SITE INSPECTION
TECHNICAL MEMORANDUM
Sites 1, 4, 9, 11, and AOC-P

174th Fighter Wing
Hancock Air National Guard Base
Syracuse, New York

Air National Guard
3500 Fetchet Avenue
Andrews A.F.B., Maryland

September 2004

CH2MHILL

ANG Delivery Order Number 0015

Executive Summary

The Hancock Air National Guard (ANG) Base is located in Syracuse, NY immediately south of and adjacent to the Syracuse International Airport (Hancock Field). The ANG Base consists of several buildings and operational facilities separated into three main tracts of land (Tracts I, II, and III) (Figure 1). Previous environmental investigations were conducted under the Installation Restoration Program (IRP) at the ANG Base and five specific sites (Site 1, Site 4, Site 9, Site 11, Site AOC-P) were identified as potential areas of concern. The previous environmental investigations included a Phase 1 investigation conducted in 1982, Phase 2 investigations conducted in 1984 and 1989, and a Site Assessment (SA) investigation conducted in 1999. Aneptek Corp. completed the SA investigation and a SA Report was prepared (SA Report, February 2003).

Based on a review of the SA Report for Sites 1, 4, 9, 11, and AOC-P, the New York State Department of Environmental Conservation (NYSDEC) identified several data gaps in the characterization of the soil and groundwater at these sites. CH2M HILL developed a Scope of Work to address the data gaps and submitted a Site Investigation (SI) Work Plan to the ANG and NYSDEC in December 2003. The Work Plan was implemented after receiving NYSDEC approval.

Site Investigation activities included both field activities and a review of historical analytical data. Field activities were focused on establishing a site-wide background standard for metals in soils, further evaluating the nature and extent of VOC, SVOC, and metals contamination in soil and groundwater at Sites 1, 4, and AOC-P, and investigating portions of Site 4 where subsurface geophysical anomalies were previously identified. In addition, historical analytical data pertaining to sites 1, 4, 9, 11, and AOC-P were re-evaluated and compared to recently acquired analytical data.

Background soil borings were advanced in areas at the site not associated with present or past remedial investigations. Subsurface soil samples were collected from each background boring and were analyzed for VOCs, SVOCs, and metals. A background metals soil standard was then established by using the highest concentration between these data and the NYSDEC Recommended Soil Cleanup Objectives (RSCO). Additional soil borings and monitoring wells were installed at Sites 1 and 4. Surface and subsurface soil samples were collected from both the soil borings and the monitoring well borings. Groundwater samples were also collected from the new and existing monitoring wells. At Site 4, test pits were excavated to evaluate the presence of subsurface geophysical anomalies identified during previous investigation activities. Surface water and surface sediment samples were collected from the end points of an ephemeral channel at AOC-P.

Exceedances of VOCs and SVOCs in soil at Site 1 are limited in extent, and have not impacted groundwater at the site. Surface soils (0-2") had exceedances of SVOCs that were also detected at background surface soil sampling locations, and may be representative of background conditions at the site. Exceedances of metals in groundwater samples were detected in four monitoring wells at Site 1.

Both metallic and non-metallic debris were uncovered from test pit excavations at Site 4. Subsurface soil samples had detections of VOCs below the RSCO, however several SVOCs were detected above the RSCO. The exceedances of SVOCs are insufficient to impact groundwater. Metals exceedances in groundwater samples at Site 4 appear to originate from an upgradient location, and do not appear to be associated with the buried metal at the site.

An evaluation of historical soil data from Sites 9 and 11 indicate that subsurface soil contamination is limited in extent at both locations.

There were no exceedances of VOCs or SVOCs at AOC-P. Concentrations of metals in sediment samples exceed some of the site specific standard values, however are not impacting the surface water.

Additional site investigation activities are recommended at Sites 1 and 4 to more fully delineate soil and groundwater contamination. No further site investigation activities are recommended for Sites 9, 11, and AOC-P.

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Acronyms and Abbreviations

ANG	Air National Guard
ANGB	Air National Guard Base
ANG/CEVR	Air National Guard/Civil Engineering Environmental Restoration
COC	Chain of Custody
DoD	Department of Defense
DQO	data quality objective
EM	Environmental Manager
EPA	U.S. Environmental Protection Agency
FSP	Field Sampling Plan
FTL	Field Team Leader
GC	Gas Chromatograph
HASP	Health and Safety Plan
HQ	Headquarters
ID	identification
NAVD	North American Vertical Datum
NFRAP	No further Response Action Planned
NGVD	National Geodetic and Vertical Datum
NGB	National Guard Bureau
NYSDEC	New York State Department of Environmental Conservation
PID	Photoionization Detector
PM	Project Manager
PMP	Project Management Plan
PPE	personal protective equipment
PVC	polyvinyl chloride
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
SA	Site Assessment
SI	Site Investigation
SOP	Standard Operating Procedure
SVOC	Semivolatile Organic Compound
VOC	Volatile Organic Compound

1.0 Introduction

The Defense Environmental Restoration Program was established in 1984 to promote and coordinate efforts for the evaluation and cleanup of contamination at Department of Defense (DoD) installations. The program currently includes the Installation Restoration Program (IRP), through which potential contamination at DoD installations and formerly owned or used properties are investigated and, as necessary, site cleanups are conducted. The Air National Guard (ANG), through ANG Headquarters, conducts that portion of the IRP that is applicable to ANG units and facilities.

The Hancock ANG Base is located in Syracuse, NY immediately south of and adjacent to the Syracuse International Airport (Hancock Field). The ANG Base consists of several buildings and operational facilities separated into three main tracts of land (Tracts I, II, and III) (Figure 1). Previous environmental investigations were conducted under the IRP at the ANG Base and five specific sites (Site 1, Site 4, Site 9, Site 11, Site AOC-P) were identified as potential areas of concern. The previous environmental investigations included a Phase 1 investigation conducted in 1982, Phase 2 investigations conducted in 1984 and 1989, and a Site Assessment (SA) investigation conducted in 1999. Aneptek Corp. completed the SA investigation and a SA Report was prepared (SA Report, February 2003).

