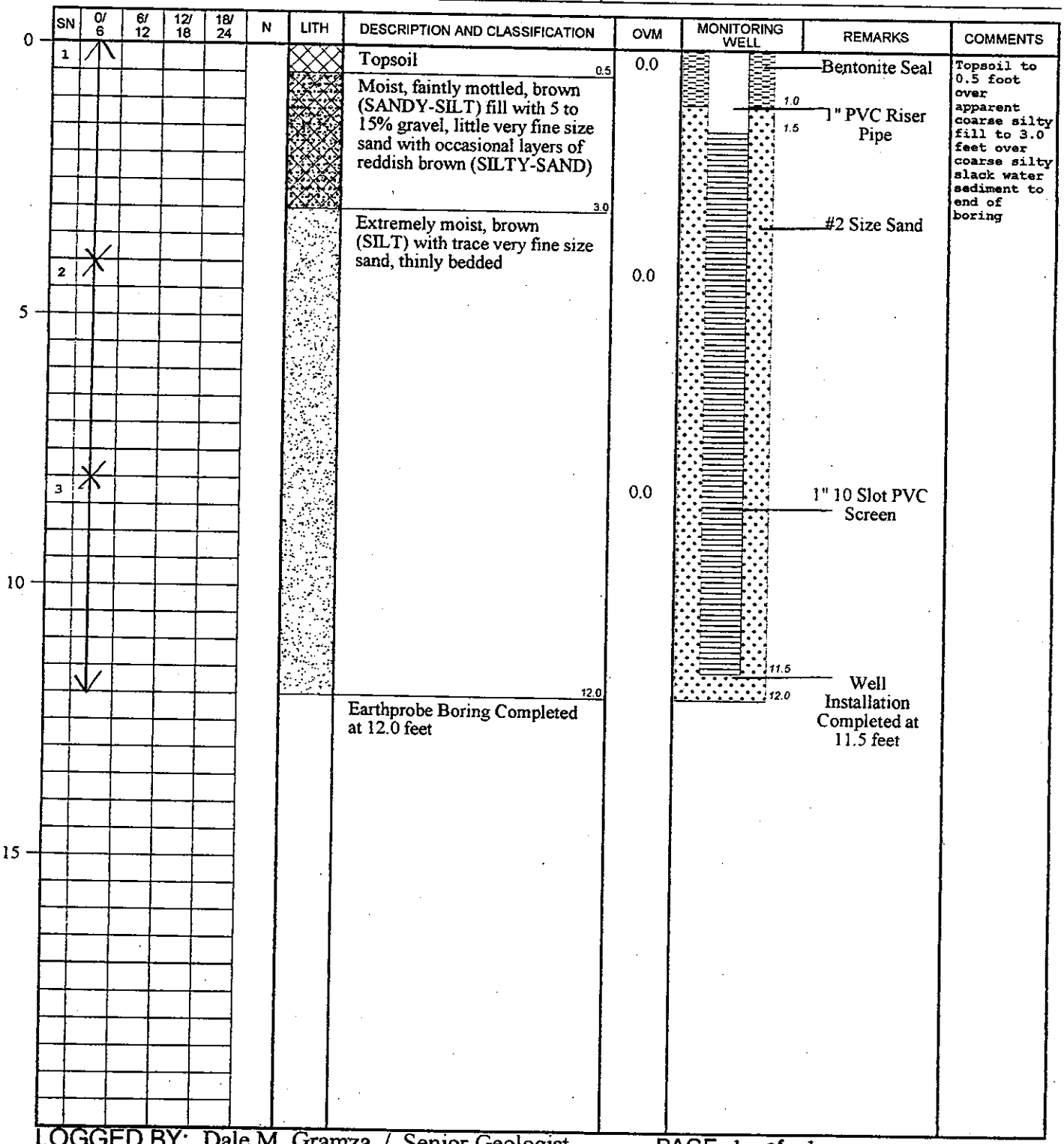
DATE: 9/27/01

ELEVATION:

PROJECT: Subsuface Investigation at the Wyoming County Fire Training Center
Wethersfield Road, Wethersfield, New York

PREPARED FOR: Wyoming County

BORING LOCATION: See Map



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(315) 568-1664

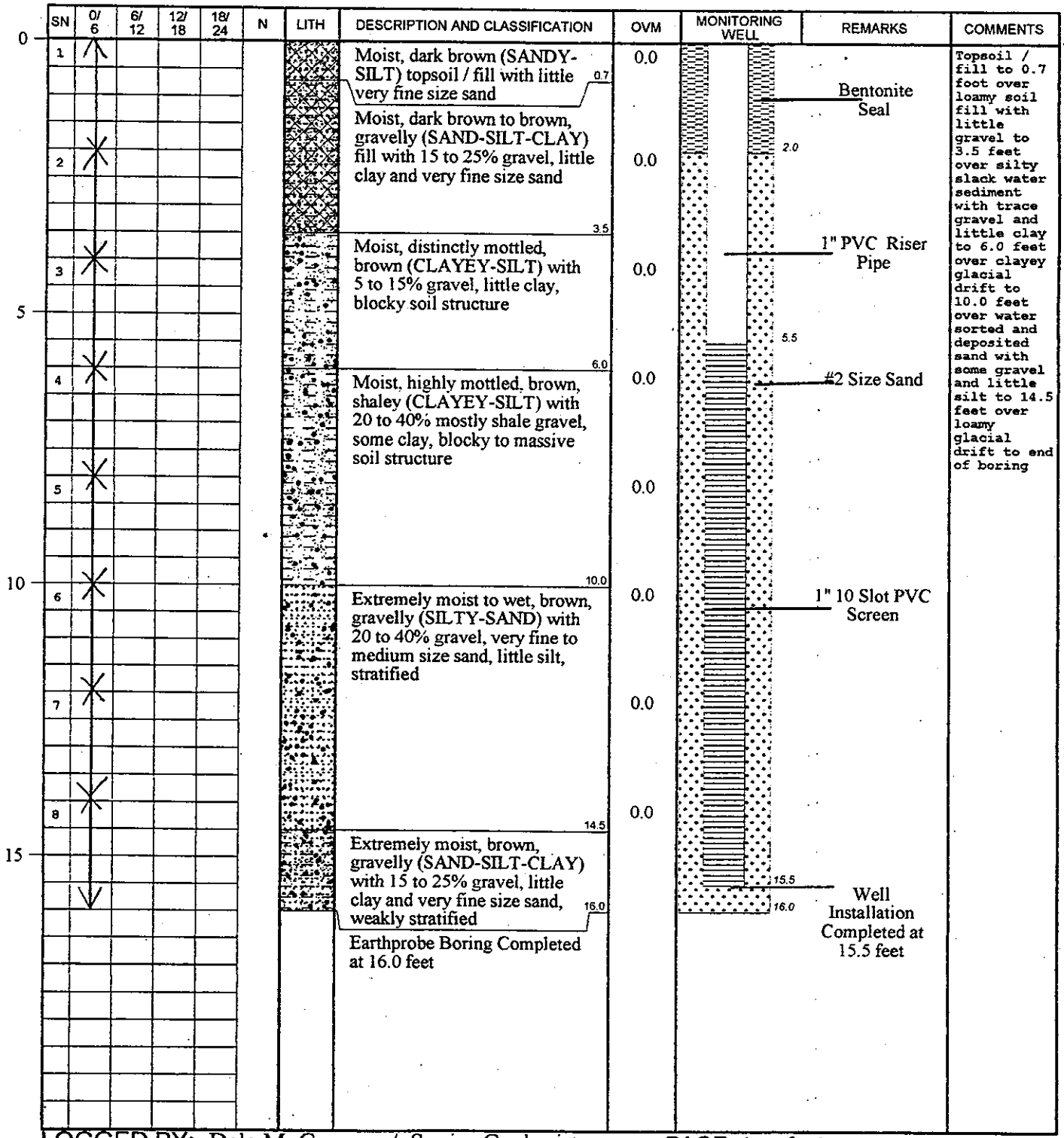
HOLE NUMBER: EP 55 / MW 3

DATE: 10/31/01 ELEVATION:

PROJECT: Subsuface Investigation at the Wyoming County Fire Training Center
Wethersfield Road, Wethersfield, New York

PREPARED FOR: Wyoming County

BORING LOCATION: See Map



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HOLE NUMBER: EP 56 / MW 4

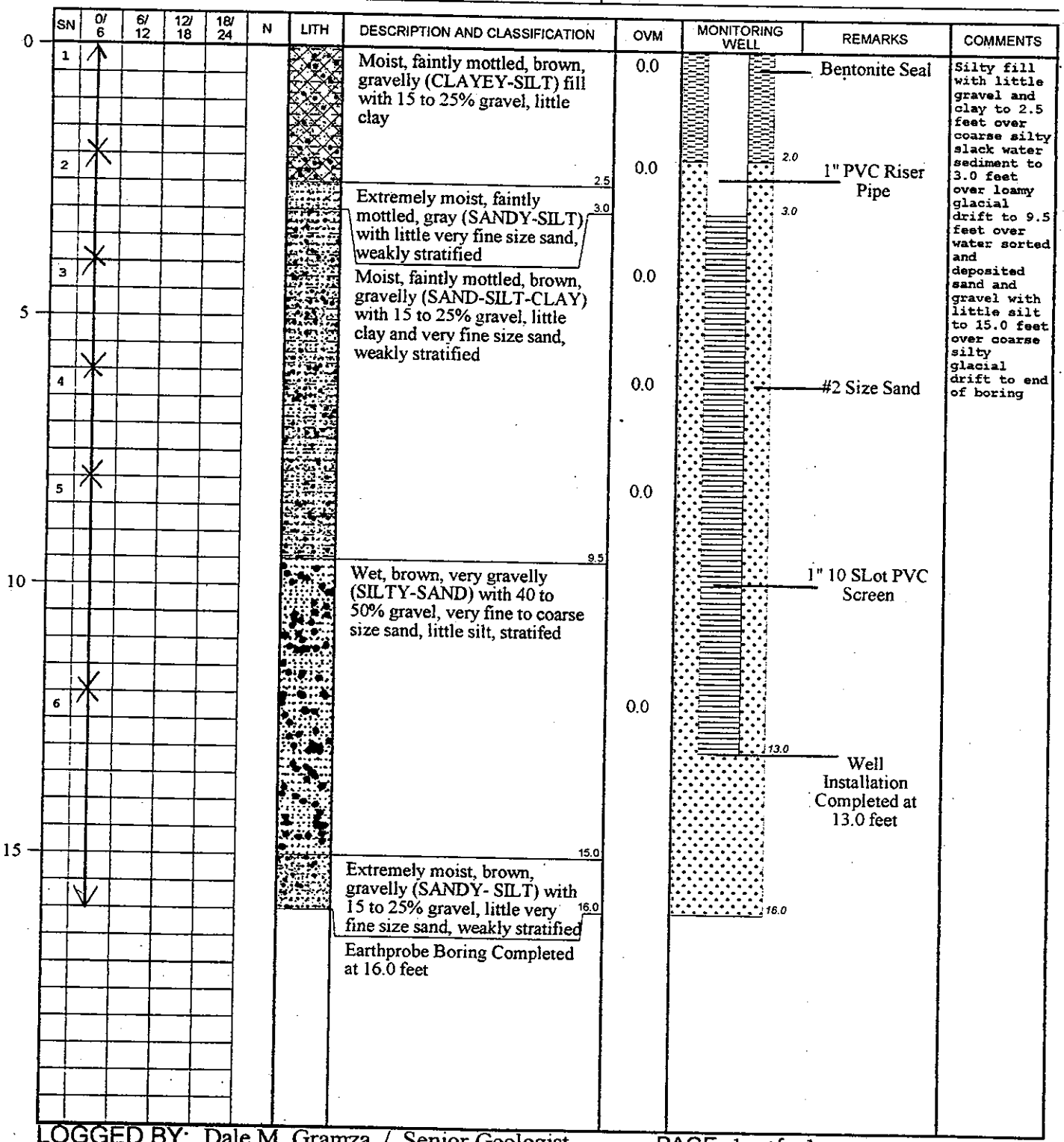
DATE: 10/31/01

ELEVATION:

PROJECT: Subsuface Investigation at the Wyoming County Fire Training Center
Wethersfield Road, Wethersfield, New York

PREPARED FOR: Wyoming County

BORING LOCATION: See Map



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(315) 568-1664

HOLE NUMBER: EP 57 / MW 5

DATE: 10/31/01

ELEVATION:

PROJECT: Subsuface Investigation at the Wyoming County Fire Training Center
Wethersfield Road, Wethersfield, New York

PREPARED FOR: Wyoming County

BORING LOCATION: See Map

SN	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	OVM	MONITORING WELL	REMARKS	COMMENTS
1							Moist, dark brown (SANDY-SILT) topsoil / fill with 5 to 15% gravel (1.0)	0.0		Bentonite Seal	Topsoil / fill to 1.0 foot over coarse silty fill with some gravel to 3.0 feet over clayey slack water sediment to 7.0 feet over water sorted and deposited sand with little silt to end of boring
2							Moist, brown, gravelly (SANDY-SILT) fill with 20 to 40% gravel, little very fine size sand (3.0)	0.0		1" PVC Riser Pipe (1.5) (2.0)	
3							Moist, distinctly mottled, brown (CLAYEY-SILT) with some clay, blocky soil structure (7.0)	4.0		#2 Size Sand	
4								0.0			
5							Wet, brown (SILTY-SAND) with very fine to fine size sand, little silt, thinly bedded with occasional gravelly (SILTY-SAND) seams noted below 10.0 feet (12.0)	0.0		1" 10 Slot PVC Screen	
6							Earthprobe Boring Completed at 12.0 feet	0.0		Well Installation Completed at 12.0 feet	

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HOLE NUMBER: EP 58 / MW 6-01

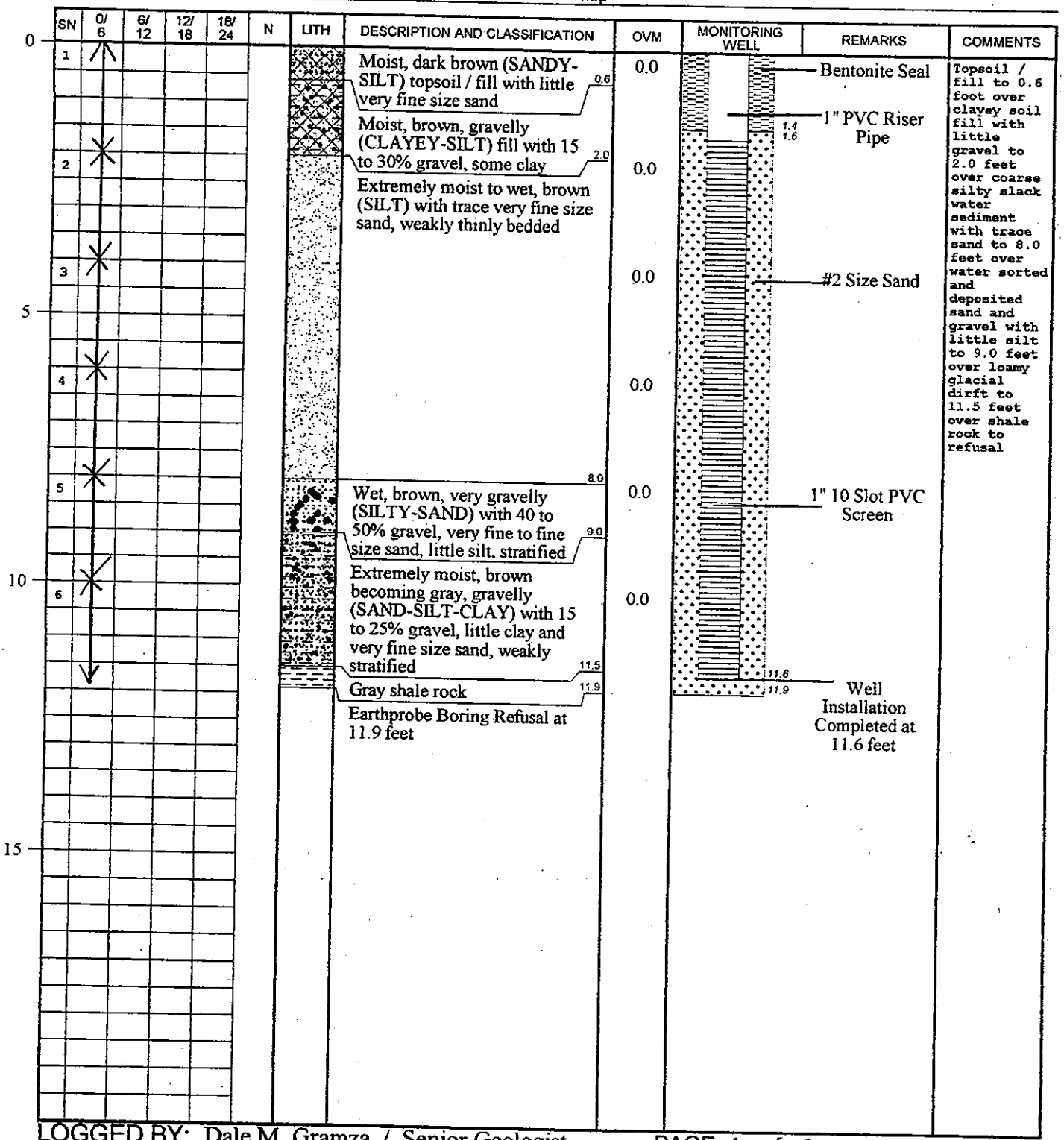
DATE: 10/31/01

ELEVATION:

PROJECT: Subsuface Investigation at the Wyoming County Fire Training Center
Wethersfield Road, Wethersfield, New York

PREPARED FOR: Wyoming County

BORING LOCATION: See Map



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HOLE NUMBER: MW 7 -01

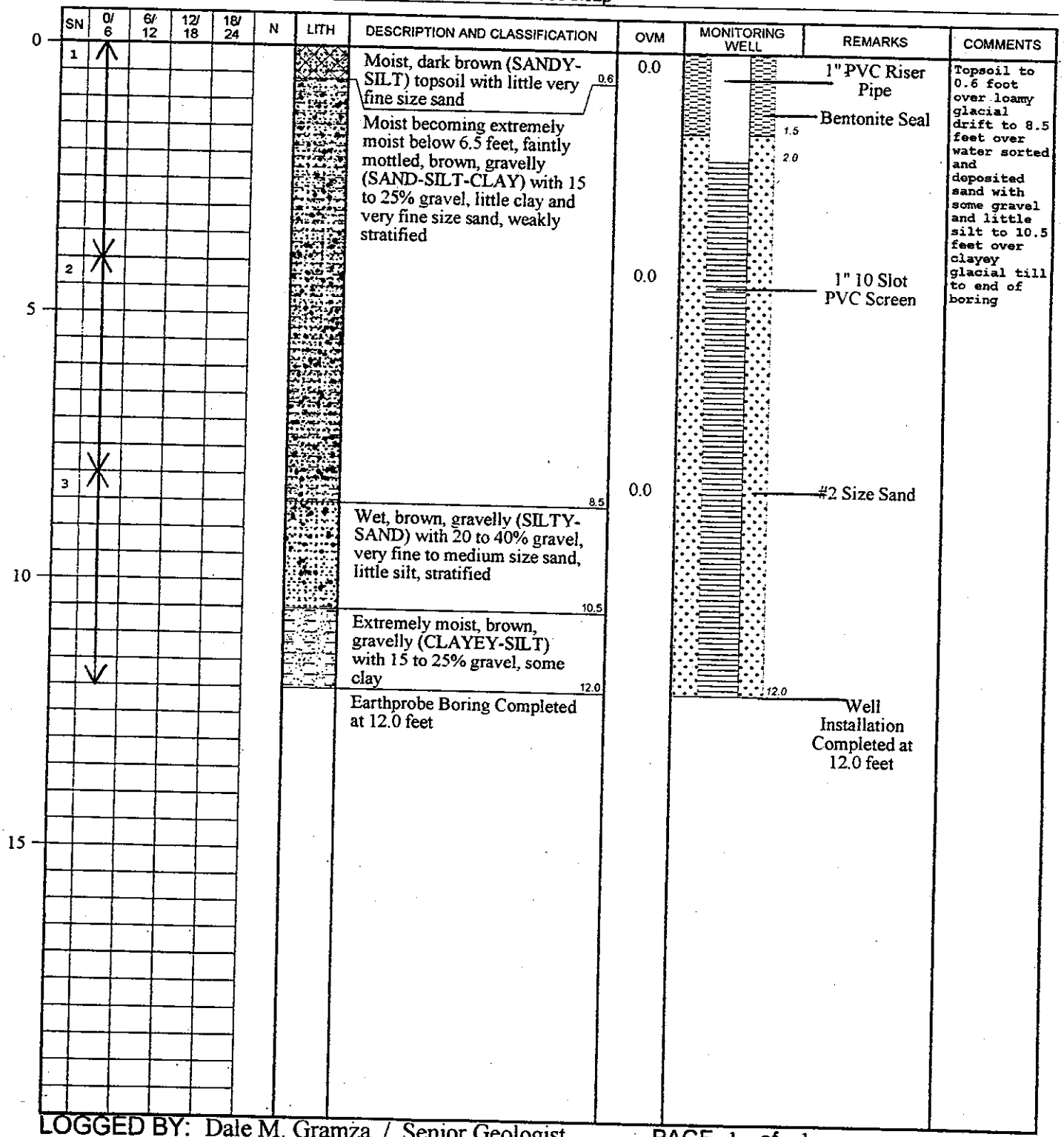
DATE: 11/06/01

ELEVATION:

PROJECT: Subsuface Investigation at the Wyoming County Fire Training Center
Wethersfield Road, Wethersfield, New York