Based on a review of the SA Report for Sites 1, 4, 9, 11, and AOC-P, the New York State Department of Environmental Conservation (NYSDEC) identified several data gaps in the characterization of the soil and groundwater at these sites. CH2M HILL developed a Scope of Work, under ANG Contract Number DAHA 92-01-D-009, to address the data gaps and submitted a Site Investigation (SI) Work Plan to the ANG and NYSDEC in December 2003. The Work Plan was implemented after receiving NYSDEC approval. The purposes of this Technical Memorandum are to describe the activities conducted during the SI, present the analytical results from the SI activities, briefly summarize the previous SA data, and reevaluate the nature and extent of contamination at the identified sites.

1.1 Site Descriptions

The SA Report (February 2003) provided detailed descriptions and background histories of Sites 1, 4, 9, 11, and AOC-P. These sites include:

- Former fire training area (Site 1) where accelerants were used during training exercises
- Two former disposal areas (Sites 4 and 9) for construction and other debris
- Sand filter bed area (Site 11) related to processing of wastewater
- An area located adjacent to a previously identified area of concern (AOC-P).

Site 1 – Former Fire Training Area, Tract III

Site 1, shown in Figure 2, is located in the southern portion of the ANG Base and comprises about 0.75 acres of land. Site 1 has a concrete pad area surrounded by vegetation. Monthly fire training exercises were staged on the concrete pad from 1948 to 1985 where waste fuels such as fuel oils, jet fuel, etc. were used as accelerants. Environmental investigations

conducted under the SA program for Site 1 included collecting subsurface soil samples from 8 soil borings, concrete samples from four locations on the concrete pad, and surface soil samples from four locations in the low-lying area directly north of the concrete pad. In addition, groundwater samples were collected from five monitoring wells installed around Site 1 to assess the groundwater quality. As presented in the SA Report, the soil samples contained concentrations of volatile organic compounds (VOCs) that exceed the applicable standards and several metals were detected. The groundwater samples collected from site monitoring wells exceeded the applicable standards for several metals. However, a background standard for metals was not established under the SA program such that further assessment of the metals results could not be completed.

Site 4 – D-5 Disposal Site, Tract III

Site 4 is located in the southern portion of the ANG Base and consists of a concrete pad area surrounded by vegetation (Figure 3). The concrete pad had been used to test aircraft engines. From 1950 to1976, a disposal area about 100 ft wide and 150 ft long was reportedly located in the area north of the concrete pad and received a variety of debris including construction rubble, empty ammunition boxes, and empty/partially empty drums. Environmental investigations conducted under the SA program for Site 4 included conducting a geophysical survey across the area to identify areas of buried metal debris, collecting subsurface soil samples from four soil borings, and collecting one groundwater sample from a monitoring well (MW-17). As presented in the SA Report, several geophysical anomalies were identified in the area surveyed and the soil samples contained concentrations of semi-volatile organic compounds (SVOCs). Various metals were also detected in soil and groundwater samples collected from the site. However, a background standard for metals was not established under the SA program such that further assessment of the metals results could not be completed.

Site 9 – D-4 Disposal Site, Tract II

Site 9 is located in the northeastern portion of the ANG Base and consists of a 0.06 acre vegetated area with a narrow dirt road (Figure 4). Site 9 is adjacent to a former Vehicle Maintenance building and parking area. From the 1950's to the 1960's, construction rubble was reportedly disposed at the site. Environmental investigations conducted under the SA program for Site 9 included conducting a geophysical survey across the area to identify areas of buried metal debris, collecting subsurface soil samples from four soil borings, and collecting a groundwater sample from a temporary well point. As presented in the SA Report, ten small and isolated geophysical anomalies were identified in the area surveyed, and the soil and groundwater samples contained concentrations of various metals that exceeded the relevant state standards. However, a background standard for metals was not established under the SA program such that further assessment of the metals results could not be completed. In addition, one soil sample from a boring adjacent to the parking area of the Vehicle Maintenance building contained a VOC (specifically xylene) at concentrations above the applicable standard.

Site 11 – WT-1 Sand Filter Bed, Tract III

Site 11, shown in Figure 5, is located in the southern portion of the ANG Base and consists of a sand filter bed in a 0.5-acre area that was used in a wastewater treatment process. The

area has a building constructed over the former sand filter bed. Environmental investigations conducted under the SA program for Site 11 included collecting subsurface soil samples from four soil borings, and grab groundwater samples from two temporary well points. As presented in the SA Report, the soil and groundwater samples contained concentrations of various metals that exceeded the relevant state standards. However, a background standard for metals was not established under the SA program such that further assessment of the metals results could not be completed.

Site AOC-P, North of Tract II

Site AOC-P is located in the northeastern portion of the ANG Base and consists of a low-lying area with an ephemeral stream located along the eastern side of the D-3 Former Disposal Area (Figure 6). Environmental investigations conducted under the SA program for Site AOC-P included collecting three sediment samples from along the middle portion of the channel. No surface water samples were collected. As presented in the SA Report, the sediment samples contained concentrations of various metals, including arsenic, which exceeded the relevant standards. It was noted that the specific metals concentration were the highest in the furthest downgradient sample, suggesting that the downgradient portion of the channel may be an accumulation area.

1.2 NYSDEC Review of SA Report and Work Plan Development

Based on a review of the SA Report and further evaluation of the analytical results, the NYSDEC noted several data gaps in the report and identified the need to collect additional field information to fill the data gaps. Specifically, the NYSDEC identified the need to:

- Establish background soil concentration for metals standards for data comparison purposes
- Identify the source of the geophysical anomalies at Site 4
- Further evaluate soil and groundwater conditions at Sites 1, 4, and AOC-P
- Define the groundwater flow conditions at Site 4.

CH2M HILL developed a Work Plan (December 2003) to address data gaps identified by the NYSDEC during the review of the SA Report. The Work Plan was focused on collecting soil samples from representative background areas at the site to establish a background concentration for metals in soil, advancing test pits to assess the nature of the geophysical anomalies identified at Site 4, completing additional soil borings and sediment sampling efforts to further evaluate the soil quality in the Site 1, Site 4, and AOC-P area, and installing additional groundwater monitoring wells. The Work Plan also included hydraulic testing and geotechnical analysis of the soils beneath the water table to provide information regarding the nature of the groundwater flow at the site.

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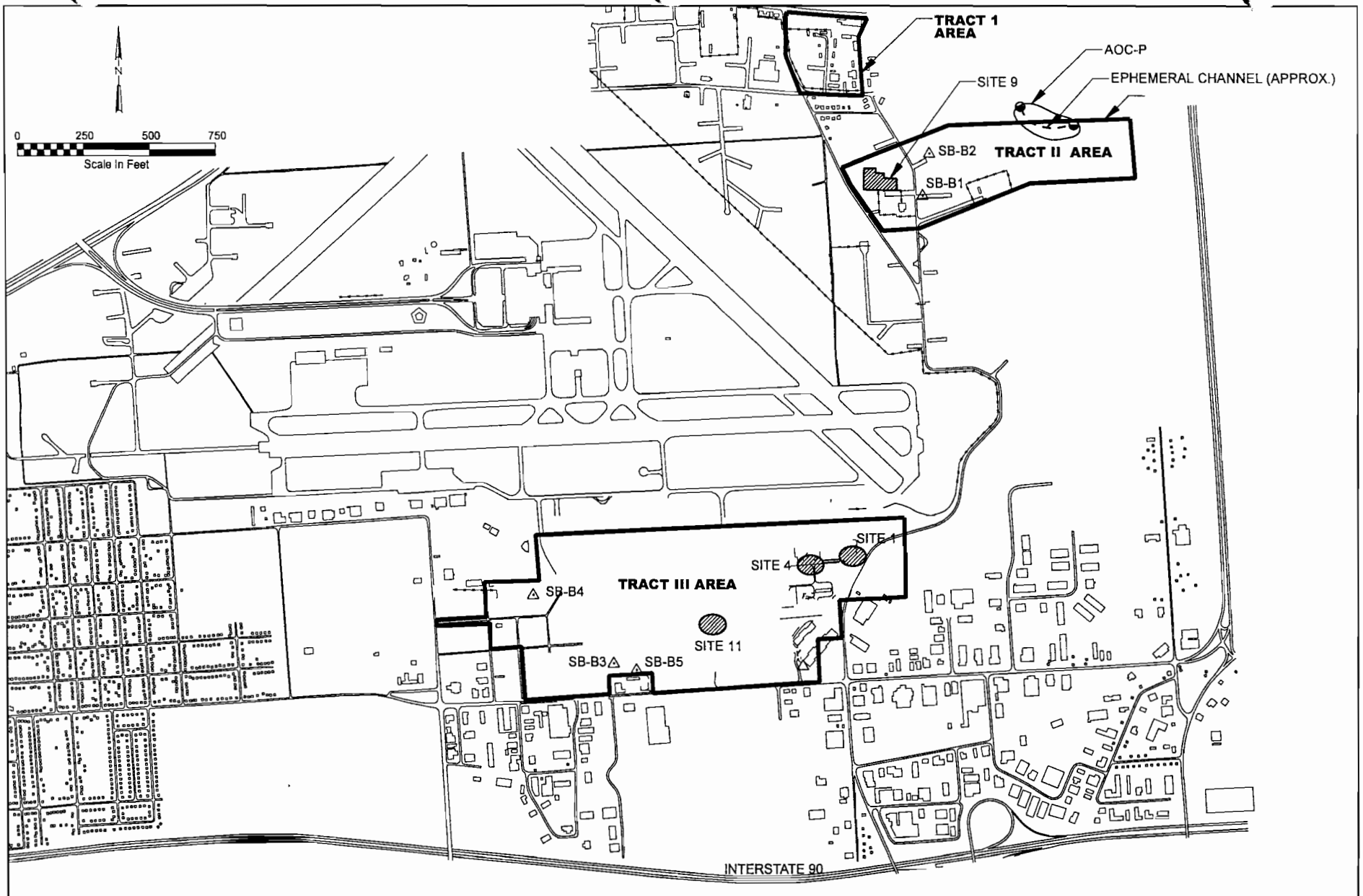

LEGEND

△ January 2004 Background Soil Borings

● January 2004 Surface Water and Sediment Location

Figure 1

SITE MAP AND BACKGROUND SOIL BORINGS

Hancock Air National Guard Base
174th F. W. ANG
Syracuse New York

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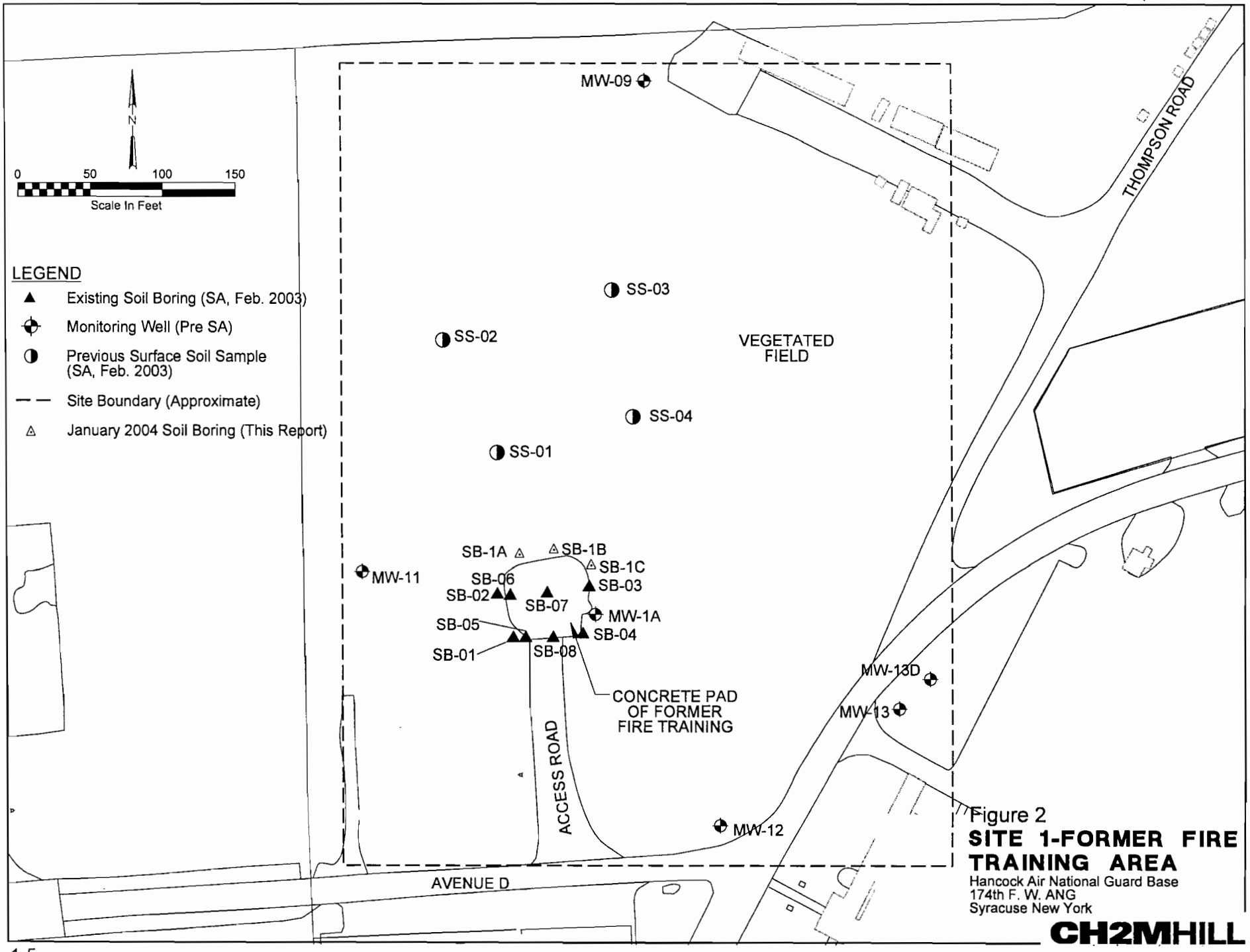