PREPARED FOR: Wyoming County

BORING LOCATION: See Map



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HOLE NUMBER: MW 8-01

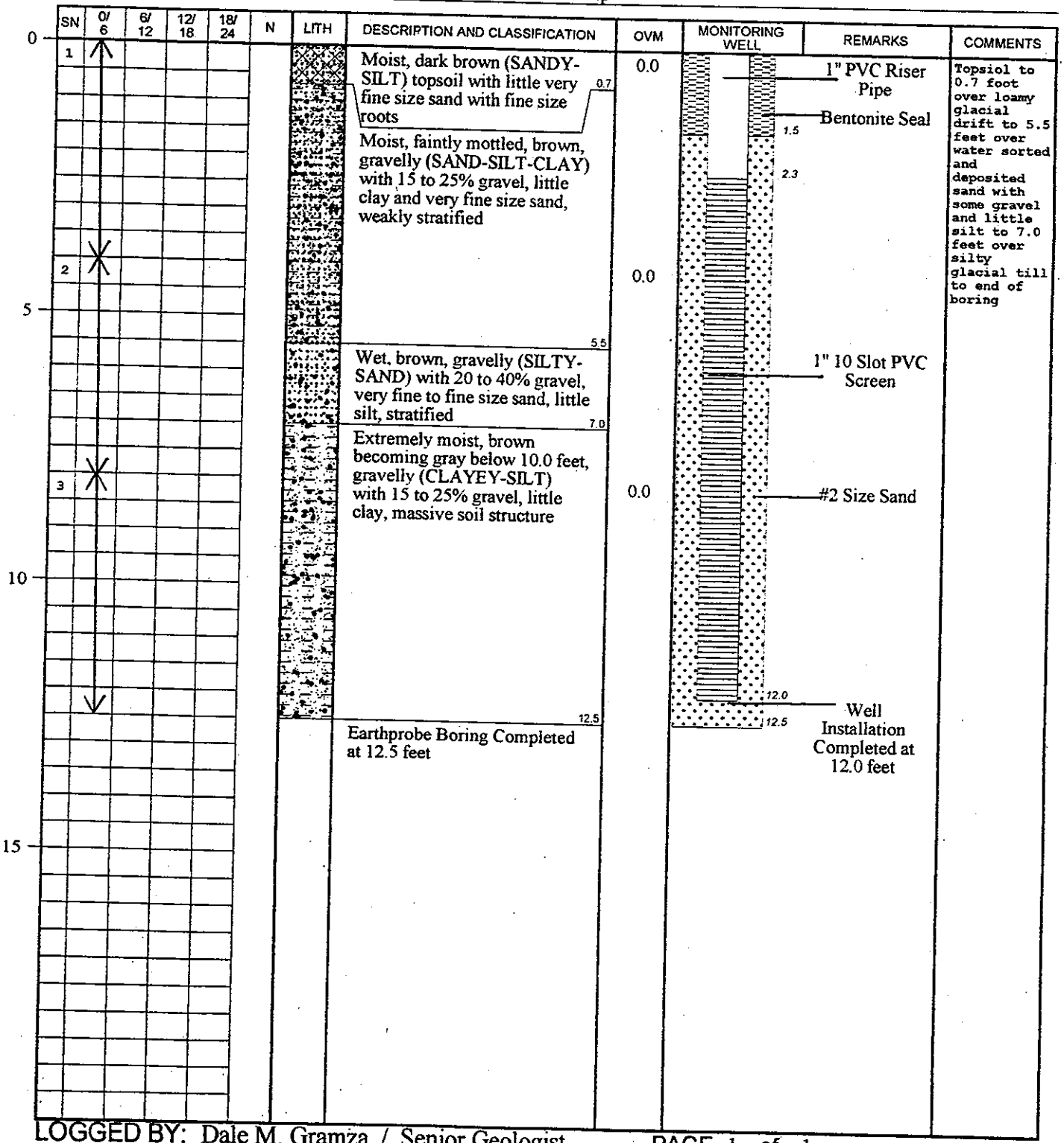
DATE: 11/06/01

ELEVATION:

PROJECT: Subsuface Investigation at the Wyoming County Fire Training Center
Wethersfield Road, Wethersfield, New York

PREPARED FOR: Wyoming County

BORING LOCATION: See Map



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(315) 568-1664

DATE: 11/06/01

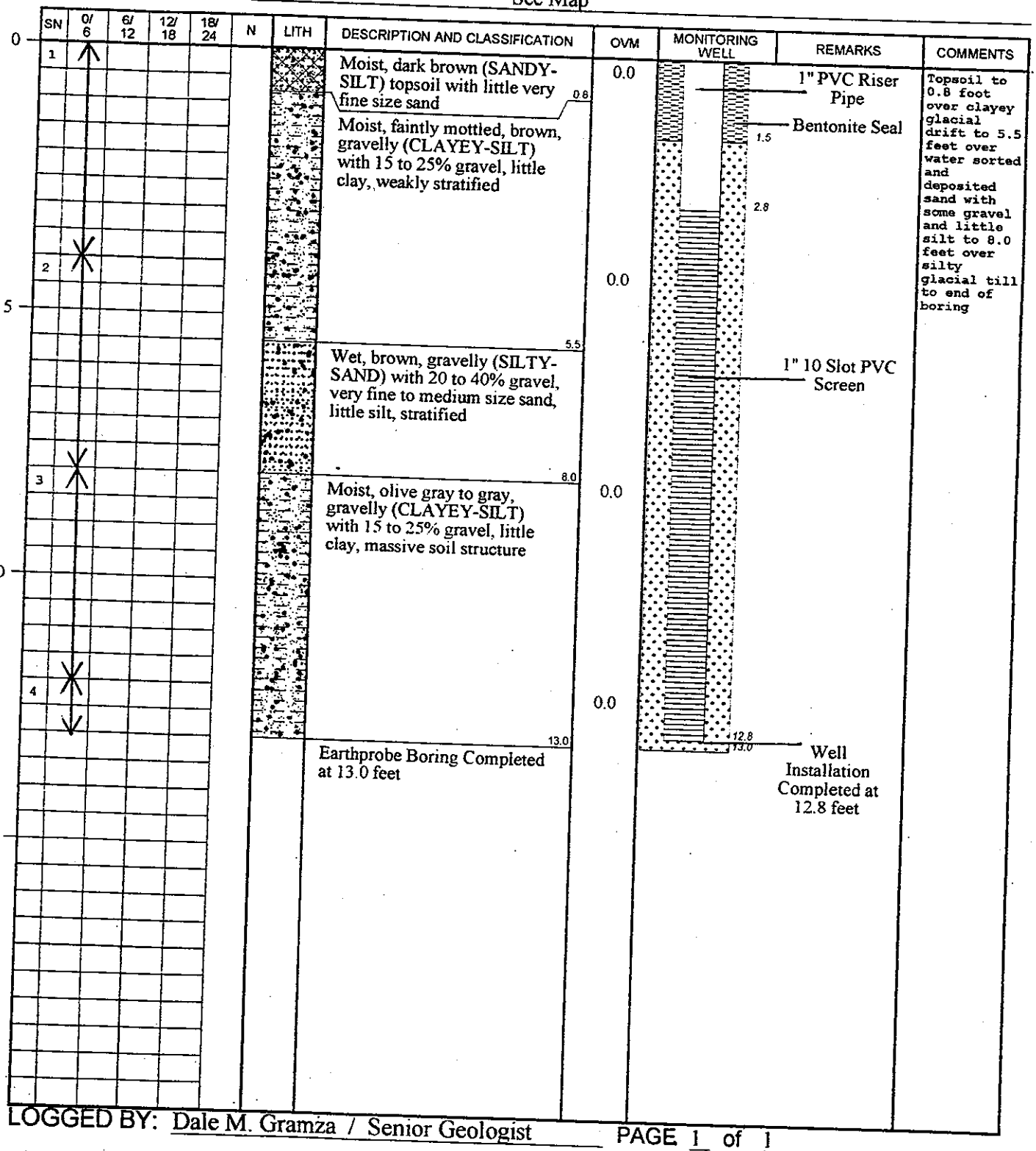
HOLE NUMBER: MW 9-01

ELEVATION:

PROJECT: Subsuface Investigation at the Wyoming County Fire Training Center
Wethersfield Road, Wethersfield, New York

PREPARED FOR: Wyoming County

BORING LOCATION: See Map



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HOLE NUMBER: MW 10-01

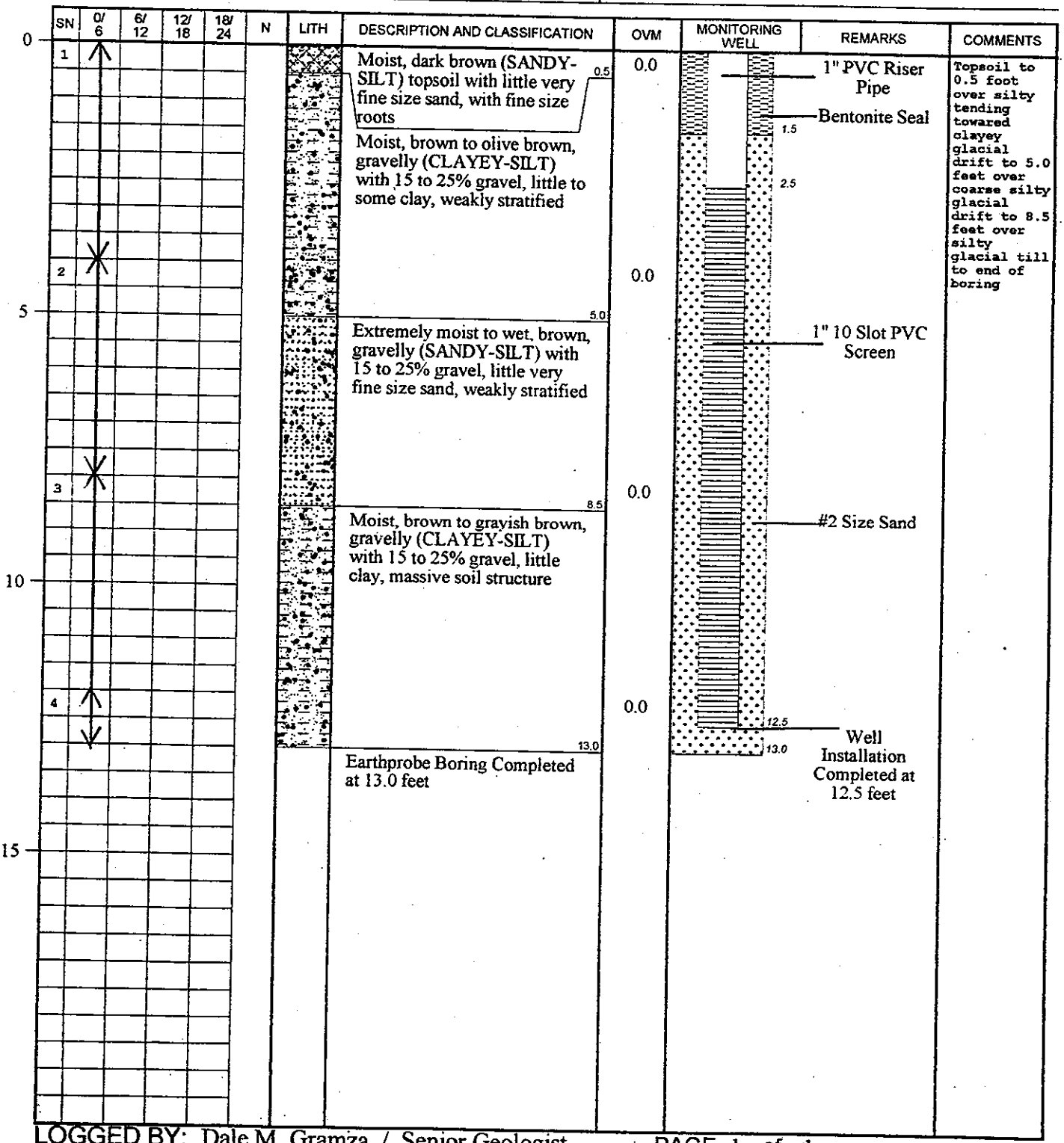
DATE: 11/06/01

ELEVATION:

PROJECT: Subsuface Investigation at the Wyoming County Fire Training Center
Wethersfield Road, Wethersfield, New York

PREPARED FOR: Wyoming County

BORING LOCATION: See Map



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URS Corporation

TEST BORING LOG

BORING NO:	MW-11
PROJECT:	Wyoming County Fire Training Area
SHEET:	1 of 1
CLIENT:	Wyoming County
JOB NO.:	11172991.00000
BORING CONTRACTOR:	Nature's Way
BORING LOCATION:	
GROUNDWATER:	
GROUND ELEVATION:	

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore		
				DIA.		2"		
				WT.		--		
				FALL		--		
				* POCKET PENETROMETER READING				

DATE STARTED:	06/03/04
DATE FINISHED:	06/03/04
DRILLER:	Bruce Bartz
GEOLOGIST:	C. Taylor
REVIEWED BY:	

DEPTH FEET	SAMPLE STRATA	NO.	TYPE	BLOWS PER 6"	REC% ROD%	DESCRIPTION COLOR	CONSIST HARD	MATERIAL DESCRIPTION	USCS	REMARKS PID	REMARKS Moist
		1	2" MC		3.2/4.0 80%	Dk Brn Light Brown	Loose	SILTY SAND: organic, trace gravel	SP	0	Moist
								SILTY SAND: trace to little gravel, choesive, low plasticity, very fine poorly graded sand			
5		2	2" MC		2.1/4.0 53%		Dense	GRAVELLY SILTY SAND: increasing gravel with depth			Wet
10		3	2" MC		2.7/4.0 68%		Loose	SAND: Trace to little silt and gravel			
								SILTY SAND: fine to medium sand, little gravel, cohesive, moderate plasticity, orange mottles, increasing gravel with depth (rounded to angular)			
		4	2" MC		1.9/3.0 63%						
15											
								Drilled to 15.0' bgs			
20											
25											
30											

COMMENTS: Skid-mounted EarthProbe 200 using 2" macrocore to a depth of 15.0' BGS.	PROJECT NO. 11172991.00000
	BORING NO. MW-11

URS Corporation

TEST BORING LOG

PROJECT:	Wyoming County Fire Training Area
CLIENT:	Wyoming County
BORING CONTRACTOR:	Nature's Way
BORING NO:	MW-12
SHEET:	1 of 1
JOB NO.:	11172991.00000
BORING LOCATION:	
GROUND ELEVATION:	
DATE STARTED:	06/03/04
DATE FINISHED:	06/03/04
DRILLER:	Bruce Bartz
GEOLOGIST:	C. Taylor
REVIEWED BY:	

GROUNDWATER:				CAS.	SAMPLER	CORE	TUBE
DATE	TIME	LEVEL	TYPE	TYPE		Macrocore		
				DIA.		2"		
				WT.		--		
				FALL		--		
				* POCKET PENETROMETER READING				

DEPTH FEET	SAMPLE STRATA	NO.	TYPE	BLOWS PER 6"	REC% ROD%	DESCRIPTION COLOR	CONSIST HARD	MATERIAL DESCRIPTION	USCS	REMARKS PID	REMARKS Moist
		1	2" MC		4.0/4.0 100%	Dk Brn Light Brown	Loose Medium Dense	GRAVELLY SILTY SAND: highly organic from 0.0 to 0.5, cohesive, low plasticity, orange mottles,	SP	0	Moist
5		2	2" MC		4.0/4.0 100%		Dense	Silty Sand 6.7 - 7.1' bgs, Gravel: 7.1 - 7.3' bgs			
10		3	2" MC		2.2/4.0 55%	Grey Medium Brown	Loose	SAND:, trace silt, trace gravel, non cohesive, non plastic			Wet
		4	2" MC		2.1/3.0 70%		Dense	SILTY SAND: Cohesive, Mod. Plastic, Gravel lenses 11.7-12.0' and 13.2-13.4' bgs,			
15						Dk Gry	Loose	SANDY GRAVEL: angular, trace silt	GP		
								Drilled to 15.0' bgs			
20											
25											
30											

COMMENTS:	Skid-mounted EarthProbe 200 using 2" macrocore to a depth of 15.0' BGS.	PROJECT NO.	11172991.00000
		BORING NO.	MW-12

URS Corporation

TEST BORING LOG

BORING NO:	MW-13
SHEET:	1 of 1
JOB NO.:	11172991.00000
BORING LOCATION:	
GROUND ELEVATION:	
DATE STARTED:	06/03/04
DATE FINISHED:	06/03/04
DRILLER:	Bruce Bartz
GEOLOGIST:	C. Taylor
REVIEWED BY:	

PROJECT: Wyoming County Fire Training Area
CLIENT: Wyoming County
BORING CONTRACTOR: Nature's Way

GROUNDWATER:

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE	TUBE
TYPE		Macrocore		
DIA.		2"		
WT.		--		
FALL		--		

* POCKET PENETROMETER READING

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	REC% ROD%	COLOR	CONSIST HARD	MATERIAL DESCRIPTION	USCS	REMARKS PID	REMARKS Moist
0		1	2" MC		2.6/4.0 65%	Dk Brn Brown	Dense	GRAVELLY SILTY SAND: highly organic 0.0-0.8', very fine sand, medium to coarse angular to sub-angular gravel, cohesive low plasticity (3.5-3.8')	SW	0	Moist
5		2	2" MC		3.1/4.0 78%	Gray	Loose to Dense	SILTY SANDY GRAVEL:			Wet
								SILTY SAND:trace gravel, medium plasticity, cohesive			
10		3	2" MC		3.4/4.0 85%	Olive Gray	Loose to Dense	GRAVEL: weathered sandy siltstone	GP		Dry
								SILTY SANDY GRAVEL: trace clay, with orange mottles	GW		Moist
15		4	2" MC		3.0/3.0 100%	Brown & Gray	Dense	SILTY GRAVELLY SAND: angular gravel, orange mottles Gravel (14.4-14.5') poorly graded	SW		Wet
20								Drilled to 15.0' bgs			
25											
30											

COMMENTS: Skid-mounted EarthProbe 200 using 2" macrocore to a depth of 15.0' BGS.

PROJECT NO. 11172991.00000
BORING NO. MW-13

URS Corporation

TEST BORING LOG

PROJECT:	Wyoming County Fire Training Area	BORING NO:	MW-14
CLIENT:	Wyoming County	SHEET:	1 of 1
BORING CONTRACTOR:	Nature's Way	JOB NO.:	11172991.00000
GROUNDWATER:		BORING LOCATION:	

	CAS.	SAMPLER	CORE	TUBE
TYPE		Macrocore		
DIA.		2"		
WT.		--		
FALL		--		

GROUND ELEVATION:	
DATE STARTED:	06/02/04
DATE FINISHED:	06/02/04
DRILLER:	Bruce Bartz
GEOLOGIST:	C. Taylor
REVIEWED BY:	

DATE	TIME	LEVEL	TYPE

* POCKET PENETROMETER READING

DEPTH FEET	SAMPLE STRATA	NO.	TYPE	BLOWS PER 6"	REC% ROD%	DESCRIPTION COLOR	CONSIST HARD	MATERIAL DESCRIPTION	USCS	REMARKS PID	REMARKS Moist
		1	2" MC		3.3/4.0 83%	Dk Brn Brown ↓ Gray to Olive Gray to Brown	Loose Dense	SILTY SAND:cohesive, medium plasticity, medium to coarse gravel, sub-rounded to angular	SW ↓ GW	0	Moist ↓ Moist to Dry ↓ Wet ↓ Dry
5		2	2" MC		4.0/4.0 100%			SILTY SANDY GRAVEL: fine sand to very coarse gravel, non-cohesive			
10		3	2" MC		2.0/2.0 100%						
		4	2" MC		2.0/2.0 100%						
15		5	2" MC		2.2/3.0 73%						
								Drilled to 15.0' bgs			
20											
25											
30											

COMMENTS:	Skid-mounted EarthProbe 200 using 2" macrocore to a depth of 15.0' BGS.	PROJECT NO.	11172991.00000
		BORING NO.	MW-14

URS Corporation

TEST BORING LOG

PROJECT:	Wyoming County Fire Training Area
CLIENT:	Wyoming County
BORING CONTRACTOR:	Nature's Way
GROUNDWATER:	
BORING NO:	MW-15
SHEET:	1 of 1
JOB NO.:	11172991.00000
BORING LOCATION:	
GROUND ELEVATION:	
DATE STARTED:	06/02/04
DATE FINISHED:	06/02/04
DRILLER:	Bruce Bartz
GEOLOGIST:	C. Taylor
REVIEWED BY:	

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore		
				DIA.		2"		
				WT.		--		
				FALL		--		
				* POCKET PENETROMETER READING				

DEPTH FEET	SAMPLE STRATA	NO.	TYPE	BLOWS PER 6"	REC% ROD%	DESCRIPTION COLOR	CONSIST HARD	MATERIAL DESCRIPTION	USCS	REMARKS PID	REMARKS Moist
		1	2" MC		3.8/4.0 95%	Dk Brn Lt Brn	V. Loose M. Dense	GRAVELLY SILTY SAND: cohesive,	SM	0	Moist
								SILTY GRAVELLY SAND: very fine sand lenses, subangular to angular fine to very coarse gravel			
5		2	2" MC		2.9/4.0 73%			Gravel lens 5.0-5.3', coarse, angular			Dry Moist to Wet
								GRAVELLY SILTY SAND: cohesive, moderate plasticity			
		3	2" MC		4.0/4.0 100%			GRAVEL: 11.3-12.0' SILTY SAND: 12.0-13.0'			
10								Orange mottling			
		4	2" MC		3.0/3.0 100%	Gray	Dense				Moist to Dry
15											
								Drilled to 15.0' bgs			
20											
25											
30											

COMMENTS: Skid-mounted EarthProbe 200 using 2" macrocore to a depth of 15.0' BGS.	PROJECT NO. 11172991.00000
	BORING NO. MW-15

URS Corporation

TEST BORING LOG

PROJECT:	Wyoming County Fire Training Area
CLIENT:	Wyoming County
BORING CONTRACTOR:	Nature's Way
GROUNDWATER:	

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE	TUBE
TYPE		Macrocore		
DIA.		2"		
WT.		--		
FALL		--		

* POCKET PENETROMETER READING

BORING NO:	MW-16
SHEET:	1 of 1
JOB NO.:	11172991.00000
BORING LOCATION:	
GROUND ELEVATION:	
DATE STARTED:	06/03/04
DATE FINISHED:	06/03/04
DRILLER:	Bruce Bartz
GEOLOGIST:	C. Taylor
REVIEWED BY:	

DEPTH FEET	SAMPLE STRATA	NO.	TYPE	BLOWS PER 6"	REC% ROD%	DESCRIPTION COLOR	CONSIST HARD	MATERIAL DESCRIPTION	USCS	REMARKS PID	REMARKS Moist
		1	2" MC		2.6/4.0 65%	Dk Brn Brown	Loose Dense	GRAVELLY SILTY SAND: very fine to medium sand, fine to very coarse gravel cohesive, low plasticity Organic 0.0-0.3'	SM	0	Moist
5		2	2" MC		2.6/4.0 65%			SILTY SANDY GRAVEL:well graded, angular (red gravel lens @ 6.3')	GM		
								SILTY SAND: fine to coarse sand, rounded to sub-angular, cohesive, low plasticity	SM		Moist
10		3	2" MC		4.0/4.0 100%			Gravelly:10.5-11.1'			to Wet
		4	2" MC		3.0/3.0 100%						
15											
								Drilled to 15.0' bgs			
20											
25											
30											

COMMENTS: Skid-mounted EarthProbe 200 using 2" macrocore to a depth of 15.0' BGS.