Figure 2
SITE 1-FORMER FIRE TRAINING AREA
Hancock Air National Guard Base
174th F. W. ANG
Syracuse New York

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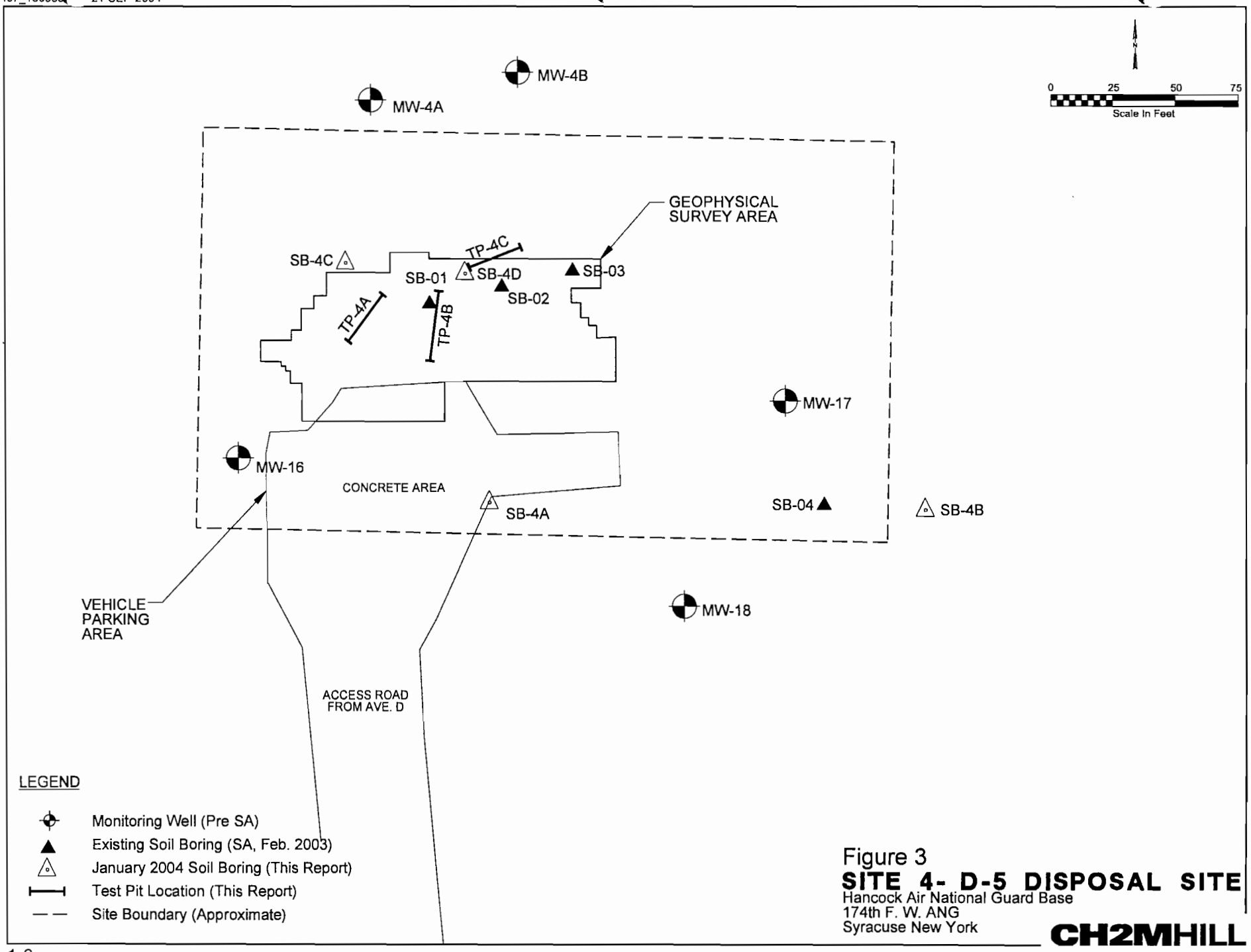

Figure 3
SITE 4- D-5 DISPOSAL SITE
Hancock Air National Guard Base
174th F. W. ANG
Syracuse New York