PROJECT NO.	11172991.00000
BORING NO.	MW-16

URS Corporation

TEST BORING LOG

PROJECT:	Wyoming County Fire Training Area
CLIENT:	Wyoming County
BORING CONTRACTOR:	Nature's Way
GROUNDWATER:	

	CAS.	SAMPLER	CORE	TUBE
TYPE		Macrocore		
DIA.		2"		
WT.		--		
FALL		--		

DATE	TIME	LEVEL	TYPE

* POCKET PENETROMETER READING

BORING NO:	MW-17
SHEET:	1 of 1
JOB NO.:	11172991.00000
BORING LOCATION:	
GROUND ELEVATION:	
DATE STARTED:	06/03/04
DATE FINISHED:	06/03/04
DRILLER:	Bruce Bartz
GEOLOGIST:	C. Taylor
REVIEWED BY:	

DEPTH FEET	SAMPLE STRATA	NO.	TYPE	BLOWS PER 6"	REC% ROD%	DESCRIPTION COLOR	CONSIST HARD	MATERIAL DESCRIPTION	USCS	REMARKS PID	REMARKS Moist
		1	2" MC		1.9/4.0 48%	Dk Brn Brown	Loose Dense	GRAVELLY SILTY SAND: very fine to medium sand, fine to very coarse gravel cohesive, low plasticity Organic 0.0-0.4'	SM	0	Moist
5		2	2" MC		3.1/4.0 78%						
10		3	2" MC		3.1/4.0 78%		Loose Dense	SILTY SAND: coh., med. plast. / GRAVELLY SILTY SAND: cohesive, non-plastic, rounded to sub-angular			
15		4	2" MC		3.0/3.0 100%		Loose Dense	SILTY SAND: medium to coarse sand / GRAVELLY SILTY SAND: rounded gravel, choesive, low plasticity			Moist to Wet
20								Drilled to 15.0' bgs			
25											
30											

COMMENTS: Skid-mounted EarthProbe 200 using 2" macrocore to a depth of 15.0' BGS.	PROJECT NO. 11172991.00000
	BORING NO. MW-17

URS Corporation

TEST BORING LOG

BORING NO:	MW-18
SHEET:	1 of 1
JOB NO.:	11172991.00000
BORING LOCATION:	
GROUND ELEVATION:	
DATE STARTED:	06/03/04
DATE FINISHED:	06/03/04
DRILLER:	Bruce Bartz
GEOLOGIST:	C. Taylor
REVIEWED BY:	

PROJECT:	Wyoming County Fire Training Area
CLIENT:	Wyoming County
BORING CONTRACTOR:	Nature's Way

GROUNDWATER:				CAS.	SAMPLER	CORE	TUBE
DATE	TIME	LEVEL	TYPE	TYPE		Macrocore		
				DIA.		2"		
				WT.		--		
				FALL		--		
				* POCKET PENETROMETER READING				

DEPTH FEET	SAMPLE STRATA	NO.	TYPE	BLOWS PER 6"	REC% ROD%	DESCRIPTION COLOR	CONSIST HARD	MATERIAL DESCRIPTION	USCS	REMARKS PID	REMARKS Moist
		1	2" MC		2.7/4.0 68%	Brown	Dk Brn Brown	GRAVELLY SILTY SAND: cohesive, low plasticity, angular to sub-rounded with gray and orange mottles. Organic, brown to dark gray, high plasticity 0.0-0.2'	SM	0	Moist
5		2	2" MC		3.3/4.0 83%						
10		3	2" MC		4.0/4.0 100%		Lt Brn & Gray Brown	SILTY SANDY GRAVEL: angular	GM		Dry
								SILTY SAND: non-cohesive, non-plastic	SM		Moist
		4	2" MC		3.0/3.0 100%						
15								Drilled to 15.0' bgs			
20											
25											
30											

COMMENTS:	Skid-mounted EarthProbe 200 using 2" macrocore to a depth of 15.0' BGS.	PROJECT NO.	11172991.00000
		BORING NO.	MW-18

URS Corporation

TEST BORING LOG

BORING NO:	MW-19
SHEET:	1 of 1
JOB NO.:	11172991.00000
BORING LOCATION:	
GROUND ELEVATION:	
DATE STARTED:	06/02/04
DATE FINISHED:	06/02/04
DRILLER:	Bruce Bartz
GEOLOGIST:	C. Taylor
REVIEWED BY:	

PROJECT:	Wyoming County Fire Training Area
CLIENT:	Wyoming County
BORING CONTRACTOR:	Nature's Way

GROUNDWATER:				CAS.	SAMPLER	CORE	TUBE
DATE	TIME	LEVEL	TYPE	TYPE		Macrocore		
				DIA.		2"		
				WT.		--		
				FALL		--		
				* POCKET PENETROMETER READING				

DEPTH FEET	SAMPLE STRATA	NO.	TYPE	BLOWS PER 6"	REC% ROD%	DESCRIPTION COLOR	CONSIST HARD	MATERIAL DESCRIPTION	USCS	REMARKS PID	REMARKS Moist
		1	2" MC		2.6/4.0 65%	Brown	Dense	SILTY GRAVELLY SAND: fine to very coarse, sub angular to angular gravel, non cohesive to cohesive with depth, low - plasticity, trace to little clay, orange brown mottling	SM	0	Moist
5		2	2" MC		3.1/4.0 78%	Lt. Brn					
10		3	2" MC		2.7/4.0 68%						Wet
15		4	2" MC		1.8/3.0 60%						
								Drilled to 15.0' bgs			
20											
25											
30											

COMMENTS:	Skid-mounted EarthProbe 200 using 2" macrocore to a depth of 15.0' BGS.

PROJECT NO.	11172991.00000
BORING NO.	MW-19

URS Corporation

TEST BORING LOG

PROJECT:	Wyoming County Fire Training Area
CLIENT:	Wyoming County
BORING CONTRACTOR:	Nature's Way
GROUNDWATER:	

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE	TUBE
TYPE		Macrocore		
DIA.		2"		
WT.		--		
FALL		--		

* POCKET PENETROMETER READING

BORING NO:	MW-20
SHEET:	1 of 1
JOB NO.:	11172991.00000
BORING LOCATION:	
GROUND ELEVATION:	
DATE STARTED:	06/04/04
DATE FINISHED:	06/04/04
DRILLER:	Bruce Bartz
GEOLOGIST:	C. Taylor
REVIEWED BY:	

DEPTH FEET	SAMPLE STRATA	NO.	TYPE	BLOWS PER 6"	REC% ROD%	DESCRIPTION COLOR	CONSIST HARD	MATERIAL DESCRIPTION	USCS	REMARKS PID	REMARKS Moist
		1	2" MC		2.7/4.0 68%	Lt. Brn	Dense	SILTY SAND: non-cohesive, non-plastic very fine sand (well sorted) trace fine to course roundwd to angular gravel	SM	0	Moist
5		2	2" MC		3.3/4.0 83%		V. Dense				
10		3	2" MC		2.0/4.0 50%			GRAVELLY SILTY SAND: cohesive, non-plastic, very fine sand			Wet
15								Drilled to 12.0' bgs			
20											
25											
30											

COMMENTS: Skid-mounted EarthProbe 200 using 2" macrocore to a depth of 15.0' BGS.

PROJECT NO.	11172991.00000
BORING NO.	MW-20

URS Corporation

TEST BORING LOG

PROJECT:	Wyoming County Fire Training Area
CLIENT:	Wyoming County
BORING CONTRACTOR:	Nature's Way
BORING NO:	MW-21
SHEET:	1 of 1
JOB NO.:	11172991.00000
BORING LOCATION:	
GROUND ELEVATION:	
DATE STARTED:	06/01/04
DATE FINISHED:	06/04/04
DRILLER:	Bruce Bartz
GEOLOGIST:	C. Taylor
REVIEWED BY:	

GROUNDWATER:				CAS.	SAMPLER	CORE	TUBE
DATE	TIME	LEVEL	TYPE	TYPE		Macrocore		
				DIA.		2"		
				WT.		--		
				FALL		--		
				* POCKET PENETROMETER READING				

DEPTH FEET	SAMPLE STRATA	NO.	TYPE	BLOWS PER 6"	REC% ROD%	DESCRIPTION COLOR	CONSIST HARD	MATERIAL DESCRIPTION	USCS	REMARKS PID	REMARKS Moist
0		1	2" MC		3.6/4.0 90%	Dk Brn Brown	Loose Dense	GRAVELLY SILTY SAND: very fine to fine sand (well sorted) sub-angular to angular gravel, cohesive, low plasticity. Organic from 0.0-0.5'	SM	0	Moist
5		2	2" MC		3.0/4.0 75%						
10		3	2" MC		2.2/4.0 55%	Lt Brn	Loose	SILTY SAND: flowing sand			Wet
15		4	2" MC		0.0/3.0 0%						
20								Drilled to 16.0' bgs			
25											
30											

COMMENTS: Skid-mounted EarthProbe 200 using 2" macrocore to a depth of 15.0' BGS.

PROJECT NO. 11172991.00000

BORING NO. MW-21

URS Corporation

TEST BORING LOG

BORING NO:	MW-22
PROJECT:	Wyoming County Fire Training Area
SHEET:	1 of 1
CLIENT:	Wyoming County
JOB NO.:	11172991.00000
BORING CONTRACTOR:	Nature's Way
BORING LOCATION:	
GROUNDWATER:	
GROUND ELEVATION:	

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore		
				DIA.		2"		
				WT.		--		
				FALL		--		
				* POCKET PENETROMETER READING				

DATE STARTED:	06/01/04
DATE FINISHED:	06/01/04
DRILLER:	Bruce Bartz
GEOLOGIST:	C. Taylor
REVIEWED BY:	

DEPTH FEET	SAMPLE STRATA	NO.	TYPE	BLOWS PER 6"	REC% ROD%	DESCRIPTION COLOR	CONSIST HARD	MATERIAL DESCRIPTION	USCS	REMARKS PID	REMARKS Moist
		1	2" MC		3.8/4.0 95%	Dk Brn Lt Brn	Loose Dense Loose	GRAVELLY SILTY SAND: very fine to fine sand (well sorted) sub-angular to angular gravel, cohesive, low plasticity. Organic from 0.0-0.5'	SM	0	Moist Wet
5		2	2" MC		3.0/4.0 75%		Dense				Dry to Moist
10		3	2" MC		4.0/4.0 100%		V. Dense V. Loose	SILTY SAND: fine sand, trace medium to course angular to sub-rounded gravel			Wet
15		4	2" MC		4.0/4.0 100%			SILTY GRAVEL:trace fine sand, fine to course gravel (well graded)	GM		
								Drilled to 16.0' bgs			
20											
25											
30											

COMMENTS: Skid-mounted EarthProbe 200 using 2" macrocore to a depth of 15.0' BGS.	PROJECT NO. 11172991.00000
	BORING NO. MW-22

URS Corporation

TEST BORING LOG

BORING NO:	MW-23
SHEET:	1 of 1
JOB NO.:	11172991.00000
BORING LOCATION:	
GROUND ELEVATION:	
DATE STARTED:	06/02/04
DATE FINISHED:	06/02/04
DRILLER:	Bruce Bartz
GEOLOGIST:	C. Taylor
REVIEWED BY:	

PROJECT:	Wyoming County Fire Training Area
CLIENT:	Wyoming County
BORING CONTRACTOR:	Nature's Way

GROUNDWATER:				CAS.	SAMPLER	CORE	TUBE
DATE	TIME	LEVEL	TYPE	TYPE	Macrocore		
				DIA.	2"		
				WT.	--		
				FALL	--		
				* POCKET PENETROMETER READING			

DEPTH FEET	SAMPLE STRATA	NO.	TYPE	BLOWS PER 6"	REC% ROD%	DESCRIPTION COLOR	CONSIST HARD	MATERIAL DESCRIPTION	USCS	REMARKS PID	REMARKS Moist
0		1	2" MC		4.0/4.0 100%	Dk Brn	Loose	CLAYEY SILTY SAND: High Plasticity Organic 0.0-0.4'	SC/SM	0	Moist
								SILTY SAND: very fine to fine sand (well sorted), trace medium to course sub-angular to angular gravel,			
5		2	2" MC		4.0/4.0 100%	Lt. Brn		Gravelly:3.3-4.0' Gravel lenses: 8.7-8.8' & 10.0-10.2'			
								Trace clay (increasing with depth) 11.3-12.0'			
10		3	2" MC		3.4/4.0 85%	Grey & Lt. Brn					Dry to Wet
		4	2" MC		3.0/3.0 100%						
15											
								Drilled to 15.0' bgs			
20											
25											
30											

COMMENTS:	Skid-mounted EarthProbe 200 using 2" macrocore to a depth of
15.0' BGS.	

PROJECT NO.	11172991.00000
BORING NO.	MW-23

MONITORING WELL CONSTRUCTION DETAILS

DRILLING SUMMARY

Geologist:
Craig Taylor

Contractor:
Nature's Way

Operator:
Bruce Bartz

Model:
EarthProbe 200

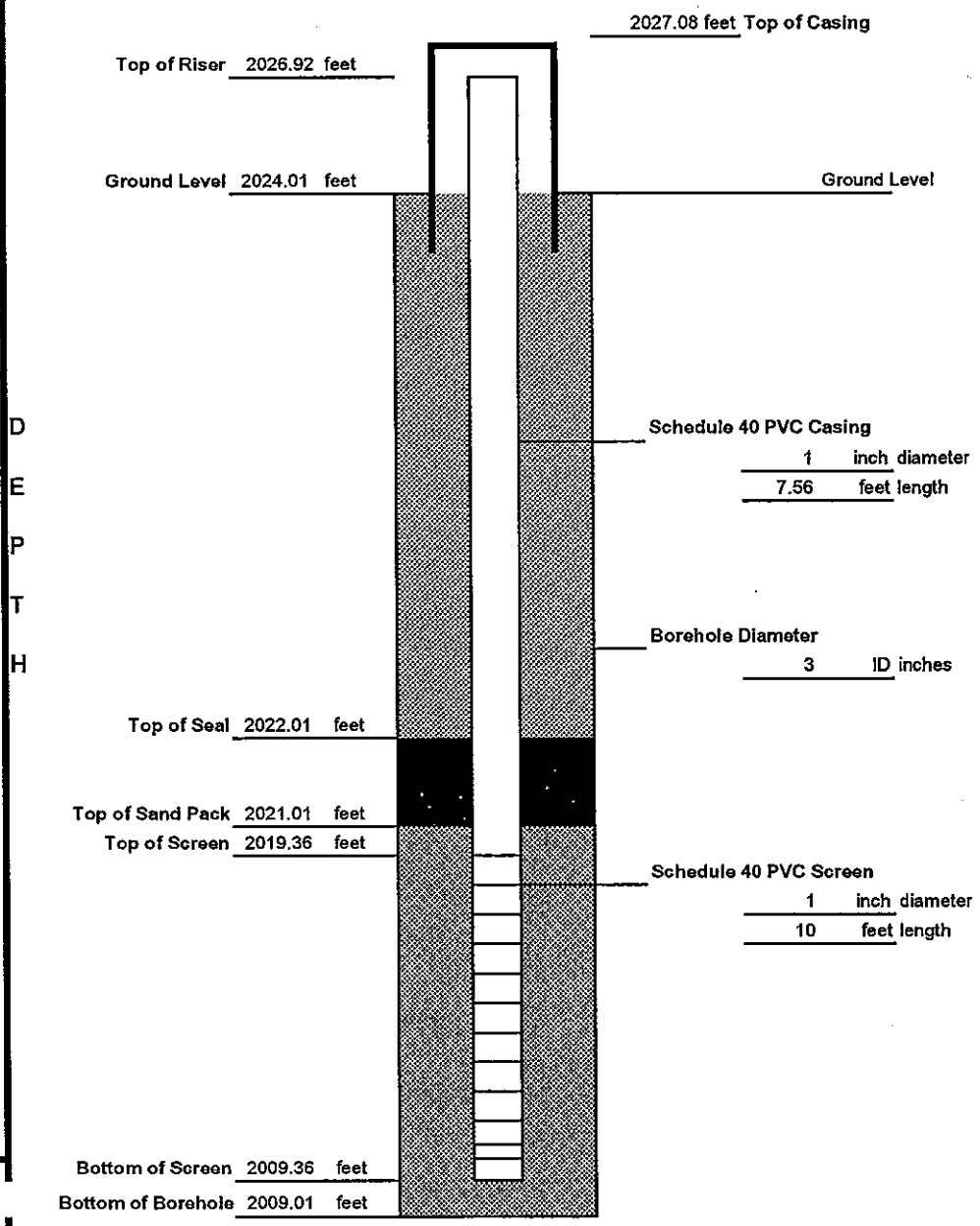
Date:
June 3, 2004

GEOLOGIC LOG

Depth(ft.)	Description

DEPTH

WELL DESIGN



CASING MATERIAL		SCREEN MATERIAL		FILTER MATERIAL
Surface:	3" PVC protective cover (Stick Up)	**Type:**	1" Schedule 40 PVC	**Type:** #2 well sand **Setting:**
Monitor:	1" Schedule 40 PVC	**Slot Size:**	0.010"	**SEAL MATERIAL** **Type 1:** Bentonite chips **Setting:** **Type 1:** **Setting:**

COMMENTS:

LEGEND

- Cement Grout
- Bentonite Seal
- Sand Pack

Client: Wyoming County	**Location:** Wyoming County FTA	**Project No.:** 11172991.00000
URS Corporation	MONITORING WELL CONSTRUCTION DETAILS	**Well Number: MW-11**

DRILLING SUMMARY

Geologist: Craig Taylor

Contractor: Nature's Way

Operator: Bruce Bartz

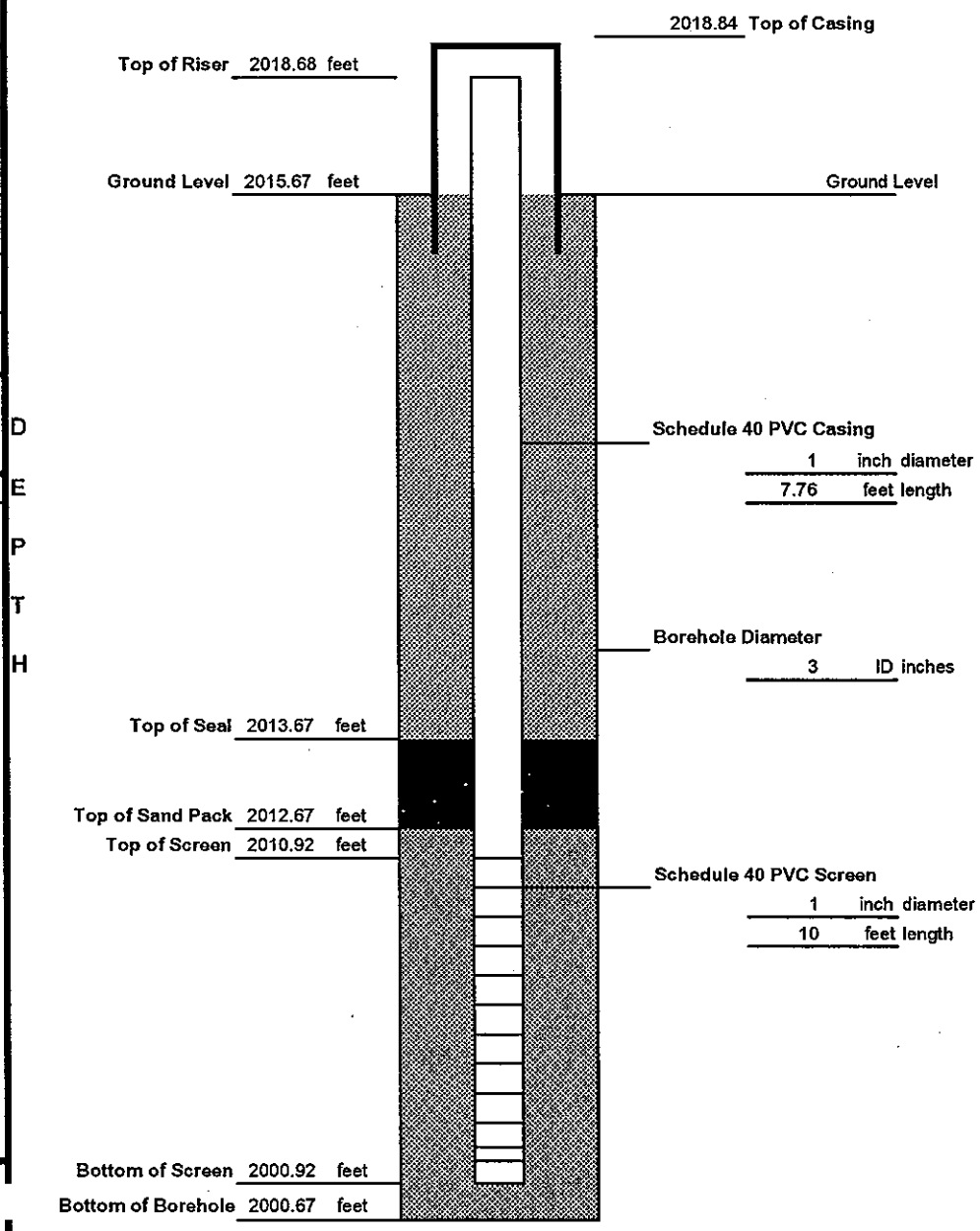
Model: EarthProbe 200

Date: June 3, 2004

GEOLOGIC LOG

Depth(ft.)	Description

WELL DESIGN



CASING MATERIAL

Surface: 3" PVC protective cover (Stick Up)

Monitor: 1" Schedule 40 PVC

SCREEN MATERIAL

Type: 1" Schedule 40 PVC

Slot Size: 0.010"

FILTER MATERIAL

Type: #2 well sand

Setting:

SEAL MATERIAL

Type 1: Bentonite chips

Setting:

Type 1:

Setting:

COMMENTS:

LEGEND

Cement Grout

Bentonite Seal

Sand Pack

Client: Wyoming County	**Location:** Wyoming County FTA	**Project No.:** 11172991.00000
URS Corporation	MONITORING WELL CONSTRUCTION DETAILS	**Well Number:** MW-12

DRILLING SUMMARY

Geologist:
Craig Taylor

Contractor:
Nature's Way

Operator:
Bruce Bartz

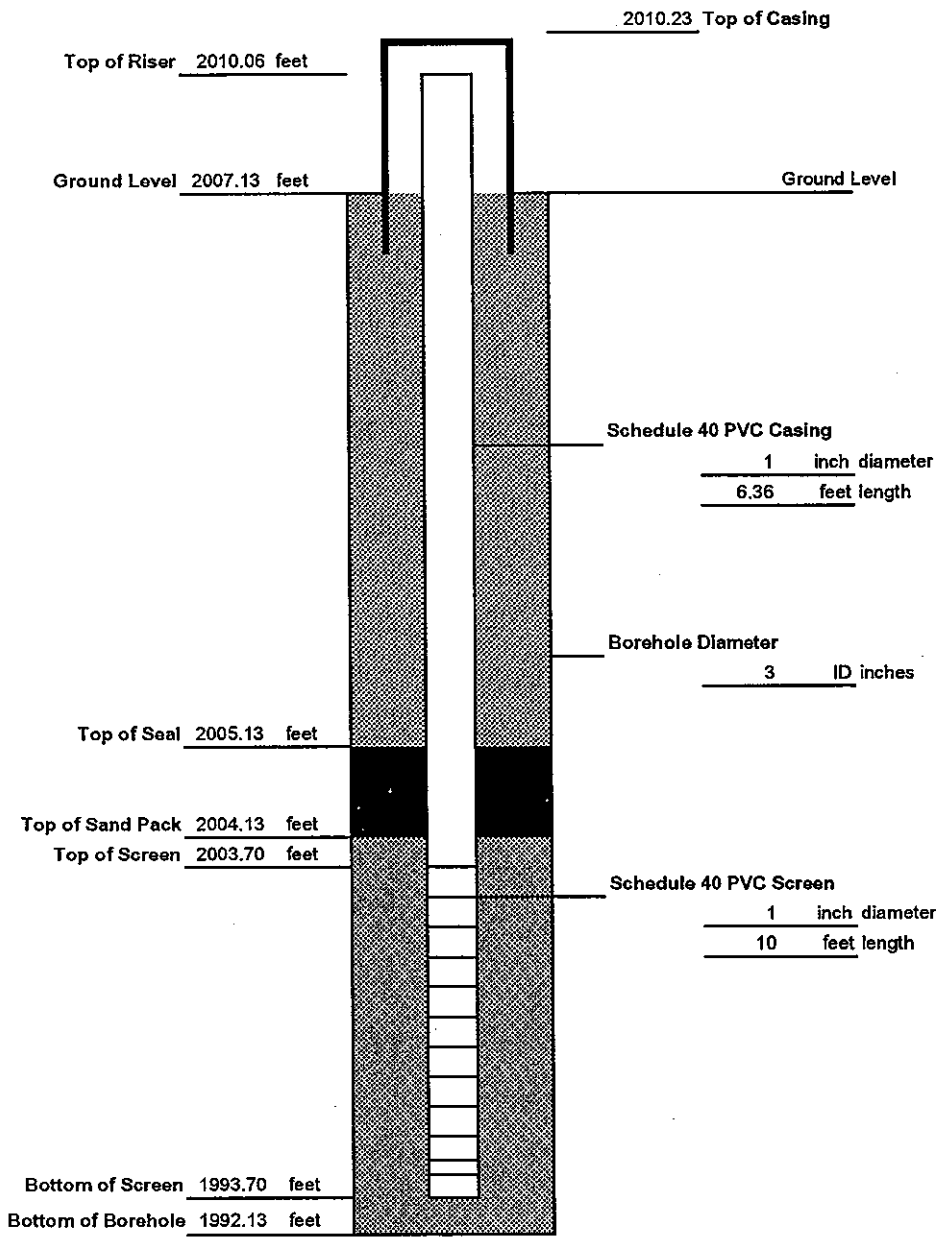
Model:
EarthProbe 200

Date:
June 3, 2004

GEOLOGIC LOG

Depth(ft.)	Description

DEPTH



WELL DESIGN

CASING MATERIAL

Surface: 3" PVC protective cover (Stick Up)

Monitor: 1" Schedule 40 PVC

SCREEN MATERIAL

Type: 1" Schedule 40 PVC

Slot Size: 0.010"

FILTER MATERIAL

Type: #2 well sand
Setting:

SEAL MATERIAL

Type 1: Bentonite chips
Setting:
Type 1:
Setting:

COMMENTS:

LEGEND

- Cement Grout
- Bentonite Seal
- Sand Pack

Client: Wyoming County	**Location:** Wyoming County FTA	**Project No.:** 11172991.00000
URS Corporation	MONITORING WELL CONSTRUCTION DETAILS	Well Number: MW-13

DRILLING SUMMARY

Geologist:
Craig Taylor

Contractor:
Nature's Way

Operator:
Bruce Bartz

Model:
EarthProbe 200

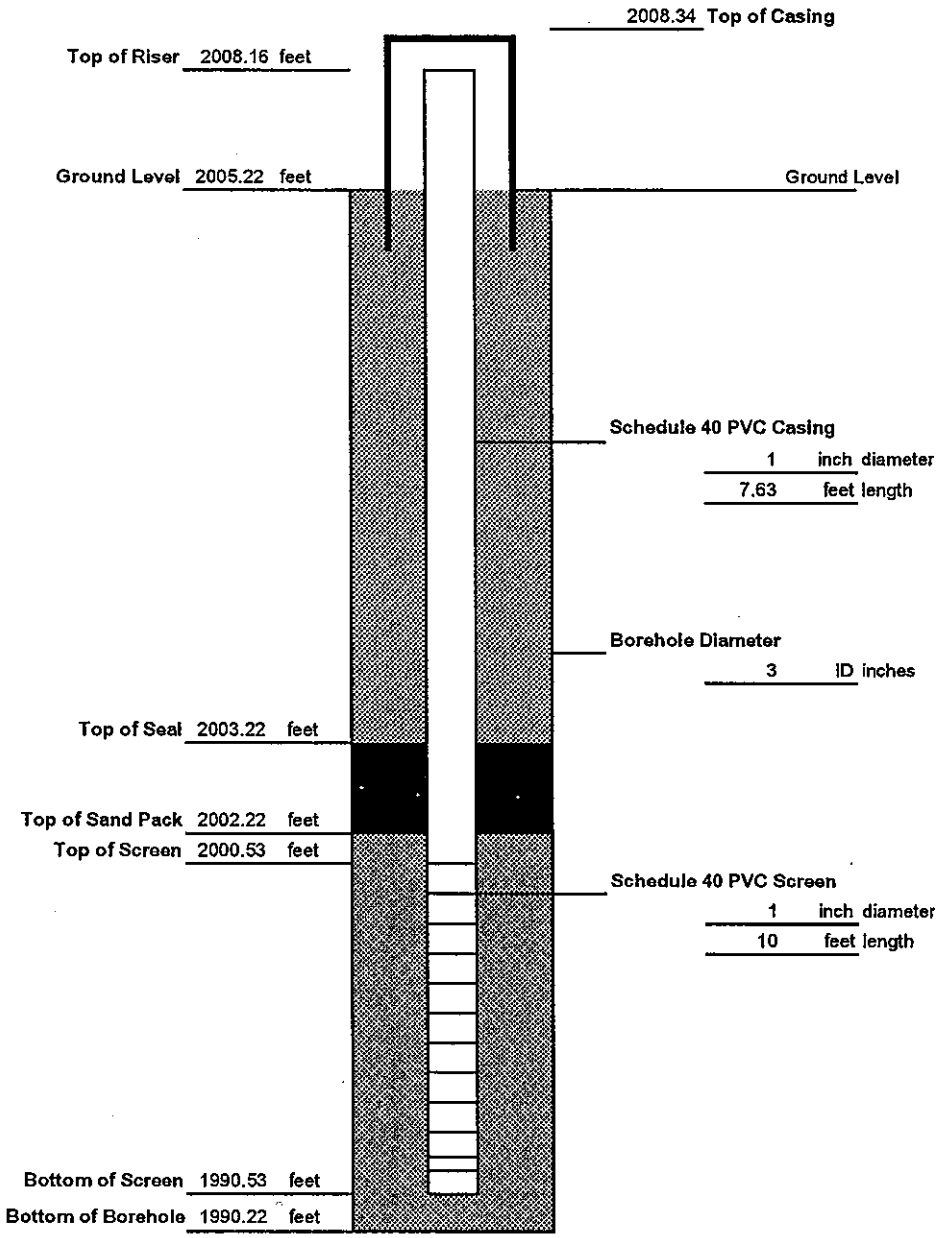
Date:
June 2, 2004

GEOLOGIC LOG

Depth(ft.)	Description

DEPTH

WELL DESIGN



CASING MATERIAL		SCREEN MATERIAL		FILTER MATERIAL
Surface:	3" PVC protective cover (Stick Up)	**Type:**	1" Schedule 40 PVC	**Type:** #2 well sand **Setting:**
Monitor:	1" Schedule 40 PVC	**Slot Size:**	0.010"	**SEAL MATERIAL** **Type 1:** Bentonite chips **Setting:** **Type 1:** **Setting:**

COMMENTS:

LEGEND

- Cement Grout
- Bentonite Seal
- Sand Pack

Client: Wyoming County	**Location:** Wyoming County FTA	**Project No.:** 11172991.00000
URS Corporation	MONITORING WELL CONSTRUCTION DETAILS	**Well Number: MW-14**

DRILLING SUMMARY

Geologist:
Craig Taylor

Contractor:
Nature's Way

Operator:
Bruce Bartz

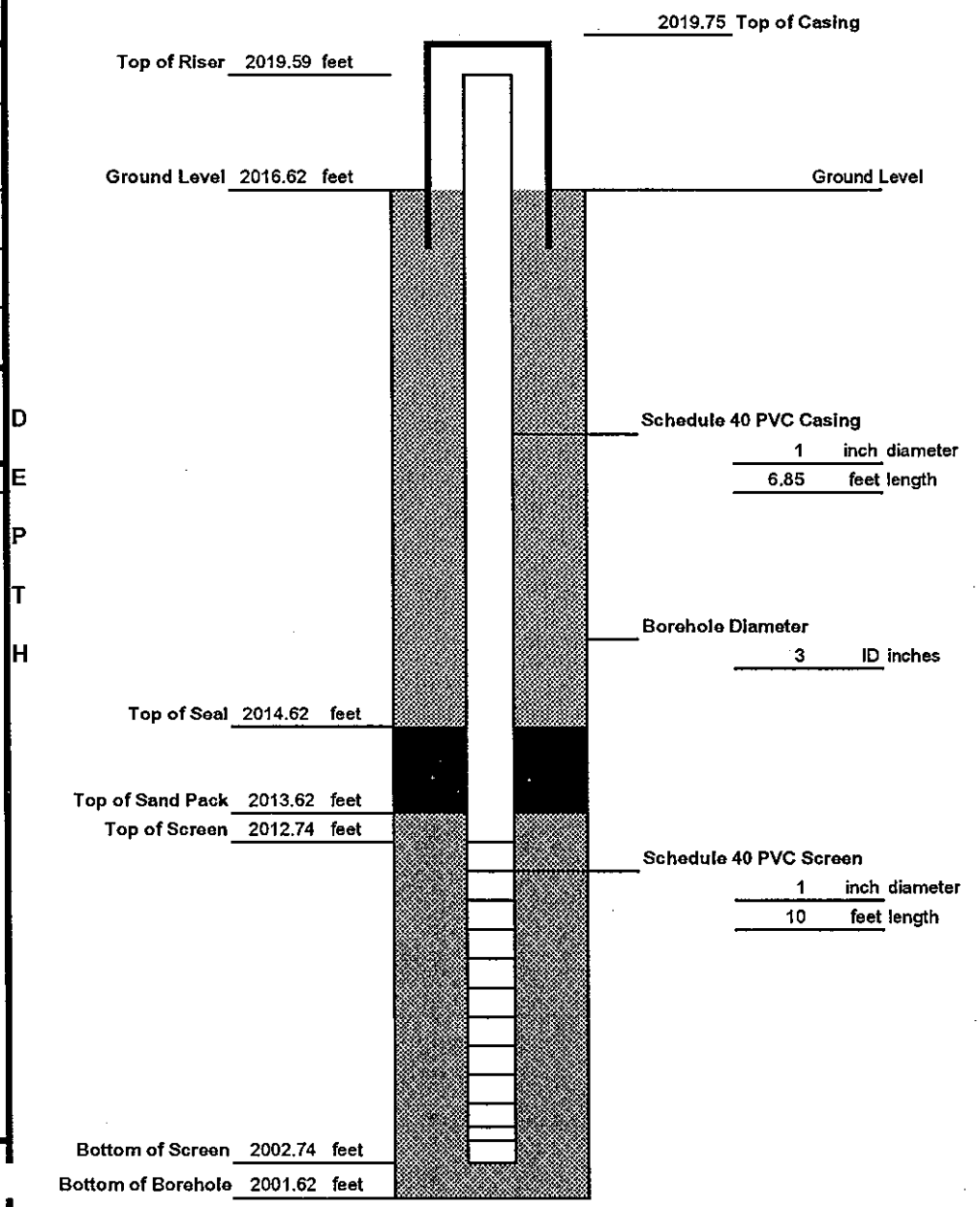
Model:
EarthProbe 200

Date:
June 2, 2004

GEOLOGIC LOG

Depth(ft.)	Description

WELL DESIGN



CASING MATERIAL

Surface: 3" PVC protective cover (Stick Up)

Monitor: 1" Schedule 40 PVC

SCREEN MATERIAL

Type: 1" Schedule 40 PVC

Slot Size: 0.010"

FILTER MATERIAL

Type: #2 well sand
Setting:

SEAL MATERIAL

Type 1: Bentonite chips
Setting:
Type 1:
Setting:

COMMENTS:

LEGEND

- Cement Grout
- Bentonite Seal
- Sand Pack

Client: Wyoming County	**Location:** Wyoming County FTA	**Project No.:** 11172991.00000
URS Corporation	MONITORING WELL CONSTRUCTION DETAILS	**Well Number:** MW-15

DRILLING SUMMARY

Geologist:
Craig Taylor

Contractor:
Nature's Way

Operator:
Bruce Bartz

Model:
EarthProbe 200

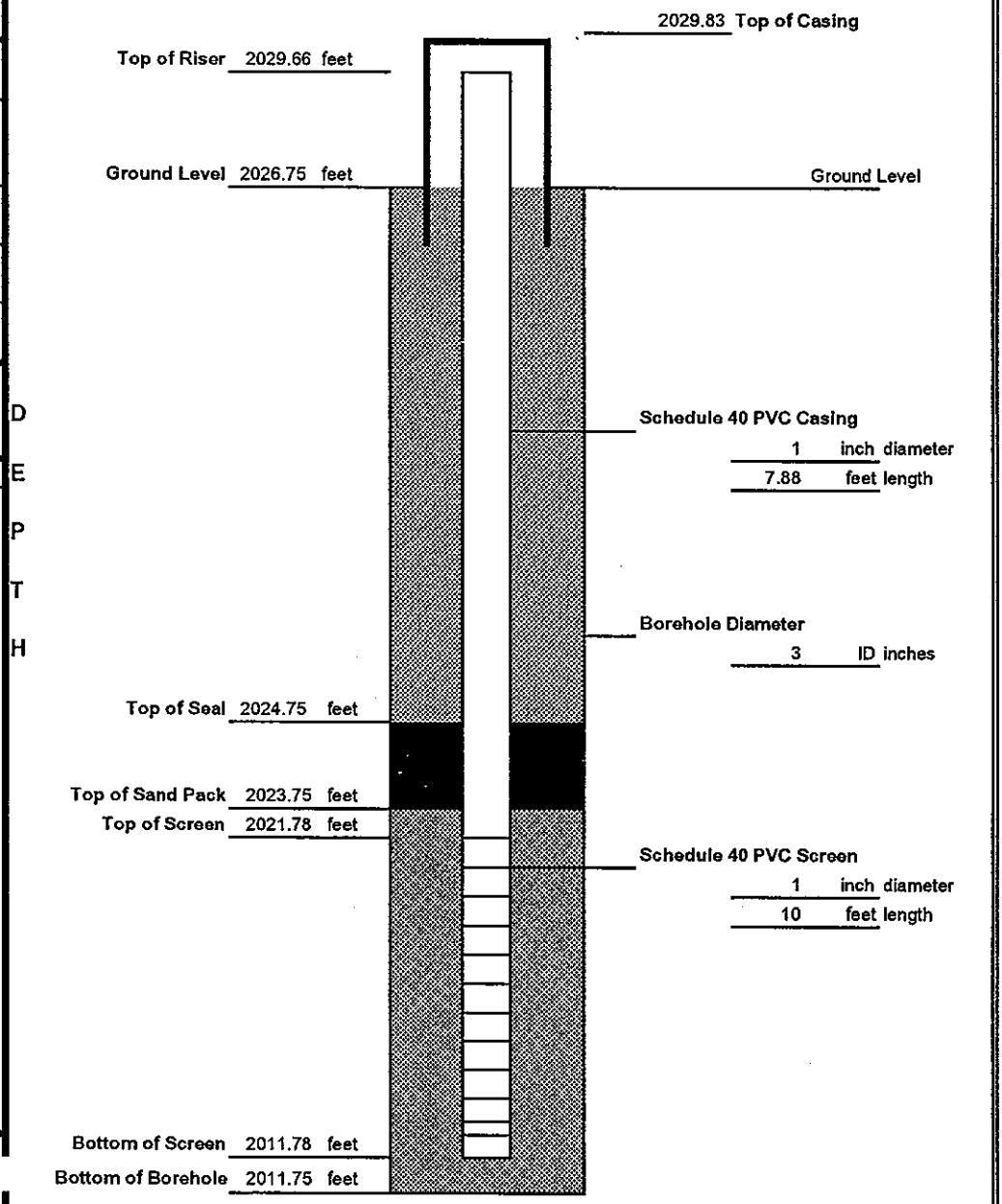
Date:
June 3, 2004

GEOLOGIC LOG

Depth(ft.)	Description

DEPTH

WELL DESIGN



CASING MATERIAL

Surface: 3" PVC protective cover (Stick Up)

Monitor: 1" Schedule 40 PVC

SCREEN MATERIAL

Type: 1" Schedule 40 PVC

Slot Size: 0.010"

FILTER MATERIAL

Type: #2 well sand
Setting:

SEAL MATERIAL

Type 1: Bentonite chips
Setting:
Type 1:
Setting:

COMMENTS:

LEGEND

- Cement Grout
- Bentonite Seal
- Sand Pack

Client: Wyoming County	**Location:** Wyoming County FTA	**Project No.:** 11172991.00000
URS Corporation	MONITORING WELL CONSTRUCTION DETAILS	**Well Number:** MW-16