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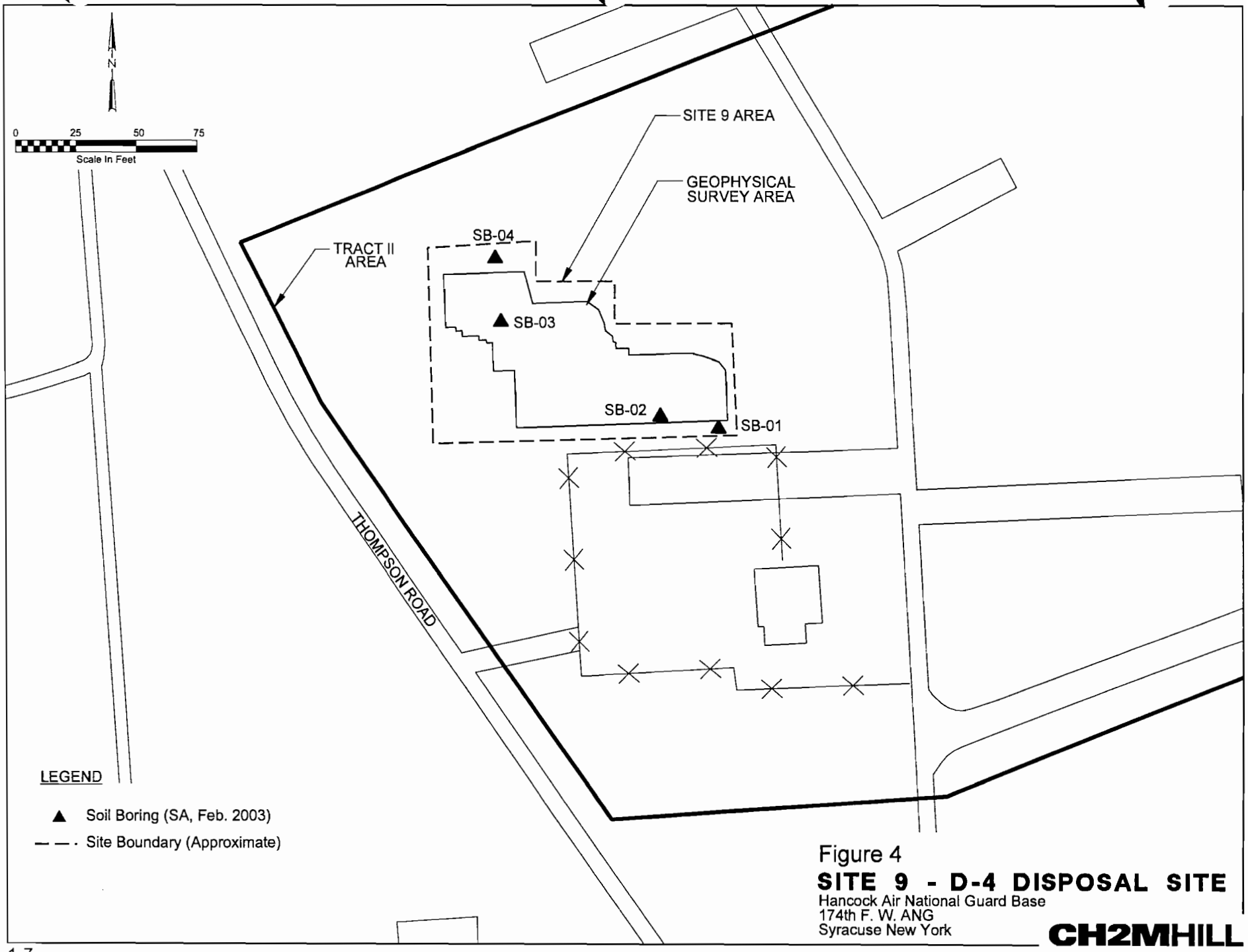

Figure 4

SITE 9 - D-4 DISPOSAL SITE

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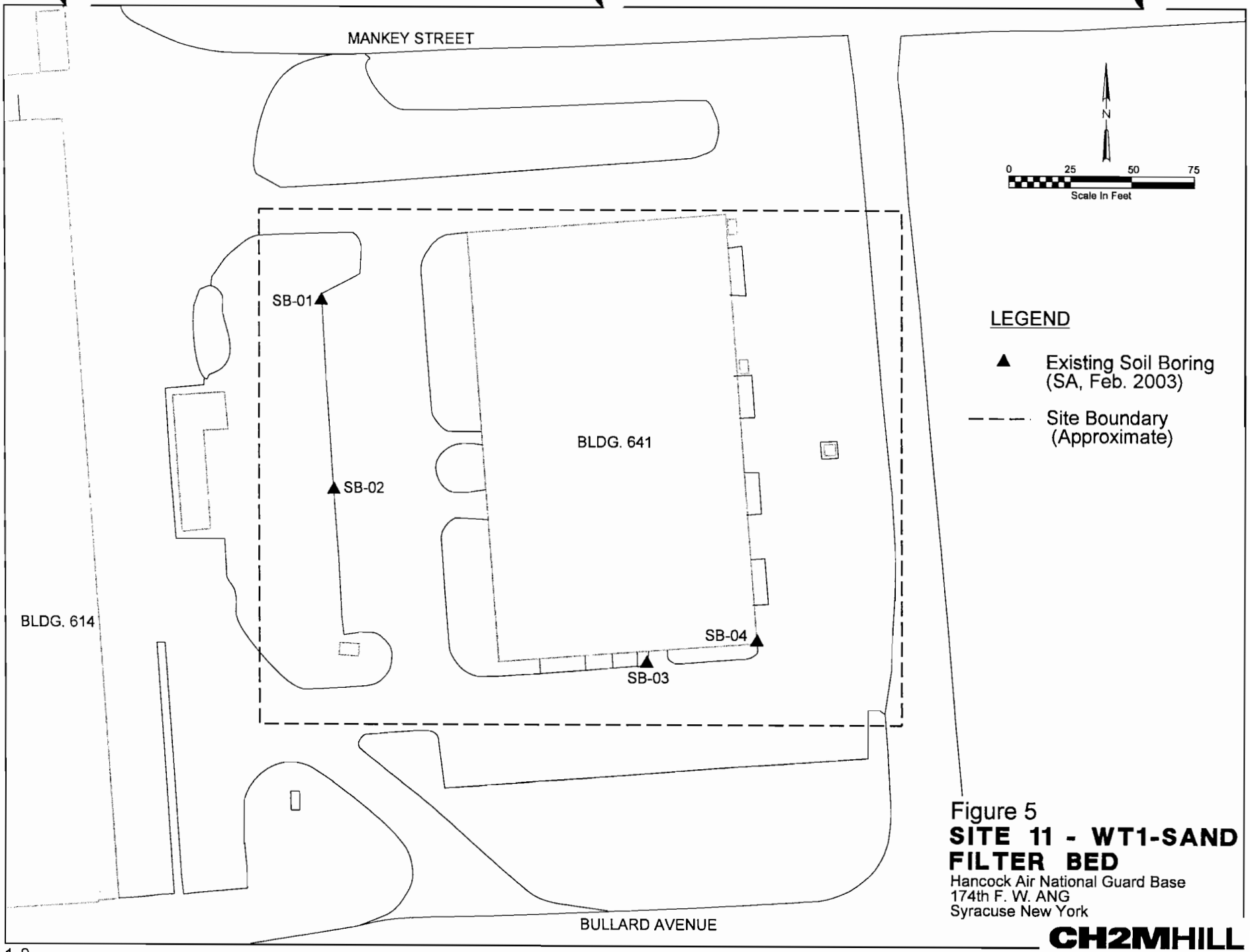