DRILLING SUMMARY

Geologist: Craig Taylor

Contractor: Nature's Way

Operator: Bruce Bartz

Model: EarthProbe 200

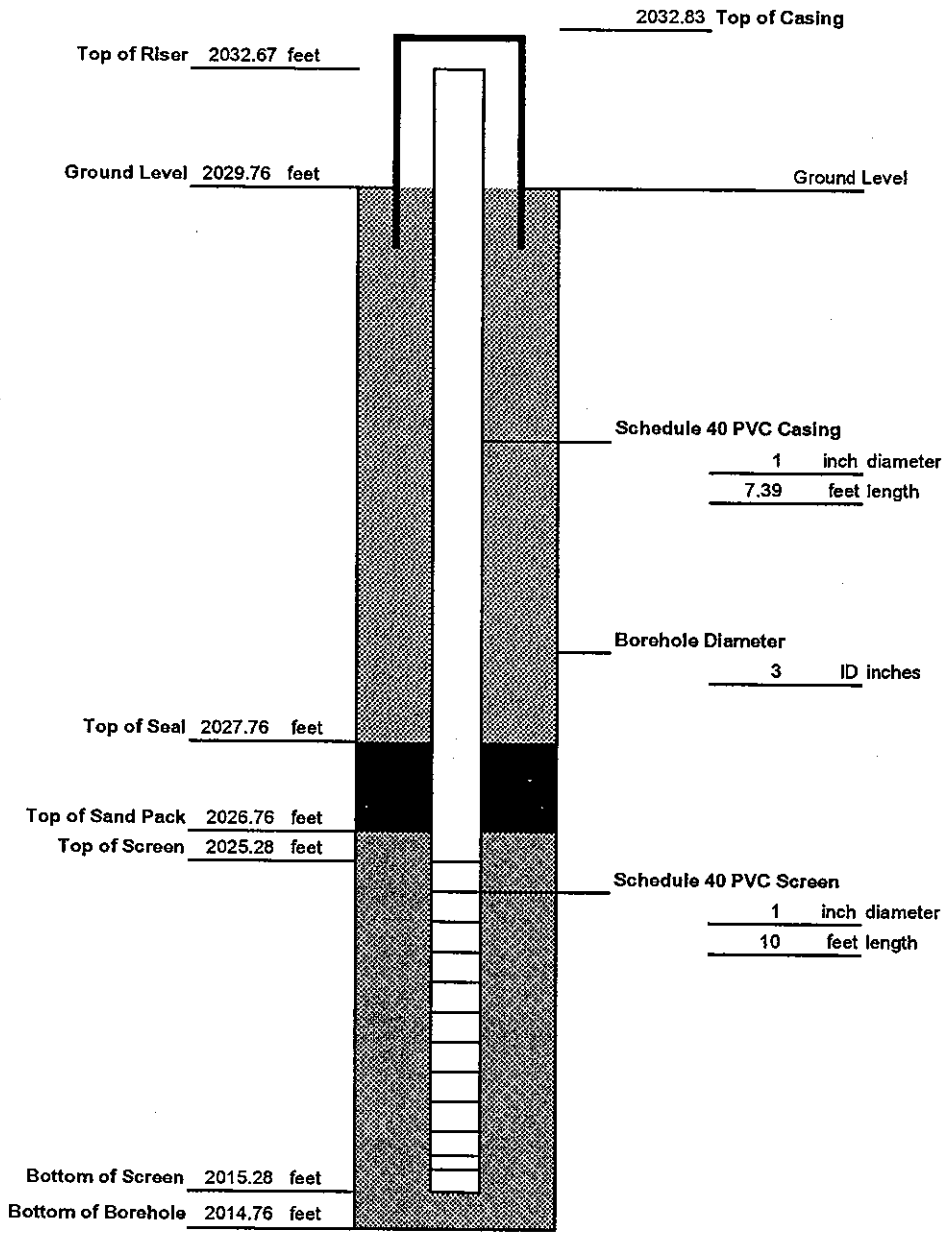
Date: June 3, 2004

GEOLOGIC LOG

Depth(ft.)	Description

DEPTH

WELL DESIGN



CASING MATERIAL

Surface: 3" PVC protective cover (Stick Up)

Monitor: 1" Schedule 40 PVC

SCREEN MATERIAL

Type: 1" Schedule 40 PVC

Slot Size: 0.010"

FILTER MATERIAL

Type: #2 well sand

Setting:

SEAL MATERIAL

Type 1: Bentonite chips

Setting:

Type 1:

Setting:

COMMENTS:

LEGEND

Cement Grout

Bentonite Seal

Sand Pack

Client: Wyoming County	**Location:** Wyoming County FTA	**Project No.:** 11172991.00000
URS Corporation	MONITORING WELL CONSTRUCTION DETAILS	**Well Number:** MW-17

DRILLING SUMMARY

Geologist:
Craig Taylor

Contractor:
Nature's Way

Operator:
Bruce Bartz

Model:
EarthProbe 200

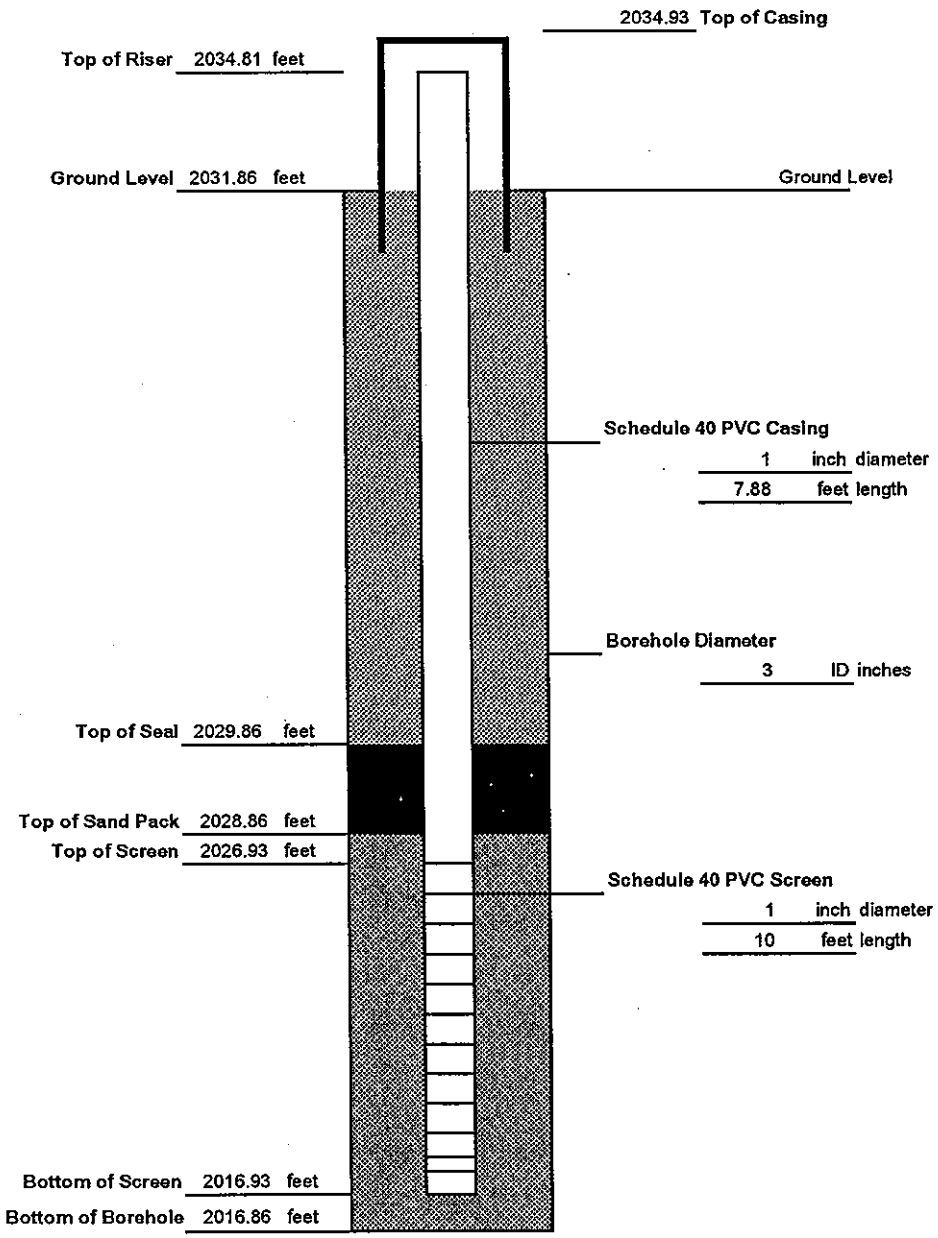
Date:
June 3, 2004

GEOLOGIC LOG

Depth(ft.)	Description

DEPTH

WELL DESIGN



CASING MATERIAL

Surface: 3" PVC protective cover (Stick Up)

Monitor: 1" Schedule 40 PVC

SCREEN MATERIAL

Type: 1" Schedule 40 PVC

Slot Size: 0.010"

FILTER MATERIAL

Type: #2 well sand
Setting:

SEAL MATERIAL

Type 1: Bentonite chips
Setting:
Type 1:
Setting:

COMMENTS:

LEGEND

- Cement Grout
- Bentonite Seal
- Sand Pack

Client: Wyoming County	**Location:** Wyoming County FTA	**Project No.:** 11172991.00000
URS Corporation	MONITORING WELL CONSTRUCTION DETAILS	**Well Number:** MW-18

DRILLING SUMMARY

Geologist:
Craig Taylor

Contractor:
Nature's Way

Operator:
Bruce Bartz

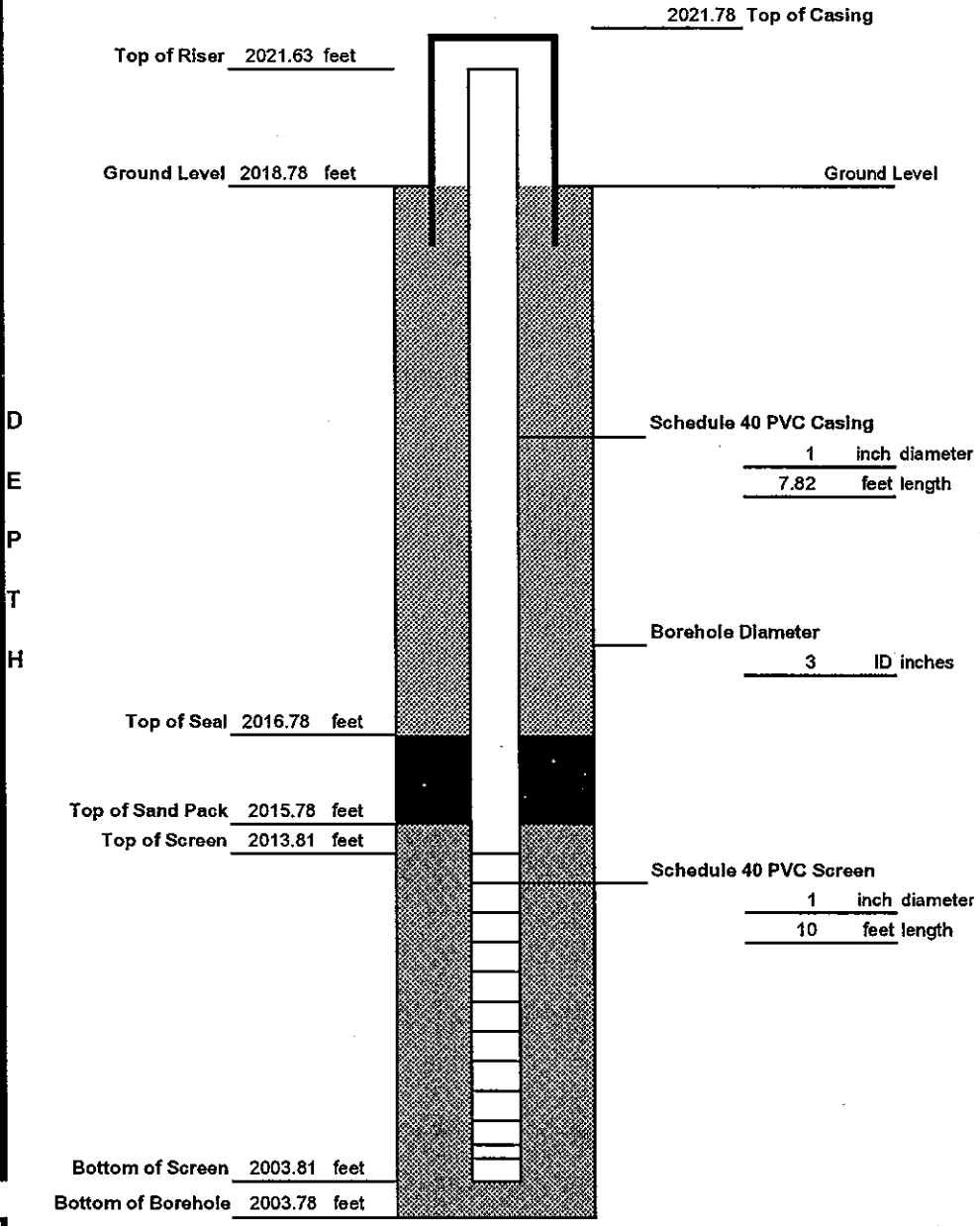
Model:
EarthProbe 200

Date:
June 2, 2004

GEOLOGIC LOG

Depth(ft.)	Description

DEPTH



WELL DESIGN

CASING MATERIAL

Surface: 3" PVC protective cover (Stick Up)

Monitor: 1" Schedule 40 PVC

SCREEN MATERIAL

Type: 1" Schedule 40 PVC

Slot Size: 0.010"

FILTER MATERIAL

Type: #2 well sand
Setting:

SEAL MATERIAL

Type 1: Bentonite chips
Setting:
Type 1:
Setting:

COMMENTS:

LEGEND

- Cement Grout
- Bentonite Seal
- Sand Pack

Client: Wyoming County	**Location:** Wyoming County FTA	**Project No.:** 11172991.00000
URS Corporation	MONITORING WELL CONSTRUCTION DETAILS	**Well Number:** MW-19

DRILLING SUMMARY

Geologist:
Craig Taylor

Contractor:
Nature's Way

Operator:
Bruce Bartz

Model:
EarthProbe 200

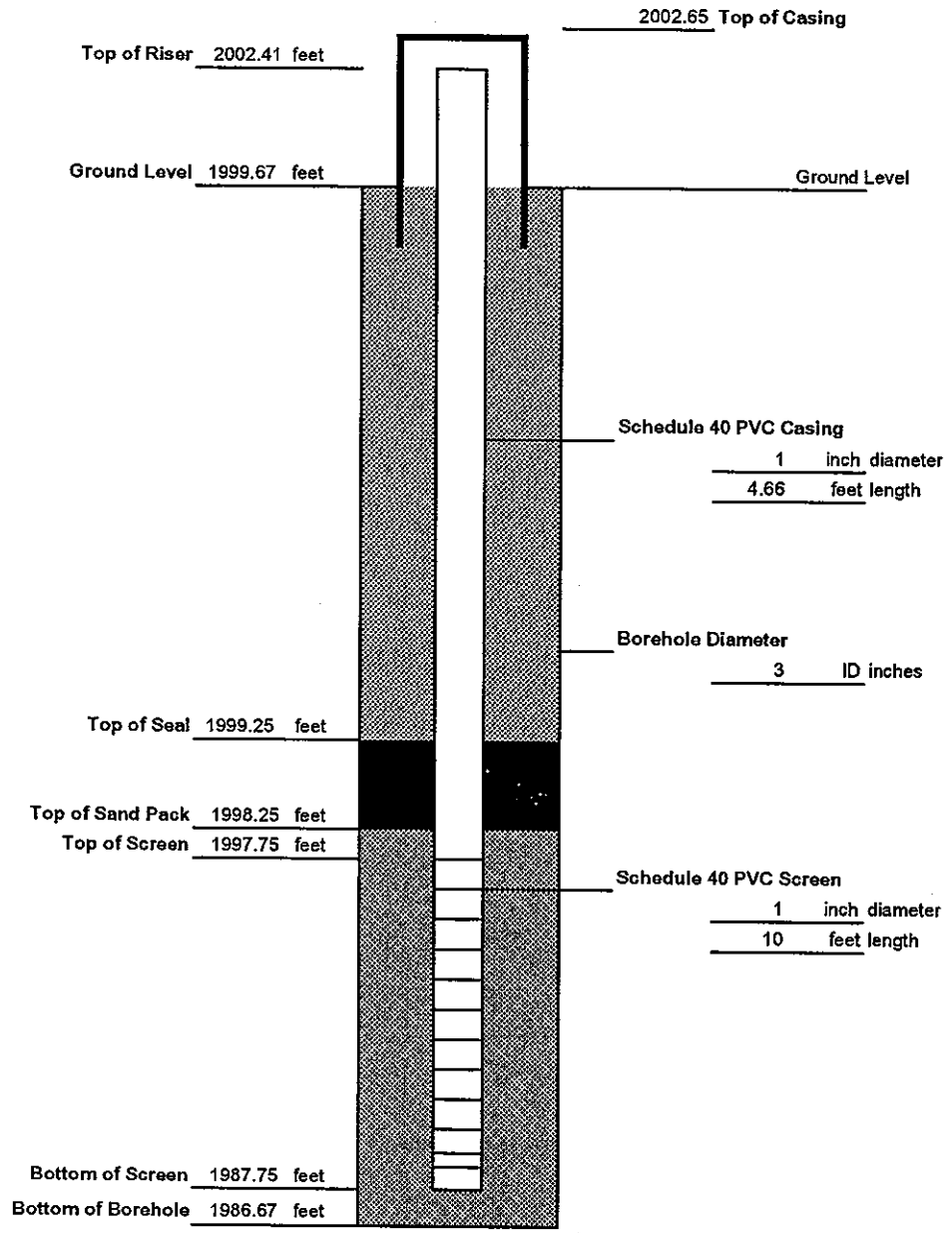
Date:
June 4, 2004

GEOLOGIC LOG

Depth(ft.)	Description

DEPTH

WELL DESIGN



CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL
Surface: 3" PVC protective cover (Stick Up)	**Type:** 1" Schedule 40 PVC	**Type:** #2 well sand **Setting:**
Monitor: 1" Schedule 40 PVC	**Slot Size:** 0.010"	**SEAL MATERIAL** **Type 1:** Bentonite chips **Setting:** **Type 1:** **Setting:**

COMMENTS:

LEGEND

- Cement Grout
- Bentonite Seal
- Sand Pack

Client: Wyoming County	**Location:** Wyoming County FTA	**Project No.:** 11172991.00000
URS Corporation	MONITORING WELL CONSTRUCTION DETAILS	**Well Number:** MW-20

DRILLING SUMMARY

Geologist:
Craig Taylor

Contractor:
Nature's Way

Operator:
Bruce Bartz

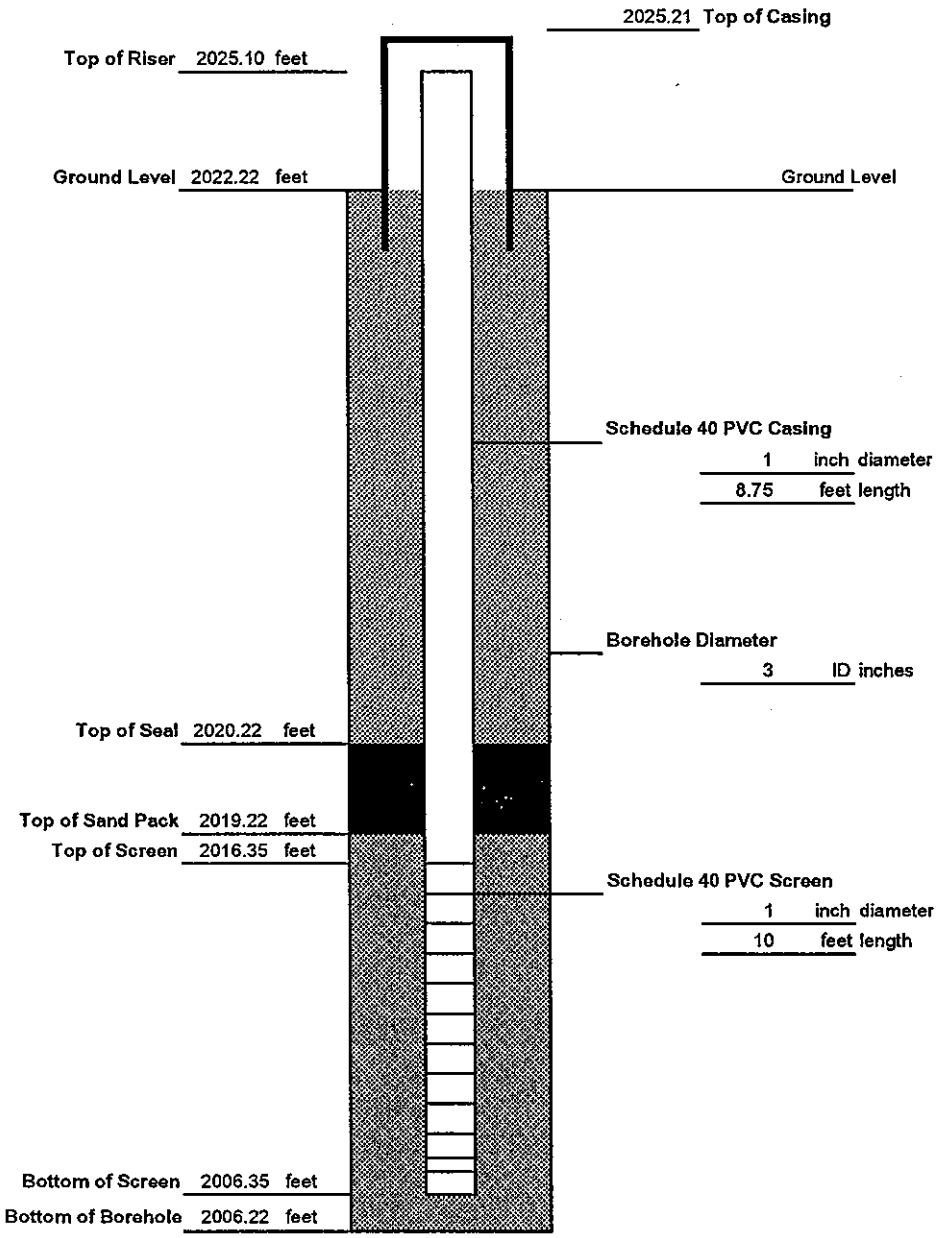
Model:
EarthProbe 200

Date:
June 4, 2004

GEOLOGIC LOG

Depth(ft.)	Description

DEPTH



WELL DESIGN

CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL
Surface: 3" PVC protective cover (Stick Up)	**Type:** 1" Schedule 40 PVC	Type: #2 well sand Setting:
Monitor: 1" Schedule 40 PVC	**Slot Size:** 0.010"	**SEAL MATERIAL** Type 1: Bentonite chips Setting: Type 1: Setting:

COMMENTS:

LEGEND

- Cement Grout
- Bentonite Seal
- Sand Pack

Client: Wyoming County	**Location:** Wyoming County FTA	**Project No.:** 11172991.00000
URS Corporation	MONITORING WELL CONSTRUCTION DETAILS	Well Number: MW-21

DRILLING SUMMARY

Geologist:
Craig Taylor

Contractor:
Nature's Way

Operator:
Bruce Bartz

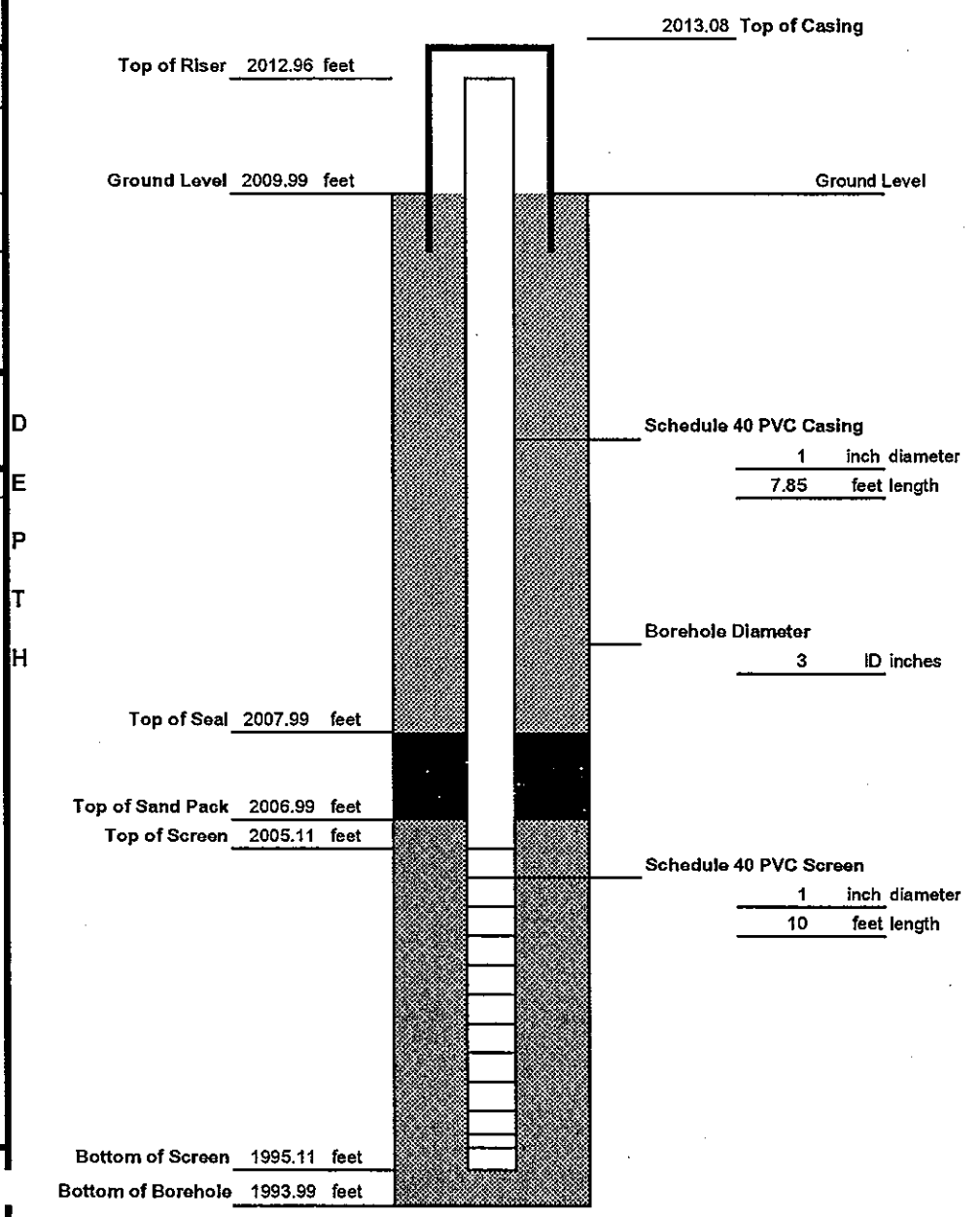
Model:
EarthProbe 200

Date:
June 1, 2004

GEOLOGIC LOG

Depth(ft.)	Description

WELL DESIGN



CASING MATERIAL

Surface: 3" PVC protective cover (Stick Up)

Monitor: 1" Schedule 40 PVC

SCREEN MATERIAL

Type: 1" Schedule 40 PVC

Slot Size: 0.010"

FILTER MATERIAL

Type: #2 well sand
Setting:

SEAL MATERIAL

Type 1: Bentonite chips
Setting:
Type 1:
Setting:

COMMENTS:

LEGEND

- Cement Grout
- Bentonite Seal
- Sand Pack

Client: Wyoming County	**Location:** Wyoming County FTA	**Project No.:** 11172991.00000
URS Corporation	MONITORING WELL CONSTRUCTION DETAILS	**Well Number:** MW-22

DRILLING SUMMARY

Geologist:
Craig Taylor

Contractor:
Nature's Way

Operator:
Bruce Bartz

Model:
EarthProbe 200

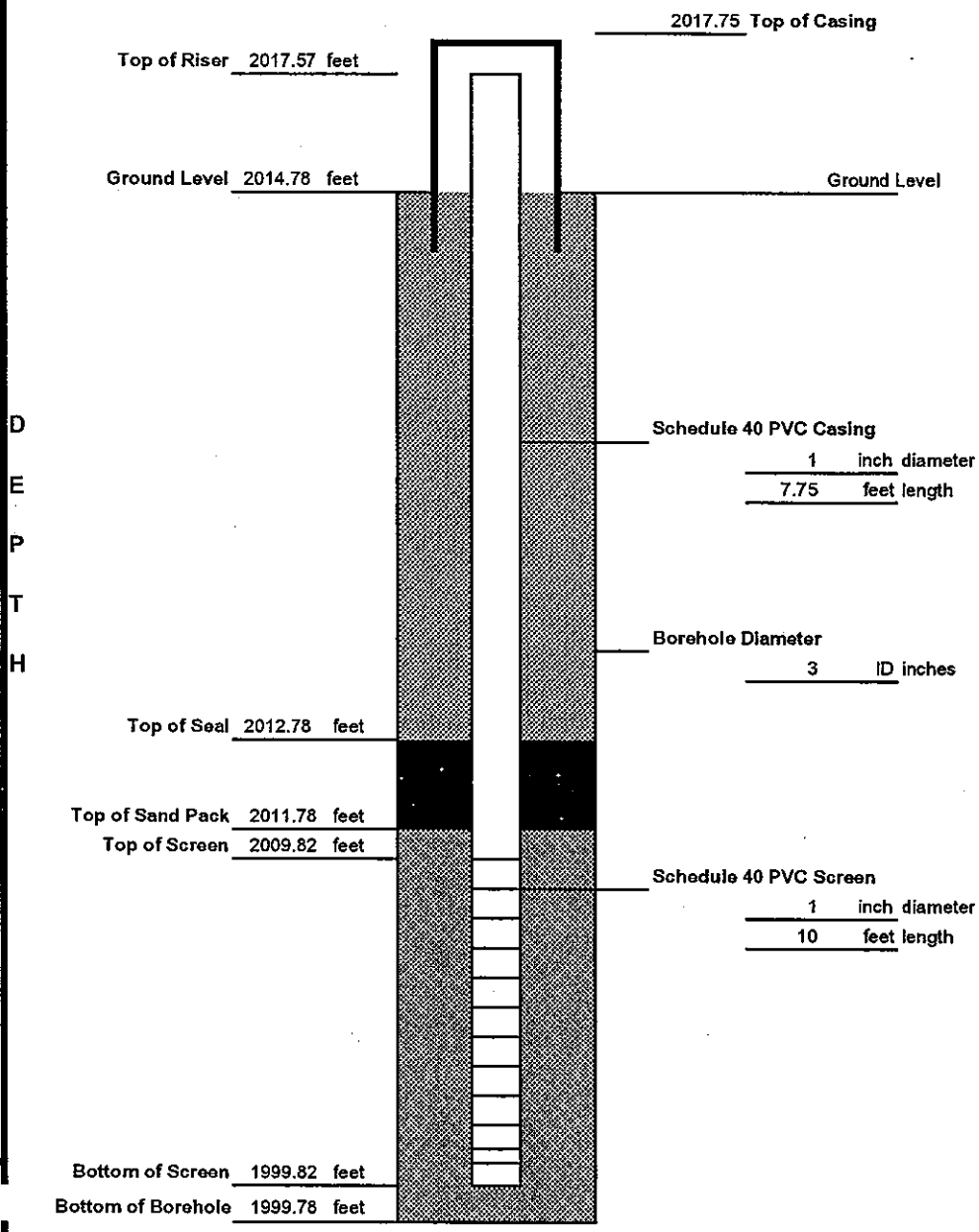
Date:
June 1, 2004

GEOLOGIC LOG

Depth(ft.)	Description

DEPTH

WELL DESIGN



CASING MATERIAL

Surface: 3" PVC protective cover (Stick Up)

Monitor: 1" Schedule 40 PVC

SCREEN MATERIAL

Type: 1" Schedule 40 PVC

Slot Size: 0.010"

FILTER MATERIAL

Type: #2 well sand
Setting:

SEAL MATERIAL

Type 1: Bentonite chips
Setting:
Type 1:
Setting:

COMMENTS:

LEGEND

- Cement Grout
- Bentonite Seal
- Sand Pack

Client: Wyoming County	**Location:** Wyoming County FTA	**Project No.:** 11172991.00000
URS Corporation	MONITORING WELL CONSTRUCTION DETAILS	**Well Number:** MW-23

APPENDIX E

FIELD SAMPLING PLAN

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FIELD SAMPLING PLAN

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1.0 INTRODUCTION

This Field Sampling Plan (FSP) is designed to provide detailed step-by-step procedures for any field activities conducted at the Site as part of the Site Management Activities for the Wyoming County Fire Training Center. It will serve as the field procedures manual to be strictly followed by all URS personnel. Adherence to these procedures will ensure the quality and defensibility of the field data collected. In addition to the field procedures outlined in this document, all personnel performing field activities must do so in compliance with: (1) the appropriate Health and Safety guidelines found in the Health and Safety Plan (Appendix B); (2) the Quality Assurance/Quality Control measures outlined in Appendix F; and, (3) the scope of work outlined in the Site Management Plan (SMP).

2.0 MOBILIZATION

A centralized decontamination area with a decontamination pad will be constructed near the site entrance to decontaminate vehicles (i.e., Geoprobe) entering and leaving the site. The decontamination area will be large enough to allow storage of cleaned equipment and materials prior to use, as well as to stage drums of contaminated material. Drums of decontamination fluids and investigation derived wastes will be stored on pallets covered with plastic sheeting in the decontamination area.

Proposed sampling locations will be staked, labeled and flagged prior to sampling. Utilities in areas designated for intrusive activities will be cleared through the Underground Facilities Protective Organization (UFPO) and site personnel. Vehicle access routes to soil boring locations shall be determined and cleared prior to any field activities.

3.0 SUBSURFACE INVESTIGATION

3.1 General Drilling Program

Subsurface investigations may be required as part of the Site Management Activities to provide information which will assist in geologic, geotechnical, hydrogeological, and chemical site interpretations. Geoprobe® borings and monitoring wells (mini-wells) may be advanced/installed as part of the subsurface program.

Investigation and mini-well installation procedures are discussed in the following sections:

- Geoprobe direct push procedure (Section 3.2)
- Monitoring well construction procedures (Section 3.3)
- Well development procedures (Section 3.4)
- Documentation (Section 3.6)

3.2 Geoprobe Direct Push Procedure

Procedure

1) Inspect the sampling equipment to ensure proper working condition.

2) Select additional components for the sampler as required (i.e., leaf spring core retainer for clays, or a sand trap for non-cohesive sands).

3) Lower the sampler to the ground surface, or bottom of the hole previously made by the sampler, and check the depth against length of the rods and the sampler.

4) Attach the drive head assembly to the sample rods.

5) Push the sampler in 4-foot increments into the subsurface up to the desired depth with a hydraulic press.

6) Rotate the sampling rods clockwise and remove the sampler.

7) Sample selection will conform to the program and specifications set forth in the Work Plan. Extrude the sample, describe the soil, and collect any necessary samples into appropriate containers and label the containers (Section 7.0). Three samples will be collected for chemical analysis (Section 3.2.2) from each boring.

8) Document all soil descriptions and sample information in the field notebook and on the Test Boring Log (Figure 3-1).

9) Sample containers will be labeled as described in Section 7.0 and shipped to the laboratory under the chain-of-custody as described in Section 8.0

10) Install mini-well or abandon the Geoprobe hole by backfilling with bentonite pellets and hydrate with potable water or use concrete patch in impervious areas.

C3.2.1 Headspace Screening Procedures

Geoprobe soil macrocores will be visually examined for the presence of elemental mercury and field-screened for the presence of mercury vapors and volatile organic vapors. Soil cores will be characterized in discrete 2-foot increments. For each depth increment, the soil will be visually characterized for textural classification (USCS), screened with a mercury vapor analyzer (MVA) and photoionization detector/flame ionization detector (PID/FID), and monitored for headspace gases. Procedures for these field techniques are described in section 3.2.3 for USCS classification, and below for the MVA and PID/FID screening and headspace screening.

URS Corporation									TEST BORING LOG	
									BORING NO:	
PROJECT:									SHEET:	1 of 1
CLIENT:									JOB NO.:	
BORING CONTRACTOR:									BORING LOCATION:	
GROUNDWATER:					CAS.	SAMPLER	CORE	TUBE	GROUND ELEVATION:	
DATE	TIME	LEVEL	TYPE	TYPE		Macrocore			DATE STARTED:	
				DIA.		2"			DATE FINISHED:	
				WT.		--			DRILLER:	
				FALL		--			GEOLOGIST:	
				* POCKET PENETROMETER READING					REVIEWED BY:	

	SAMPLE					DESCRIPTION					
DEPTH FEET	STRATA	NO.	TYPE	BLOWS PER 6"	REC% ROD%	COLOR	CONSIST HARD	MATERIAL DESCRIPTION	USCS	REMARKS PID	Moist
		1	2" MC								
5		2	2" MC								
10		3	2" MC								
15											
20											
25											
30											

COMMENTS: Geoprobe 5400 using 2" macrocore to a depth of	PROJECT NO.
	BORING NO.

FIGURE 3-1

35787/Geology Forms/Geoprobe Boring Log

Procedure

1) Follow procedure for Geoprobe sampling (Section 3.2) up to step 7.0.

2) Cut acetate macrocore liner open.

3) Slowly scan the soil core with the MVA and PID/FID.

4) For each 2-foot increment record the reading in the notebook.

5) Divide the soil core in 2-foot increments.

6) Classify the soil core by USCS and record in the notebook and on a Geoprobe Log (Figure 3-2).

7) Place each soil increment into a ziplock freezer bag and seal tightly. Knead the soils vigorously and set the baggie aside for 30 minutes and allow the samples to equilibrate to ambient temperature and then measure the headspace in the baggie using the MVA and PID/FID.

8) Record the readings in the field notebook and on a Geoprobe Log (Figure 3-1).

3.2.2 Soil Sampling Procedures for Chemical Analysis

Subsurface soil samples will be collected from Geoprobe soil boring locations to determine the extent of soil contamination at the site. Three soil samples will be collected from each Geoprobe borings. All samples will be analyzed for TAL mercury. Soil samples from each boring will be field-screened with a MVA and PID/FID and described using a detailed soil classification system (Section 3.2.3). One sample will be obtained from the 0-2" interval to characterize surface soil conditions. A second composite sample of the fill material will be obtained. This sample will be formed by collecting representative materials throughout the fill interval and mixing them together to form one sample. The third sample will be collected from the fill/silty clay interface. Any soils that appear to be visually stained, exhibit elevated PID/FID

readings, or show other evidence of contamination will be analyzed for TCL VOCs, TCL SVOCs, PCBs, and RCRA metals.

Procedure

1) Follow procedure for Geoprobe sampling (Section 3.2) up to Step 7.

2) Scan the soil core with the MVA and PID/FID and record the readings. Inspect the soil core closely for visual and/or olfactory evidence of contamination including staining, DNAPL/LNAPL presence, and sheen.

3) If there are elevated PID/FID readings or visual evidence of contamination, collect the sample for VOCs first using a stainless-steel pre-cleaned scoop. Fill the sample jars directly from the soil core without mixing. Label the sample jars as described in Section 7.0.

4) For the other chemical fractions (i.e., mercury, SVOCs, PCBs, RCRA metals) composite the soil into a stainless-steel mixing bowl and place into the appropriate sample bottles.

5) Secure a Teflon-lined cap onto each bottle and place the samples on ice in a cooler for transport/shipment to the laboratory (Section 8.0).

6) Label the sample bottles with the appropriate tag and complete all chain-of-custody documents.

7) Decontaminate sampling equipment after each use as described in Section 6.0.

8) Record all field data in the field notebook.

3.2.3 Unified Soil Classification System

Soils are classified for engineering purposes according to the Unified Soil Classification System (USCS) adopted by the U.S. Army Corps of Engineers and U.S. Department of the Interior Bureau of Reclamation. Soil properties which form the basis for the USCS are:

- Percentage of gravel, sand, and fines;
- Shape of the grain-size distribution curve; and
- Plasticity and compressibility characteristics.

According to this system, all soils are divided into three major groups: coarse-grained, fine-grained, and highly-organic (peaty). The boundary between coarse-grained and fine-grained soils is taken to be the 200-mesh sieve (0.074 mm). In the field the distinction is based on whether the individual particles can be seen with the unaided eye. If more than 50% of the soil by weight is judged to consist of grains that can be distinguished separately, the soil is considered to be coarse-grained.

The coarse-grained soils are divided into gravelly (G) or sandy (S) soils, depending on whether more or less than 50% of the visible grains are larger than the No. 4 sieve (3/16 inch). They are each divided further into four groups:

W: Well graded; fairly clean (<5% finer than 0.074 mm)

P: Poorly graded (gap-graded); fairly clean (<5% finer than 0.074mm)

C: Clayey (>12% finer than 0.074mm); plastic (clayey) fines. Fine fraction above the A- line with plasticity index above 7.

M: Silty (>12% finer than 0.074 mm); nonplastic or silty fines. Fine fraction below the A- line and plasticity index below 4.

The soils are represented by symbols such as GW or SP. Borderline materials are represented by a double symbol, as GW-GC.

The fine-grained soils are divided into three groups: inorganic silts (M), inorganic clays (C), and organic silts and clays (O). The soils are further divided into those having liquid limits lower than 50% (L), or higher than 50% (H).

The distinction between the inorganic clays (C), the inorganic silts (M), and organic soils (O) is made on the basis of a modified plasticity chart. Soils CH and CL are represented by points above the A-line, whereas soils OH, OL, and MH correspond to positions below the A-line. Soils ML, except for a few clayey fine sands, are also represented by points below the A-line. The organic soils O are distinguished from the inorganic soils M and C by their characteristic odor and dark color.

3.2.4 Visual Identification

Soil properties required to define the USCS classification of a soil are the primary features to be considered in field identification. These properties and other observed characteristics normally identified in describing a soil are defined below:

a. Color
b. Moisture conditions
c. Grain size
    (1) Estimated maximum grain size
    (2) Estimated percent by weight of fines (material passing No. 200 sieve)
d. Gradation
e. Grain shape
f. Plasticity
g. Predominant soil type
h. Secondary components of soil
i. Classification symbol
j. Other features such as:
    - organic, chemical, or metallic content;
    - compactness;
    - consistency;
    - cohesiveness near plastic limit;

- dry strength; and source - residual, or transported (aeolian, water borne, glacial deposit, etc.)

3.3 Monitoring Well Construction Procedures

Monitoring wells (mini-wells) may be installed to monitor groundwater conditions

Monitoring Well Construction

The well construction methodology described below is common for the construction of groundwater wells. It allows for monitoring of groundwater elevation and acquisition of groundwater samples for laboratory testing.

Procedure:

1) Advance the subsurface boring to the depth of penetration by means of direct-push drilling. Well depths will vary based on the depth to the top of the silty clay unit.

2) Remove the macrocore samples and verify borehole depth using a weighted measuring tape.

3) Insert the 1-inch, 5 or 10 foot (depending on depth to top of silty clay) Schedule 40 polyvinylchloride (PVC) well screen (0.010-inch slot). The well screen should straddle the contact between the fill materials and the underlying silty clay unit. Add 1-inch PVC riser pipe into borehole as necessary. Cap the riser to prevent well construction materials from entering the well.

4) Add sand to screen section of well until the sand pack extends to within 3 feet of the ground surface. Measure with a tape.

5) Slowly add bentonite pellets to the borehole until a minimum 1-foot thick bentonite seal has been installed. Measure with a tape.

6) If the bentonite seal is placed above the groundwater level within the borehole, add clean, potable water to the borehole to hydrate the bentonite pellets. Allow the pellets to hydrate for at least 30 minutes.

7) Backfill the remainder of the borehole with concrete.

8) Install the flush-mount protective curb box over the well riser pipe and set it into the concrete backfill. (Alternatively, a protective casing with locking cap may be used.)

9) Lock the protective cover.

10) Document well construction details in the field notebook and later on a Monitoring Well Construction Details diagram (Figure 3-2).