Figure 5
SITE 11 - WT1-SAND FILTER BED
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Syracuse New York

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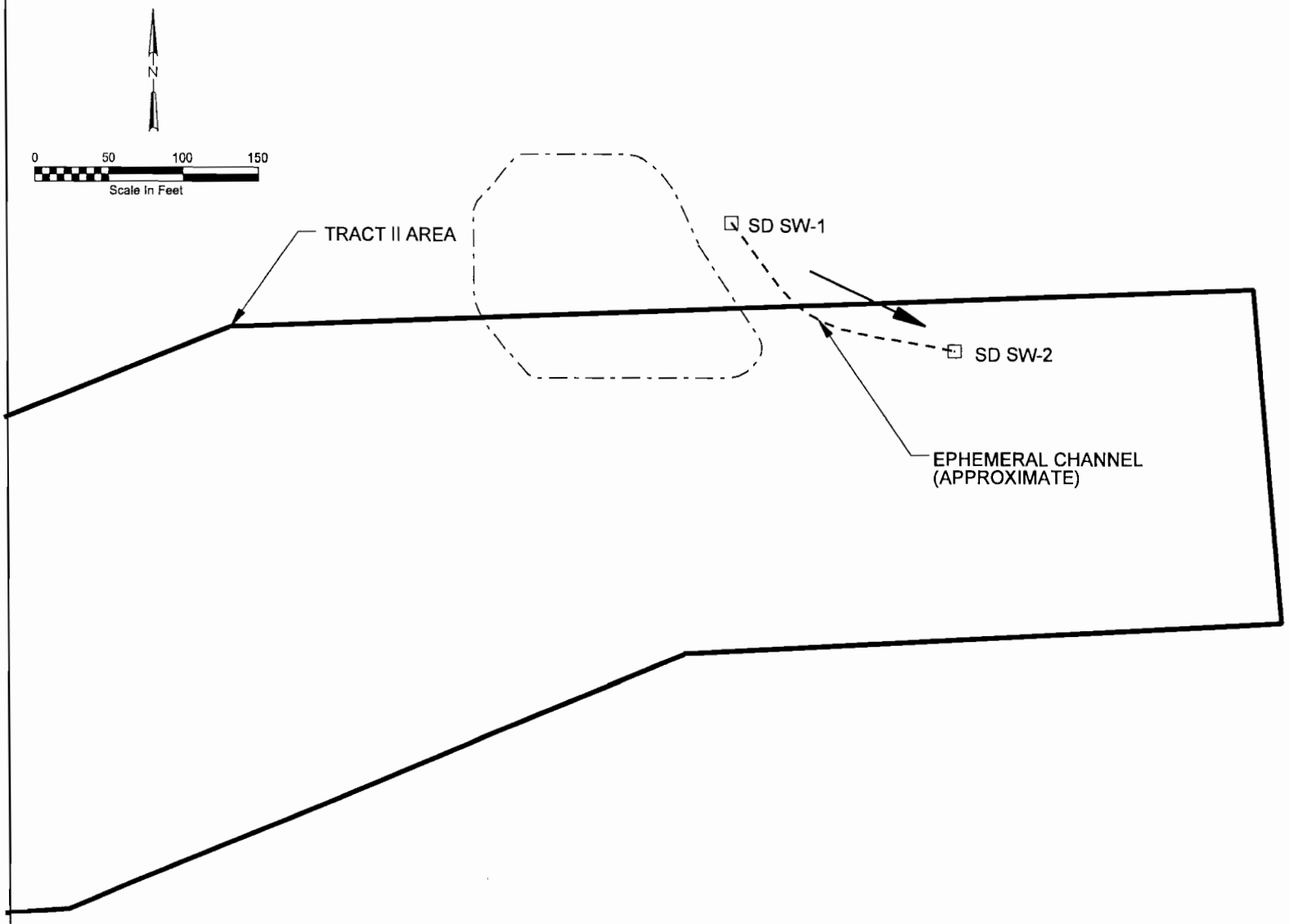

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- January 2004 Surface Water and Sediment Location
- Approximate Limits of D-3 Disposal Site
- Apparent Surface Water Flow Direction (Ephemeral)

Figure 6

AOC-P

Hancock Air National Guard Base
174th F. W. ANG
Syracuse New York

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2.0 Site Investigation Activities

CH2M HILL implemented the site investigation activities identified in the Work Plan (December 2003) with the support of ANG personnel, and various subcontractors. ANG personnel assisted with underground utility clearance, security clearance, facilitating communications at the ANG Base, providing access to the sites, selecting suitable areas to conduct background soil boring activities, and other logistical issues. SJB Services from Cortland, New York provided the subsurface drilling and test pit equipment and crews. RJ Rybinski, LS of Manlius, New York conducted the surveying of the sample locations and monitoring well elevations. Parratt-Wolff Labs, Inc. of East Syracuse, New York and STL Laboratories of Edison, New Jersey provided the geotechnical and analytical laboratory services, respectively. The activities described below were conducted in accordance with the NYSDEC-approved Work Plan (December 2003), including decontamination between sampling locations and sampling intervals, management of the investigation derived waste, adherence to the site-specific health and safety plan, and implementation of the quality assurance project plan.

2.1 Background Soil Borings

To establish background concentration of metals in soil, five on-site locations were selected to collect representative soil samples from three discrete depths. The on-site locations, selected with the support of ANG representatives, consisted of three locations on Tract III and two locations on Tract II (Figure 1). The locations were considered to be unaffected by current or historic base operations, were distributed across the site, and would have the same lithologic characteristics as the soil samples previously collected at the site.

At the selected locations denoted as SB-B1, SB-B2, SB-B3, SB-B4, and SB-B5, a soil boring was advanced using hollow-stem auger drilling methods with 2-inch inside-diameter augers. Split barrel samplers were advanced continuously at 2-ft intervals from the ground surface to the bottom of the boring. Soil samples retrieved from the samplers were screened with a photo-ionization detector (PID) to assess the presence of volatile organic compounds (VOCs). An on-site geologist recorded the PID screening results on a boring log along with a physical description of the soil sample. The borings were advanced to the first encountered groundwater, which ranged from 6 to 8 feet below grade. The soil boring logs are included in Appendix A.

Soil samples were collected from the background soil borings at three depth intervals. At a minimum, a soil sample was collected from the 0 to 2 inches below grade interval as specified in the Work Plan. The remaining subsurface soil samples were collected at various depth intervals distributed throughout the soil column to provide a suitable vertical distribution of soil samples.

The soil samples were collected in certified-clean containers, properly labeled, and placed in an ice filled cooler. Each soil sample was documented on a chain-of-custody form along with the desired analytical methods, and sent to the laboratory for analysis. In accordance

with the Work Plan, the soil samples were submitted for analysis of VOCs (EPA Method 8260B), SVOCs (EPA Method 8270C), and metals (EPA Method 6010B).

2.2 Site 1

Based on the characterization results in the SA Report (February 2003), additional activities were conducted at Site 1 to further assess the soil and groundwater quality in the area. These activities included the advancement of soil borings, installation of a groundwater monitoring well, and collection of soil and groundwater samples. The locations of the soil borings and monitoring well were specified in the Work Plan and were selected to fill identified data gaps in the SA Report.

Three soil borings, denoted as SB-1A, SB-1B, and SB-1C, were advanced using a hand auger and one soil boring (MW-1A) was advanced using a hollow-stem auger drilling rig with 4.25-inch inside diameter augers. Soil boring MW-1A was subsequently converted to a monitoring well. Soil samples were collected during boring advancement and screened with a PID. The PID readings were recorded on a boring log along with a physical description of the soil sample. A total of ten soil samples were collected from the four soil borings. The soil samples were collected in certified-clean containers, properly labeled, and placed in an ice filled cooler. Each soil sample was documented on a chain-of-custody form along with the desired analytical methods, and sent to laboratory for analysis. In accordance with the Work Plan, the soil samples were submitted for analysis of VOCs (EPA Method 8260B), SVOCs (EPA Method 8270C), and metals (EPA Method 6010B).

Soil boring MW-1A was advanced about 8 ft below the first encountered water to facilitate installation of a monitoring well in the borehole. During advancement, a Shelby tube sample was collected from the upper portion of the shallow aquifer and submitted for analysis of grain size, Atterberg limits, lithology, hydraulic conductivity, bulk (natural) soil density, specific gravity, porosity, and cation exchange. After reaching the target depth, a monitoring well, that consisted of 2 inch diameter PVC materials with a 10 foot section of 0.010-inch slotted well screen, was placed into the borehole. The well screen was positioned in the borehole to straddle the water table and a sand filter pack was installed around the monitoring well screen from the bottom of the borehole to about 2 feet above the top of the well screen. A bentonite-grout seal was then placed on top of the filter pack to within 2 feet of the ground surface. The monitoring well was completed with a stick-up outer-protective casing with a concrete pad and locking cap. A well construction diagram is included in Appendix A and the monitoring well specifications are provided below.

Monitoring Well Specifications

Well ID	Finished Well Depth (ft BGS)	Screen Interval (ft BGS)	Materials	Northing	Easting	Elevation (TOIC)
MW-1A	15	5 - 15	PVC	1131483.2650	630132.0579	400.37

Ft. BGS – Feet below ground surface

TOIC – Top of inner casing

Monitoring well MW-1A was developed to optimize long-term performance of sampling events, and to improve the hydraulic connection between the aquifer and the monitoring well screen assembly. Monitoring well development consisted of using a stainless-steel bailer attached to a dedicated polyethylene cord to remove water and sediment from the monitoring well. Development continued until each well yielded sediment-free water and field chemistry parameters (pH, specific conductance, and temperature) had stabilized.

Subsequent to development, a hydraulic conductivity test was performed on monitoring well MW-1A. Both rising and falling head tests were performed using a weighted slug, which consisted of a dedicated Teflon bailer filled with water. Prior to initiating the test, a static water level was measured and recorded, and a pressure transducer was placed near the bottom of the monitoring well. The pressure transducer was programmed to record water level measurements every 10 seconds using a data logger. The weighted slug was then inserted into the well, causing an initial rise in the water level, then a gradual fall constituting the falling head test. Once the water level returned to static conditions, a new test was started, and the slug was removed. This caused the water level to initially drop then gradually rise, constituting a rising head test. The data collected during this test is included in Appendix B.

A groundwater sample was collected from the newly installed monitoring well (MW-1A) and the four existing shallow monitoring wells (MW-09, MW-11, MW-12, and MW-13). The existing monitoring wells were installed prior to the SA Report. Together, these wells form an effective monitoring network around Site 1 to assess the groundwater quality related to historic site activities. A groundwater sample was not collected from deeper monitoring well MW-13D based on the strong upward hydraulic gradient (near artesian conditions) noted in the SA Report that would limit the potential downward vertical migration of groundwater at the site. As detailed in the NYSDEC-approved Work Plan (December 2003), groundwater samples were collected using the USEPA low flow method with 2-inch-diameter Grundfos pump and dedicated Teflon-lined polyethylene tubing. It is noted that the groundwater samples described in the SA Report were collected using the bailer method; which tend to provide turbid groundwater samples and artificially elevate the metals concentration of the sample. The low-flow sampling method was used during this investigation to minimize the sample turbidity. During this sampling event, groundwater samples exhibiting turbidity values above 50 Nephelometric Turbidity Units (NTUs) were also filtered in the field using a 0.45 micron in-line filter prior to metals analysis. The groundwater samples were collected in labeled containers, placed in an ice-filled cooler, and submitted for laboratory analysis of VOCs (EPA Method 8260B), SVOCs (EPA Method 8270C), and total (and dissolved) metals (EPA Method 6010B).

2.3 Site 4

Additional activities were conducted at Site 4 to further assess the soil and groundwater quality in the area and included the completion of test pits, advancement of soil borings, installation of a groundwater monitoring well, and collection of soil and groundwater samples. The locations of the soil borings and monitoring well were specified in the Work Plan and were selected to fill identified data gaps in the SA Report (February 2003).