3.4 Well Development Procedures

Following completion of drilling and mini-well installation, each well will be developed by pumping until the discharged water is relatively sediment free and the indicator parameters (pH, temperature, turbidity, and specific conductivity) have reached steady-state. Developing the well not only removes any sediment, but also may improve the hydraulic properties of the formation. The effectiveness of the development measures will be monitored closely to keep the volume of discharged water to the minimum necessary to obtain sediment-free samples. A portable turbidimeter will be used to monitor effectiveness of development. A turbidity reading of less than 50 nephelometric turbidity units (NTUs) and steady-state pH, temperature, dissolved oxygen, and specific conductivity readings will be used as a guide for discontinuing well development.

Procedure

DRILLING SUMMARY

Geologist:

Drilling Company:

Driller:

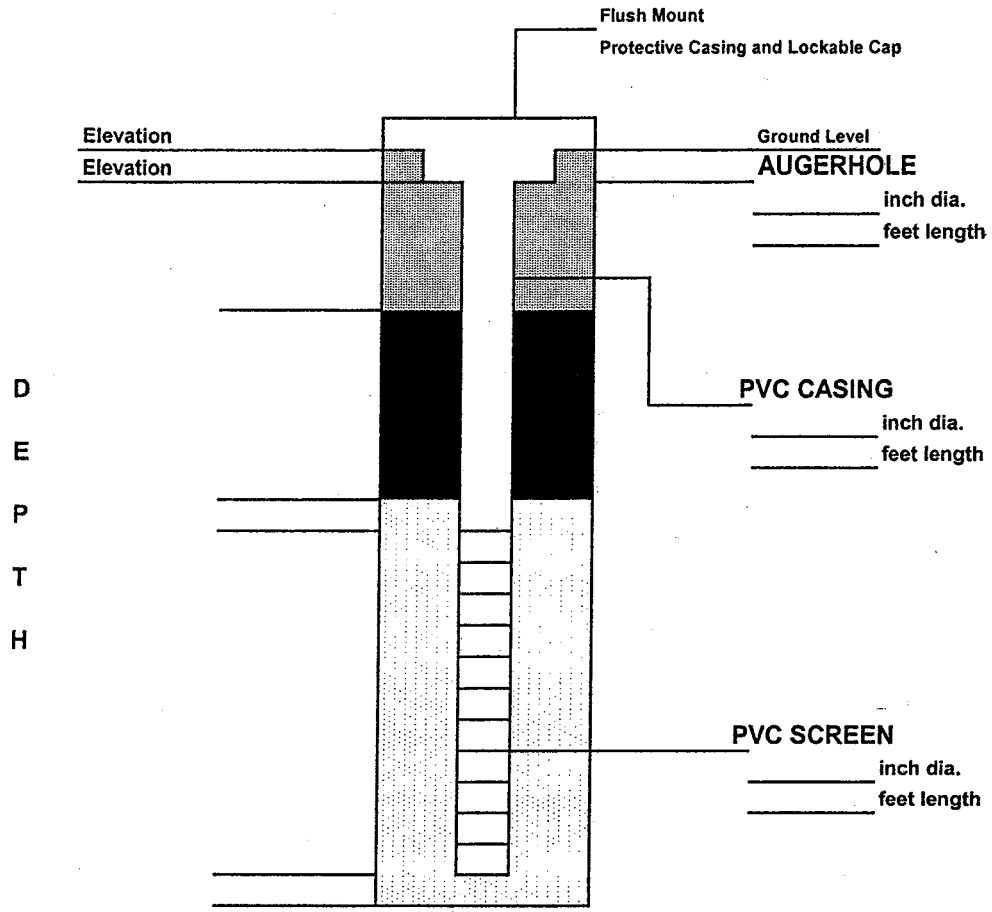
Rig Make/Model:

Date:

GEOLOGIC LOG

Depth(ft.)	Description

WELL DESIGN



CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 4" PVC	**Type:** #2 Sand **Setting:**
Monitor: 4" PVC	**Slot Size:** .020"	***SEAL MATERIAL***
		Type: Bentonite **Setting:**

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client:	**Location:**	**Project No.:**
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:**

Q:/Exchange/Montroy/Geology Forms/Flush Mount-8/18/03-8:11 AM

FIGURE 3-2

1) Mini-wells will be developed using a peristaltic pump and high-density polyethylene tubing (HDPE) until the turbidity is consistently less than 50 NTUs, and the indicator parameters have reached steady-state.

2) Equipment should be assembled, decontaminated (if necessary), and installed in the well. Care should be taken not to introduce contaminants to the equipment during installation.

3) Well development should proceed by repeatedly removing water from the well until the discharged water is less than 50 NTUs. The volume of water removed from the wells will not be less than that lost to the formation during drilling. All development water will be containerized on site in 55-gallon drums. The water will be tested and disposed of off-site at an offsite facility. The effectiveness of development should be monitored at regular intervals using a portable turbidimeter.

   Volume of water removed and turbidity, pH, temperature, and conductivity measurements will be recorded on a Well Development/Purge Log form (Figure 3-3).

4) Well development will be discontinued when the turbidity of the discharged water is below 50 NTUs and the other indicator parameters have stabilized.

3.5 Investigation-Derived Waste

Summary: Disposal of investigation-derived waste (IDW) will be performed in accordance with New York State Department of Environmental Conservation Technical and Administrative Guidance Memorandum (TAGM) HWR-89-4032, November 21, 1989.

Intrusive activities (soil borings) will not generate any IDW. Any spent protective gear or sampling equipment will be disposed of in a Part 360 solid waste landfill.

3.6 Documentation

WELL DEVELOPMENT LOG

URS Corporation

PROJECT TITLE: _____ WELL NO.: _____

PROJECT NO.: _____

STAFF: _____

DATE(S): _____

			WELL ID.	VOL. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=		1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=		2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	0.0	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	0.17	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	0.0	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x ___)	=	0	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=		8"	2.60

OR

$V=0.0408 \times (\text{CASING DIAMETER})^2$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
pH											
SPEC. COND. (umhos)											
APPEARANCE											
TEMPERATURE (°C)											

COMMENTS:

FIGURE 3-3

Each soil boring and monitoring well will be logged in a bound field notebook by the supervising geologist. Field notes will include descriptions of subsurface materials encountered during drilling, sample numbers, and types of samples recovered from the soil borings. Additionally, the geologist will note time and material expenditures for later verification of contractor invoices.

Upon completion of daily activities, the geologist will initiate chain-of-custody on any samples recovered for chemical laboratory testing. Following completion of the subsurface program, the geologist will transfer field notes onto standard forms for the SI/RAR.

On a weekly basis the project geologist will submit a summary report to the project manager containing at a minimum the following: (1) a summary of the daily activities; (2) progress report on field activities; and (3) a record of site visitors.

The proper completion of the following forms/logs will be considered correct procedure for documentation during the drilling program:

1) Field Log Book - weather-proof hand-bound field book
2) Geoprobe Log (Figure 3-1)
4) Well Construction Details (Figure C3-2)
3) Well Development/Purge Log (Figure C3-3)
4) Daily Drilling Record (Figure C3-4)
5) Chain of Custody Record (Figure C3-5)

DAILY DRILLING RECORD

URS Corporation

PROJECT TITLE: _____ DATE: _____

CLIENT: _____ CONTRACTOR: _____

FROM	TO	PRODUCTIVE HOURS	ACTIVITIES/COMMENTS
TOTAL PRODUCTIVE HOURS			LEVEL B / LEVEL C / LEVEL D (CIRCLE ONE SELCTION)

LABOR:		MATERIALS / SUPPLIES:	
UNITS		UNITS	

WEATHER:

_____ URS ONSITE COORDINATOR	_____ CONTRACTOR REPRESENTATIVE

Q:/Exchange/Montroy/Geology Forms/Daily Drilling Record -8/18/03-8:12 AM

FIGURE 3-4

CHAIN OF CUSTODY RECORD

URS

PROJECT NO. | SITE NAME

SAMPLERS (PRINT/SIGNATURE)

DELIVERY SERVICE: _____ AIRBILL NO.: _____

LAB _____

COOLER _____ of _____

PAGE _____ of _____

TESTS

BOTTLE TYPE AND PRESERVATIVE

LOCATION IDENTIFIER	DATE	TIME	COMP/ GRAB	SAMPLE ID	MATRIX	TOTAL NO.# OF CONTAINERS	REMARKS	SAMPLE TYPE	BEGINNING DEPTH (IN FEET)	ENDING DEPTH (IN FEET)	FIELD LOT NO.# (IRPIMS ONLY)

MATRIX CODES

AA - AMBIENT AIR; SE - SEDIMENT; SH - HAZARDOUS SOLID WASTE; SL - SLUDGE; WP - DRINKING WATER; WW - WASTE WATER; WG - GROUND WATER; SO - SOIL; DC - DRILL CUTTINGS; WL - LEACHATE; GS - SOIL GAS; WC - DRILLING WATER; WO - OCEAN WATER; WS - SURFACE WATER; WQ - WATER FIELD QC; LH - HAZARDOUS LIQUID WASTE; LF - FLOATING/FREE PRODUCT ON GW TABLE

SAMPLE TYPE CODES

TB# - TRIP BLANK; SD# - MATRIX SPIKE DUPLICATE; RB# - RINSE BLANK; FR# - FIELD REPLICATE; N# - NORMAL ENVIRONMENTAL SAMPLE; MS# - MATRIX SPIKE

(# - SEQUENTIAL NUMBER (FROM 1 TO 9) TO ACCOMMODATE MULTIPLE SAMPLES IN A SINGLE DAY)

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME	SPECIAL INSTRUCTIONS
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY (SIGNATURE)	DATE	TIME	

Distribution: Original accompanies shipment, copy to coordinator field files

URSF-075C/1 OF 1/CofCR/GCM

FIGURE 3-5

4.0 GROUNDWATER MONITORING

Groundwater monitoring requirements are defined in the SMP. To collect representative groundwater samples, groundwater wells must be adequately purged prior to sampling. Purging will require the removal of one to three volumes of standing water**.** The wells will be sampled following procedures found in Section 4.2. The samples will be labeled and shipped following procedures outlined in Sections 7.0 and 8.0 and analyzed for the parameters identified in Table 4-1.

C4.1 Well Purging Procedures

Procedures

1) The mini-well cap will be carefully removed to avoid having any foreign material enter the well. The interior of the riser pipe will be monitored for organic vapors using a PID/FID. If a reading of greater than 5 parts per million (ppm) is recorded, the well will be vented until levels are below 5 ppm before purging begins.

2) Using an electronic water level detector, the water level below top of casing will be measured. Knowing the total depth of the well, it will be possible to calculate the volume of water in the well. The end of the probe will be soap-and-water-washed and deionized-water-rinsed between wells.

3) Calibrate field instruments (e.g., pH, specific conductance, and turbidity).

4) In all wells, a peristaltic pump will be used to purge the required water volume (i.e., until stabilization of pH, temperature, specific conductivity, and turbidity). Dedicated new high density polyethylene (HDPE) discharge and intake tubing will be used for each well.

5) Purge well until the water quality parameters have stabilized. The stabilization criteria are: specific conductivity - 3% full scale range; pH - 0.10 pH unit; temperature - 0.2ºC and turbidity <50 NTU.

6) Well purging data are to be recorded in the field notebook and on the Well Development/Purge Log (Figure C3-3).

7) Dispose of HDPE tubing as per Section C3.5.

4.2 Groundwater Sampling Procedures

Procedures

1) After well purging is completed, a sample will be collected into the appropriate container. The aliquot for total metals will not be filtered since turbidity will be less than 50 NTUs.

2) Direct the discharge tubing toward the inside wall of the sample container to minimize volatilization. Preserve as needed and cap all sample containers.

3) All sample bottles will be labeled in the field using a waterproof permanent marker (Section 7.0).

4) Samples will be collected into sample bottles (Table 4-2) (containing required preservatives) and placed on ice in coolers for processing (preservation and packing) prior to shipment to the analytical laboratory. A chain-of-custody record (Figure 3-5) will be initiated. The analytical laboratory will certify that the sample bottles are analyte-free prior to shipping.

5) Remove pump and tubing.

6) Well sampling data are to be recorded in the field notebook and on the Well Development/Purge Log (Figure 3-3).

4.3 Water Level Monitoring Procedures

Determination of groundwater surface elevations throughout a monitoring well network makes possible the construction of a potentiometric surface contour map and determination of groundwater flow patterns.

Water levels in all monitoring wells will be measured using an electronic water level indicator or weighted tape. Initially, measurements will be taken following well development until the well has recovered to anticipated static conditions. Water levels will also be measured prior to groundwater purging sampling. Water level measurement procedures are presented below.

Procedure

1) Clean water level probe following the decontamination procedures (Section 6.0) and test water level meter to ensure that the batteries are charged.

2) Lower probe slowly into the monitoring well until audible alarm indicates the top of the water column.

3) Read the depth to the nearest hundredth of a foot, from the graduated cable using a set reference point on the riser pipe.

4) Repeat the measurement for confirmation and record the water level.

5) Remove the probe from the monitor slowly, drying the cable and probe with a clean "Chem Wipe" or paper towel.

6) Replace monitoring well cap and lock protective cap in place.

7) Decontaminate the water level indicator (Section 6.0) if additional measurements are to be taken.

4.4 Sample Container, Preservation and Holding Time Requirements

Table 4-2 lists the sample container, volume, preservation and holding time requirements for samples to be collected at the site.

TABLE 4-1

SUMMARY OF ANALYTICAL PARAMETERS

NIACET FACILITY

Parameter	Method Number/ Reference[1]	Estimated Number of Samples	QA/QC Samples	
			MS/MD	Rinse Blanks
I. Groundwater				
Mercury (Total)	ILM04.0	9	1/1	1
I. Subsurface Soil				
Mercury (Total)	ILM04.1	250	12/12	12

NOTES:

[1]NYSDEC Analytical Services Protocol (ASP), June 2000 Edition

TABLE 4-2

ANALYTICAL METHODS, CONTAINER, PRESERVATION,

AND HOLDING TIME REQUIREMENTS

NIACET FACILITY

PARAMETER	ANALYTICAL METHOD*	VOLUME REQUIREMENT	PRESERVATION	HOLDING TIME**
I. Groundwater				
Mercury (total)	ILM04.1	1 x 1 L plastic	HNO_3 to pH<2, Cool 4° C	26 days
II. Surface and Subsurface Soil				
Mercury (total)	ILM04.1	1 x 4 oz. glass	Cool 4°C	26 days

NOTES:

* - NYSDEC, Analytical Services Protocol (ASP) June 2000 Edition.
** - All holding times begin with the Validated Time of Sample Receipt (VTSR) at the laboratory.

5.0 SURVEYING AND MAPPING

Project control surveying will provide for location of sampling points. All surveying will be performed under the supervision of a New York State licensed Land surveyor, following the requirements of the SMP and the HASP.

5.1 Establishing Horizontal Primary Project Control

Summary: In order to determine the horizontal locations of site features, horizontal control will be established by surveying to/from established survey monuments in the New York State Plane Coordinate System, Transverse Mercator Projection, East Zone, North American Datum of 1983. This information will be used on all site maps.

Procedure:

1) Research for monuments.
2) Recover monuments in field.
3) Set and reference points on primary traverse.
4) Turn angles and measure distances.
5) Compute closures and adjust traverse.

5.2 Establishing Vertical Primary Project Control

Summary: In order to determine site elevations, vertical control must be established by surveying to/from established survey monuments in the North American Vertical Datum of 1988 network.

Procedure:

1) Research for monuments.
2) Recover monuments in field.
3) Set project benchmarks.
4) Run level line from monuments to set project benchmarks and back.

5) Reduce notes and adjust benchmark elevations.

6) Prepare recovery sketches.

5.3 Global Positioning System (GPS) Surveying

Most of the surveying will be performed using GPS systems methodologies. This data will be converted into the horizontal and vertical coordinate systems noted in Sections 4.1 and 4.2.

6.0 SAMPLING EQUIPMENT CLEANING PROCEDURES

Summary: To assure that no outside contamination will be introduced into the samples/data, thereby invalidating the samples/data, the following cleaning protocols will apply for all equipment used to collect samples/ data during the field investigations. Geoprobe equipment and heavy machinery will be steam cleaned on the decontamination pad.

Procedures:

1) Thoroughly clean equipment with laboratory-grade soap and water, until all visible contamination is gone.
2) Rinse with tap water, until all visible evidence of soap is removed.
3) Rinse several times with deionized water.
4) Air dry before using. If equipment will not be used immediately, wrap in aluminum foil.

7.0 SAMPLE LABELING

Summary: In order to prevent misidentification and to aid in the handling of environmental samples collected during the field investigation, the following procedures will be used:

Procedure:

1) Affixed to each sample container will be a non-removable (when wet) label. Apply label and wrap with 2-inch cellophane tape to cover label. The following information will be written on each label with permanent marker:

- Site name
- Sample identification
- Project number
- Date/time
- Sampler's initials
- Sample preservation
- Analysis required

2) Each sample of each matrix will be assigned a unique identification alpha-numeric code. An example of this code and a description of its components is presented below:

Examples

1. SB-1
   SB-1 = Soil Boring No. 1

2. SB-1 - 2'-4'
   SB-1 = Soil Boring No. 1
   2' - 4' = Two-foot to four-foot soil sample

List of Abbreviations

Sample Type

SB	=	Soil Boring
MW	=	Monitoring Well
MSB	=	Matrix Spike Blank
EB	=	Equipment Rinse Blank
TB	=	Trip Blank
RB	=	Rinse Blank
MS	=	Matrix Spike
MSD	=	Matrix Spike Duplicate
MD	=	Matrix Duplicate

8.0 SAMPLE SHIPPING

Summary: Proper documentation of sample collection and the methods used to control these documents are referred to as chain-of-custody procedures. Chain-of-custody procedures are essential for presentation of sample analytical chemistry results as evidence in litigation or at administrative hearings held by regulatory agencies. Chain-of-custody procedures also serve to minimize loss or misidentification of samples and to ensure that unauthorized persons do not tamper with collected samples.

The procedures used in this Supplemental SI follow the chain-of-custody guidelines outlined in NEIC Policies and Procedures, prepared by the National Enforcement Investigations Center (NEIC) of the U.S. Environmental Protection Agency Office of Enforcement.

Procedure:

1) The chain-of-custody (COC) record (Figure C3-5) should be completely filled out, with all relevant information.
2) The original COC goes with the samples. It should be placed in a ziplock bag and taped inside the sample cooler. Sampler should retain a copy of the COC.
3) Place inert cushioning material such as vermiculite or bubble-wrap in bottom of cooler.
4) Place bottles in cooler in such a way that they do not touch (use cardboard dividers or bubble-wrap).
5) Wrap VOA vials securely in bubble-wrap and tape. Place them in the center of the cooler.
6) Pack cooler with ice in doubled ziplock plastic bags.
7) Pack cooler with cushioning material.
8) Tape the drain shut.
9) Wrap cooler completely with strapping tape at two locations securing the lid. Do not cover any labels.

10) Place lab address on top of cooler. For out-of-town laboratory, add the following: Put "This side up" labels on all four sides and "Fragile" labels on at least two sides. Affix numbered custody seals on front right and left of cooler. Cover seals with wide, clear tape.

11) Ship samples via overnight carrier the same day that they are collected.

APPENDIX F

QUALITY ASSURANCE PROJECT PLAN

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QUALITY ASSURANCE PROJECT PLAN

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1.0 INTRODUCTION

This Quality Assurance Project Plan (QAPP) is designed to provide an overview of quality assurance/quality control (QA/QC) procedures and programs which will be adhered to for activities as described in the Site Management Plan (SMP). It will give specific methods and QA/QC procedures for chemical testing of environmental samples obtained from the site. In addition, it will ensure the quality of the data produced. All samples will be analyzed by a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory.

During any Site Management activities, the URS QA/QC Officer will be responsible for verifying that corporate QA procedures are followed. The Onsite Coordinator will be responsible for verifying that QA procedures are followed in the field. This will provide for the valid collection of representative samples. The Project Chemist will be in direct contact with the analytical laboratory to monitor laboratory activities so that holding times and other QA/QC requirements are met.

In addition to overall project coordination, the Project Manager will be responsible for overseeing both the analytical and field QA/QC activities. The ultimate responsibility for maintaining quality throughout the project rests with the Project Manager.

The analytical laboratory proposed to be used for the analysis of soil samples shall be currently certified by NYSDOH ELAP for the appropriate categories (i.e., CLP). The laboratory QA Manager will be responsible for overseeing the QC data generated. Also, the laboratory QA Manager will be in daily communication with the Project Chemist.

2.0 DATA QUALITY OBJECTIVES

2.1 Background

Data quality objectives (DQOs) are qualitative and quantitative statements which specify the quality of data required to support Site Management activities. DQOs focus on the identification of the end use of the data to be collected. The project DQOs will be achieved utilizing the definitive data category, as outlined in *Guidance for the Data Quality Objectives Process,* EPA QA/G-4 (August 2000). All sample analyses will provide definitive data which are generated using rigorous analytical methods, such as reference methods approved by the U.S. Environmental Protection Agency (USEPA). A summary of the analytical methods to be used are presented in Table B2-1.

The project DQOs for data collection are:

- Monitor groundwater quality across the site;
- to evaluate the effectiveness of remedial actions completed at the site;
- to maintain the highest possible scientific/professional standards for each procedure; and,
- to assure the ultimate defensibility of the data produced during.

Soil and groundwater analytical results will be compared to the applicable standards, criteria and guidance (SCGs) that are protective of human health and the environment. For the soil matrix, the SCG's will be the New York State Department of Environmental Conservation (NYSDEC) 6 NYCRR Part 375 Soil Cleanup Objectives for restricted commercial usage (December 2007). For groundwater, the SCG's will be the NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1) "*Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*".

2.2 QA Objectives for Chemical Data Measurement

In order to achieve the definitive data category described above, the data quality indicators of precision, accuracy, representativeness, comparability, and completeness will be measured during offsite chemical analysis.

2.2.1 Precision

Precision examines the distribution of the reported values about their mean. The distribution of reported values refers to how different the individual reported values are from the average reported value. Precision may be affected by the natural variation of the matrix or contamination within that matrix, as well as by errors made in field and/or laboratory handling procedures. Precision is evaluated using analyses of a laboratory matrix spike/matrix spike duplicate, which not only exhibit sampling and analytical precision, but indicate analytical precision through the reproducibility of the analytical results. Relative Percent Difference (RPD) is used to evaluate precision. RPD criteria must meet the method requirements identified in Table 2-1.

2.2.2 Accuracy

Accuracy measures the analytical bias in a measurement system. Sources of error are the sampling process, field contamination, preservation, handling, sample matrix, sample preparation, and analysis techniques. Sampling accuracy may be assessed by evaluating the results of rinse blanks. This data helps to assess the potential concentration contribution from various outside sources. The laboratory objective for accuracy is to equal or exceed the accuracy demonstrated for the applied analytical methods on samples of the same matrix. The percent recovery criterion is used to estimate accuracy based on recovery in the matrix spike/matrix spike duplicate and matrix spike blank samples. The spike and spike duplicate, which will give an indication of matrix effects that may be affecting target compounds, are also a good gauge of method efficiency. For VOC analysis surrogate recovery results will also be measured. Acceptable ranges of recovery are reported in the referenced methods identified in Table 2-1.

2.2.3 Representativeness

Representativeness expresses the degree to which the sample data accurately and precisely represent the characteristics of a population of samples, parameter variations at a sampling point, or environmental conditions. Representativeness is a qualitative parameter which is most concerned with the proper design of the sampling program or subsampling of a given sample. Objectives for representativeness are defined for sampling and analysis tasks and are a function of the investigative objectives (i.e., determination of vertical and horizontal extent of contamination). The sampling procedures have been selected with the goal of obtaining representative samples for the media of concern.

2.2.4 Comparability

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared with another. A DQO for this program is to produce data with the greatest possible degree of comparability. This goal is achieved through using standard techniques to collect and analyze representative samples and reporting analytical results in appropriate units. Complete field documentation using standardized data collection forms will support the assessment of comparability. Comparability is limited by the other parameters (e.g., precision, accuracy, representativeness, completeness) because only when precision and accuracy are known can data sets be compared with confidence. In order for data sets to be comparable, it is imperative that contract-required methods and procedures be explicitly followed.

2.2.5 Completeness

Completeness is defined as a measure of the amount of valid data obtainable from a measurement system compared to the amount that was expected to be obtained under normal conditions. It is important that appropriate QA procedures be maintained to verify that valid data are obtained in order to meet project needs. For the data generated, a goal of 90% is required for completeness (or usability) of the analytical data. If this goal is not met, URS project personnel will determine whether the deviations might cause the data to be rejected.

3.0 SAMPLING LOCATIONS, CUSTODY, HOLDING TIMES, AND ANALYSIS

Sampling locations and procedures are discussed in Section 4.0 of the IRM Work Plan. Table B3-1 presents sample methods and container, preservation, and holding time requirements. All analyses will be performed in accordance with the NYSDEC Analytical Services Protocol, June 2000 Edition.

Table 2-1 identifies the specific method to be performed on the soil and groundwater matrices. All holding times begin with validated time of sample receipt (VTSR) at the laboratory. The laboratory must meet the method required detection limits which are referenced within the method listed in this table.

4.0 CALIBRATION PROCEDURES AND FREQUENCY

In order to obtain a high level of precision and accuracy during sample processing procedures, laboratory instruments must be calibrated properly. Several analytical support areas must be considered so the integrity of standards and reagents is upheld prior to instrument calibration. The following sections describe the analytical support areas and laboratory instrument calibration procedures.

4.1 Analytical Support Areas

Prior to generating quality data, several analytical support areas must be considered:

Standard/Reagent Preparation - Primary reference standards and secondary standard solutions shall be obtained from National Institute of Standards and Technology (NIST), or other reliable commercial sources to verify the highest purity possible. The preparation and maintenance of standards and reagents will be accomplished according to the method referenced in Table 2-1. All standards and standard solutions are to be formally documented (i.e., in a bound logbook) and should identify the supplier, lot number, purity/concentration, receipt/ preparation date, preparer's name, method of preparation, expiration date, and any other pertinent information. All standard solutions shall be validated prior to use. Care shall be exercised in the proper storage and handling of standard solutions (e.g., separating volatile standards from nonvolatile standards). The laboratory shall continually monitor the quality of the standards and reagents through well documented procedures.

Balances - The analytical balances shall be calibrated and maintained in accordance with manufacturer specifications. Calibration is conducted with two Class "S" weights that bracket the expected balance use range. The laboratory shall check the accuracy of the balances daily and they must be properly documented in permanently bound logbooks.

Refrigerators/Freezers – The temperature of the refrigerators and freezers within the laboratory shall be monitored and recorded daily. This will verify that the quality of the standards and reagents is not compromised and the integrity of the analytical samples is upheld.

Appropriate acceptance ranges (2 to 6° C for refrigerators) shall be clearly posted on each unit in service.

Water Supply System - The laboratory must maintain a sufficient water supply for all project needs. The grade of the water must be of the highest quality (analyte-free) in order to eliminate false-positives from the analytical results. Ultraviolet cartridges or carbon absorption treatments are recommended for organic analyses and ion-exchange treatment is recommended for inorganic tests. Appropriate documentation of the quality of the water supply system(s) will be performed on a regular basis.

4.2 Laboratory Instruments

Calibration of instruments is required to verify that the analytical system is operating properly and at the sensitivity necessary to meet established quantitation limits. Each instrument for organic and inorganic analyses shall be calibrated with standards appropriate to the type of instrument and linear range established within the analytical method(s). Calibration of laboratory instruments will be performed according to the method specified in Table 2-1. In addition to the requirements stated within the analytical method, the contract laboratory will be required to analyze an additional low level standard at or near the detection limits. In general, standards will be used that bracket the expected concentration of the samples. This will require the use of different concentration levels, which are used to demonstrate the instrument's linear range of calibration.

Calibration of an instrument must be performed prior to the analysis of any samples and then at periodic intervals (continuing calibration) during the sample analysis to verify that the instrument is still calibrated. If the contract laboratory cannot meet the method required calibration requirements, corrective action shall be taken as discussed in Section 7.0. All corrective action procedures taken by the contract laboratory are to be documented, summarized within the case narrative, and submitted with the analytical results.

5.0 INTERNAL QUALITY CONTROL CHECKS

Internal QC checks are used to determine if analytical operations at the laboratory are in control, as well as determining the effect sample matrix may have on data being generated. Two types of internal checks are performed and are described as batch QC and matrix-specific QC procedures. The type and frequency of specific QC samples performed by the contract laboratory will be according to the specified analytical method and project specific requirements. Acceptable criteria and/or target ranges for these QC samples are presented within the analytical method referenced in Table 2-1.

QC results which vary from acceptable ranges shall result in the implementation of appropriate corrective measures, potential application of qualifiers, and/or an assessment of the impact these corrective measures have on the established data quality objectives. Quality control samples including any project-specific QC will be analyzed are discussed below.

5.1 Batch QC

Method Blanks - A method blank is defined as laboratory-distilled or deionized water that is carried through the entire analytical procedure. The method blank is used to determine the level of laboratory background contamination. Method blanks are analyzed at a frequency of one per analytical batch.

Matrix Spike Blank Samples - A matrix spike blank (MSB) sample is an aliquot of water spiked (fortified) with all the elements being analyzed for calculation of precision and accuracy to verify that the analysis that is being performed is in control. A MSB will be performed for each matrix.

5.2 Matrix-Specific QC

Matrix Spike Samples - An aliquot of a matrix is spiked with known concentrations of specific compounds as stipulated by the methodology. The matrix spike (MS) and matrix spike duplicate (MSD) are subjected to the entire analytical procedure in order to assess both accuracy and precision of the method for the matrix by measuring the percent recovery and relative percent

difference of the two spiked samples. The samples are used to assess matrix interference effects on the method, as well as to evaluate instrument performance. MS/MSDs are analyzed at a frequency of one each per 20 samples per matrix. MS/MSDs will be performed for all parameters listed in Table 2-1.

5.3 Additional QC

Rinsate (Equipment) Blanks - A rinsate blank is a sample of laboratory demonstrated analyte-free water passed through and over the cleaned sampling equipment. A rinsate blank is used to indicate potential contamination from ambient air and from sample instruments used to collect and transfer samples. This water must originate from one common source within the laboratory and must be the same water used by the laboratory performing the analysis. The rinsate blank should be collected, transported, and analyzed in the same manner as the samples acquired that day. Rinsate blanks for nonaqueous matrices should be performed at a rate of 10 percent of the total number of samples collected throughout the sampling event.

Trip Blanks - Trip blanks are not required for nonaqueous matrices. Trip blanks are required for aqueous sampling events. They consist of a set of sample bottles filled at the laboratory with laboratory-demonstrated analyte free water. These samples then accompany the bottles that are prepared at the lab into the field and back to the laboratory, along with the collected samples for analysis. These bottles are never opened in the field. Trip blanks must return to the lab with the same set of bottles they accompanied to the field, and will be analyzed for volatile organic parameters. Trip blanks must be included at a rate of one per volatile sample shipment.

6.0 CALCULATION OF DATA QUALITY INDICATORS

6.1 Precision

Precision is evaluated using analyses of a field duplicate and/or a laboratory MS/MSD which not only exhibit sampling and analytical precision, but indicate analytical precision through the reproducibility of the analytical results. RPD is used to evaluate precision by the following formula:

$$RPD = \frac{/ X_1 - X_2 /}{[(X_1 + X_2) / 2]} x\, 100\%$$

where:

X_1 = Measured value of sample or matrix spike

X_2 = Measured value of duplicate or matrix spike duplicate

Precision will be determined through the use of MS/MSD analyses. RPD criteria for this project must meet the method requirements listed in Table 2-1.

6.2 Accuracy

Accuracy is defined as the degree of difference between the measured or calculated value and the true value. The closer the numerical value of the measurement comes to the true value or actual concentration, the more accurate the measurement is. Analytical accuracy is expressed as the percent recovery of a compound or element that has been added to the environmental sample at known concentrations before analysis. Analytical accuracy may be assessed through the use of known and unknown QC samples and spiked samples. It is presented as percent recovery. Accuracy will be determined from matrix spike, matrix spike duplicate, and matrix spike blank samples, as well as from surrogate compounds added to organic fractions (i.e., volatiles), and is calculated as follows:

$$Accuracy\ (\%R) = \frac{(X_s - X_u)}{K}\ x\ 100\%$$

where:

X_s = Measured value of the spike sample

X_u = Measured value of the unspiked sample

K = Known amount of spike in the sample

6.3 Completeness

Completeness is calculated on a per matrix basis for the project and is calculated as follows:

$$Completeness\ (\%C) = \frac{(X_v - X_n)}{N}\ x\ 100\%$$

where:

X_v = Number of expected valid measurements

X_n = Number of invalid measurements

N = Number of valid measurements expected to be obtained

7.0 CORRECTIVE ACTIONS

Laboratory corrective actions shall be implemented to resolve problems and restore proper functioning to the analytical system when errors, deficiencies, or out-of-control situations exist at the laboratory. Full documentation of the corrective action procedure needed to resolve the problem shall be filed in the project records, and the information summarized in the case narrative. A discussion of the corrective actions to be taken is presented in the following sections.

7.1 Incoming Samples

Problems noted during sample receipt shall be documented by the laboratory. The URS Project Chemist shall be contacted immediately for problem resolution. All corrective actions shall be documented thoroughly.

7.2 Sample Holding Times

If any sample extraction and/or analyses exceed method holding time requirements, URS Project Chemist shall be notified immediately for problem resolution. All corrective actions shall be documented thoroughly.

7.3 Instrument Calibration

Sample analysis shall not be allowed until all initial calibrations meet the appropriate requirements. All laboratory instrumentation must be calibrated in accordance with method requirements. If any initial/continuing calibration standards exceed method QC limits, recalibration must be performed and, if necessary, reanalysis of all samples affected back to the previous acceptable calibration check.

7.4 Reporting Limits

The laboratory must meet the method required detection limits listed in Table B2-1. If difficulties arise in achieving these limits due to a particular sample matrix, the laboratory must notify URS project personnel for problem resolution. In order to achieve those detection limits, the laboratory must utilize all appropriate cleanup procedures in an attempt to retain the project required detection limits. When any sample requires a secondary dilution due to high levels of target analytes, the laboratory must document all initial analyses and secondary dilution results. Secondary dilution will be permitted only to bring target analytes within the linear range of calibration. If samples are analyzed at a secondary dilution with no target analytes detected, URS Project Chemist will be immediately notified so that appropriate corrective actions can be initiated.

7.5 Method QC

All QC, including blanks, matrix spikes, matrix spike duplicates, surrogate recoveries, matrix spike blank samples, and other method-specified QC samples, shall meet the method requirements referenced in Table B2-1. Failure of method-required QC will result in the review and possible qualification of all affected data. If the laboratory cannot find any errors, the affected sample(s) shall be reanalyzed and/or re-extracted/redigested, then reanalyzed within method-required holding times to verify the presence or absence of matrix effects. If matrix effect is confirmed, the corresponding data shall be flagged accordingly using the flagging symbols and criteria. If matrix effect is not confirmed, then the entire batch of samples may have to be reanalyzed and/or re-extracted/redigested, then reanalyzed at no cost to the URS. URS shall be notified as soon as possible to discuss possible corrective actions should unusually difficult sample matrices be encountered.

7.6 Calculation Errors

All analytical results must be reviewed systematically for accuracy prior to submittal. If upon data review calculation and/or reporting errors exist, the laboratory will be required to reissue the analytical data report with the corrective actions appropriately documented in the case narrative.

8.0 DATA REDUCTION, VALIDATION, AND USABILITY

For all analyses, NYSDEC ASP Category B deliverable requirements will be employed for documentation and reporting of all data. The standard NYSDEC data package summary forms (see Appendix 1) will be completed by the analytical laboratory and included in the deliverable data packages.

8.1 Data Reduction

Laboratory analytical data are first generated in raw form at the instrument. These data may be either in a graphic or printed tabular format. Specific data generation procedures and calculations are found in each of the referenced methods. Analytical results must be reported consistently. Data for water samples will be reported in concentrations of micrograms per liter (µg/L). Data for soils will be reported in concentrations of micrograms per kilogram (µg/kg) for organics and reported on a dry weight basis.

Identification of all analytes must be accomplished with an authentic standard of the analyte traceable to National Institute of Standards and Technology (NIST) or USEPA sources. Data reduction will be performed by individuals experienced with a particular analysis and knowledgeable of requirements.

8.2 Data Validation

Data validation is a systematic procedure of reviewing a body of data against a set of established criteria to provide a specified level of assurance of validity prior to its intended use. Data validation will be performed by environmental chemists under the supervision of the QA/QC Officer. All analytical samples collected will receive a limited data review. The data validation will be limited to a review of holding times, completeness of all required deliverables, review of QC results (surrogates, spikes, spike duplicates) and a 10% check of all samples analyzed to ensure they were analyzed properly. The method referenced in Table B3-1 as well as the general guidelines presented in the following documents will be used to aide the chemist during the data review USEPA Region II *Contract Laboratory Program (CLP) Organic Data*

Review, SOP No. HW-6, Revision #12, March 2001. This document will be used with the following exceptions:

- Technical holding times will be in accordance with NYSDEC ASP, June 2000 edition, and
- Tentatively identified compounds (TICs) will be qualified by the analytical laboratory only

Where possible, discrepancies will be resolved by URS chemists (i.e., no letters will be written to laboratories). A complete analytical data validation is not anticipated. However, if the initial limited data audit reveals significant deviations and problems with the analytical data. URS may recommend complete validation of the data.

8.3 Data Usability

Two sets of data usability tables will be submitted. One set of tables will be only detected values reported, which will be incorporated into the text of the IRM report. The second set of tables will be a complete listing of the validated analytical results. These validation summary tables will be included in the Data Usability Summary Report (DUSR). The DUSR will obtain information regarding deviations, discrepancies and unusable data along with the validation summary tables.

9.0 PREVENTIVE MAINTENANCE AND PERFORMANCE/SYSTEM AUDITS

9.1 Preventative Maintenance

The laboratory is responsible for the maintenance of its analytical equipment. Preventive maintenance is provided on a regular basis to minimize down-time and the potential interruption of analytical work. Instruments are maintained in accordance with the manufacturer's recommendations. If instruments require maintenance, only trained laboratory personnel or manufacturer-authorized service specialists are permitted to do the work. Maintenance activities will be documented and kept in permanent logs. These logs will be available for inspection by auditing personnel.

9.2 Performance/System Audits

Audits will include a careful evaluation of both field and laboratory quality control procedures and will be performed before or shortly after systems are operational. The audits will be conducted by an individual who is technically knowledgeable about the operation(s) under review. Performance audits are conducted by introducing control samples into the data production process. These control samples may include performance evaluation samples, field samples spiked with known amounts of analyte, and split field samples that are analyzed by two or more analysts within or outside the organization.

Systems audits are onsite qualitative inspections and reviews of the quality assurance system used by some part of or the entire measurement system. They provide a quantitative measure of the quality of the data produced by one section or the entire measurement process. The audits are performed against a set of requirements, which may be a quality assurance project plan or work plan, a standard method, or a project statement of work. The primary objective of the systems audits is to verify that the QA/QC procedures are being followed.

9.2.1 Performance and External Audits

In addition to conducting internal reviews and audits, as part of its established quality assurance program, the laboratory is required to take part in regularly-scheduled performance evaluations and laboratory audits from state and federal agencies. They are conducted as part of the certification process and to monitor the laboratory performance. The audits also provide an external quality assurance check of the laboratory and provide reviews and information on the management systems, personnel, standard operating procedures, and analytical measurement systems. Acceptable performance on evaluation samples and audits is required for certification and accreditation. The laboratory shall use the information provided from these audits to monitor and assess the quality of its performance. Problems detected in these audits shall be reviewed by the QA Manager and Laboratory Management, and corrective action shall be instituted as necessary.

9.2.2 Systems/Internal Audits

As part of its quality assurance program, the Laboratory QA Manager shall conduct periodic checks and audits of the analytical systems. The purpose of these is to verify that the analytical systems are working properly, and that personnel are adhering to established procedures and documenting the required information. These checks and audits also assist in determining or detecting where problems are occurring.

The QA Manager periodically will submit laboratory control samples. These samples will serve to check the entire analytical method, the efficiency of the preparation method, and the analytical instrument performance. The results of the control samples are reviewed by the QA Manager who reports the results to the analyst and the Laboratory Director. When a problem is indicated, the QA Manager will assist the analyst and laboratory management in determining the reason and in developing solutions. The QA Manager will also recheck the systems as required.

REFERENCES

Comprehensive Environmental Response Compensation and Liability Act (CERCLA) Quality Assurance Manual, Final Copy, Revision 1, October 1989.

National Enforcement Investigations Center of USEPA Office of Enforcement. *NEIC Policies and Procedures.* Washington: USEPA.

New York State Department of Environmental Conservation (NYSDEC). 2000. *Analytical Services Protocol* (ASP), June Edition. Albany: NYSDEC.

USEPA. 1987. *A Compendium of Superfund Field Operations Methods,* EPA/540/P-87-001, (OSWER Directive 9355.0-14). December. Cincinnati, OH: USEPA.

USEPA. 2000. *Guidance for the Data Quality Objective Process,* EPA QA/G-4. August. Washington: USEPA.

TABLE 2-1
SUMMARY OF ANALYTICAL PARAMETERS

Parameter	Method Number/ Reference[1]	Estimated Number of Samples	QA/QC Samples	
			MS/MD	Rinse Blanks
I. Groundwater				
TCL VOCs	OLM04.2	7	1/1	1
I. Subsurface Soil				
TCL VOCs	OLM04.2	5	1/1	--

NOTES:

[1]NYSDEC Analytical Services Protocol (ASP), June 2000 Edition

TABLE 3-1

ANALYTICAL METHODS, CONTAINER, PRESERVATION,

AND HOLDING TIME REQUIREMENTS

NIACET FACILITY

PARAMETER	ANALYTICAL METHOD*	VOLUME REQUIREMENT	PRESERVATION	HOLDING TIME**
I. Groundwater				
TCL VOCs	ILM04.1	3 x 40 ml glass	HCI to pH<2, Cool 4° C	10 days
II. Surface and Subsurface Soil				
TCL VOCs	ILM04.1	1 x 4 oz. glass	Cool 4°C	10 days

NOTES:

* - NYSDEC, Analytical Services Protocol (ASP) June 2000 Edition.
** - All holding times begin with the Validated Time of Sample Receipt (VTSR) at the laboratory.

APPENDIX 1

STANDARD NYSDEC DATA PACKAGE REPORTING FORMS

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY INORGANIC ANALYSES

Laboratory Sample ID	Matrix	Metals Requested	Date Received at Lab	Date Analyzed

APPENDIX G

ENGINEERING CONTROLS SYSTEM

INSPECTION CHECKLIST

APPENDIX G

WYOMING COUNTY FIRE TRAINING CENTER – SITE MANAGEMENT PLAN

NYSDEC SITE NO. V-00604-9

ENGINEERING CONTROL SYSTEMS INSPECTION FORM

Component	Item	Condition
North Permeable Reactive Wall	Obvious subsidence, depressions or cracks Evidence of ponded water Stressed or missing vegetation Soil erosion due to surface runoff Animal burrows Piezometers Stone erosion control blanket (east end) Groundwater seepage from PRW Other:	
South Permeable Reactive Wall	Obvious subsidence, depressions or cracks Evidence of ponded water Stressed or missing vegetation Soil erosion due to surface runoff Animal burrows Groundwater seepage from PRW Other:	

Date: _____ **Inspector:** _____