Subsurface geophysical anomalies were identified at Site 4 during previous investigation activities. Three test pits, designated as TP-4A, TP-4B, and TP-4C, were excavated to assess the source of the geophysical anomalies (Figure 3). Each test pit was excavated using a conventional backhoe which removed the soil in 6-inch to 1-foot lifts and placed the soil adjacent to the test pit location. The excavated material was screened with a PID to assess the potential presence of VOCs. The soil was lithologically described and a soil sample was collected from three locations within each trench. As VOCs were not detected during PID screening, the soil samples were collected from the mid-point of each trench from evenly distributed depths. A total of 9 soil samples were collected from the three test pits. The soil samples were collected in certified-clean containers, properly labeled, and placed in an ice filled cooler. Each soil sample was documented on a chain-of-custody form along with the desired analytical methods, and sent to the laboratory for analysis. In accordance with the Work Plan, the soil samples were submitted for analysis of VOCs (EPA Method 8260B), SVOCs (EPA Method 8270C), and metals (EPA Method 6010B).

Each trench was excavated to the first encountered groundwater, which was about 6 feet below grade. The completed trenches were about 20 feet long, 3 feet wide, and six feet deep. During the excavation of test pit TP-4A, various automotive parts and other debris were uncovered including a muffler, rubber hoses, copper tubing, concrete, 55-gallon drum lid, and unidentified debris. Excavation TP-4B revealed similar debris including an empty 55-gallon drum. Test pit TP-4C contained automotive metallic and other debris including wires, a wet cell battery, bumper, tailpipe, and asphalt. Photographs taken during the trench excavation activities are included in Appendix C. After excavation and sampling was complete, the trenches were backfilled with the same excavated material.

Two soil borings, denoted as SB-4A and SB-4B, were advanced using a hand auger and four soil borings (SB-4C, SB-4D, MW-4A, and MW-4B) was advanced using a hollow-stem auger drilling rig with 4.25-inch inside diameter augers. Soil borings MW-4A and MW-4B were subsequently converted to monitoring wells. Soil samples were collected during boring advancement and screened with a PID. The PID readings were recorded on a boring log along with a physical description of the soil sample. A total of 16 soil samples were collected from the six soil borings. The soil samples were collected in certified-clean containers, properly labeled, and placed in an ice filled cooler. Each soil sample was documented on a chain-of-custody form along with the desired analytical methods, and sent to laboratory for analysis. In accordance with the Work Plan, the soil samples were submitted for analysis of VOCs (EPA Method 8260B), SVOCs (EPA Method 8270C), and metals (EPA Method 6010B).

Soil borings MW-4A and MW-4B were advanced about 8 ft below the first encountered water to facilitate installation of a monitoring well in the boreholes. During advancement, a Shelby tube sample was collected from the upper portion of the shallow aquifer in soil boring MW-4A and submitted for analysis of grain size, Atterberg limits, lithology, hydraulic conductivity, bulk (natural) soil density, specific gravity, porosity, and cation exchange. After reaching the target depth, a monitoring well, consisting of 2-inch diameter PVC materials with a 10-foot section of 0.010-inch slotted well screen, was placed into each borehole. The well screens were positioned in the boreholes to straddle the water table and a sand filter pack was installed around the monitoring well screen from the bottom of the borehole to about 2 feet above the top of the well screen. A bentonite-grout seal was then placed on top of the filter pack to within 2 feet of the ground surface. The monitoring wells

were completed with stick-up outer-protective casings with a concrete pad and locking cap. Well construction diagrams are included in Appendix A and the monitoring well specifications are provided below.

New Monitoring Well Specifications

Well ID	Finished Well Depth (ft BGS)	Screen Interval (ft BGS)	Materials	Northing	Easting	Elevation (TOIC)
MW-4A	14	4 - 14	PVC	1131744.9431	629169.7004	396.53
MW-4B	18	8 - 18	PVC	1131756.3042	629230.4076	396.49

Ft. BGS -- Feet below ground surface

TOIC – Top of inner casing

Monitoring wells MW-4A and MW-4B were developed to optimize long-term performance of sampling events, and to improve the hydraulic connection between the aquifer and the monitoring well screen assembly. Monitoring well development consisted of using a stainless-steel bailer attached to a dedicated polyethylene cord to remove water and sediment from the monitoring well. Development continued until each well yielded sediment-free water and field chemistry parameters (pH, specific conductance, and temperature) had stabilized.

Subsequent to development, a hydraulic conductivity test was performed on the monitoring wells. Both rising and falling head tests were performed using a weighted slug, which consisted of a dedicated Teflon bailer filled with water. Prior to initiating the test, a static water level was measured and recorded, and a pressure transducer was placed near the bottom of the monitoring well. The pressure transducer was programmed to record water level measurements every 10 seconds using a data logger. The weighted slug was then inserted into the well, causing an initial rise in the water level, then a gradual fall constituting the falling head test. Once the water level returned to static conditions, a new test was started, and the slug was removed. This caused the water level to initially drop then gradually rise, constituting a rising head test. The data collected during this test is included in Appendix B.

A groundwater sample was collected from the newly installed monitoring wells (MW-4A and MW-4B) and the 3 existing monitoring wells (MW-16, MW-17, and MW-18). Together, these wells form an effective monitoring network around Site 4 to assess the groundwater quality related to historical site activities. As detailed in the NYSDEC-approved Work Plan (December 2003), groundwater samples were collected using the USEPA low flow method to minimize the sample turbidity. During this sampling event, groundwater samples exibiting turbidity values above 50 Nephelometric Turbidity Units (NTUs) were also filtered in the field using a 0.45 micron in-line filter prior to metals analysis. The groundwater samples were collected in certified-clean labeled containers, placed in an ice-filled cooler, and submitted for laboratory analysis of VOCs (EPA Method 8260B), SVOCs (EPA Method 8270C), and total (and dissolved) metals (EPA Method 6010B).

2.4 Deviations

Field activities were executed in accordance with the work plan. No circumstances arose that warranted deviations.

3.0 Site Investigation Results

3.1 Analytical Results

A data validation effort was completed on the analytical data set received from the laboratory. The data validation effort was conducted in accordance with the QAPP (December 2003) and included a review of the data accuracy, precision, and completeness. A data validation memorandum (Appendix D) summarizes the data qualifiers added to the data and concludes that the data are of good quality and are acceptable as reported and qualified. Appendix E contains summary tables of the validated data set. Included on the summary tables are the validated analytical results presented in the SA Report. These data were included to provide a comprehensive view of the available analytical data from the ANG Base. The soil results for metals were compared to an established background standard (as described below). The VOC and SVOC analyses were compared to the NYSDEC Recommended Soil Cleanup Objective (RSCO). Groundwater results were compared to the NYSDEC Drinking Water Quality Standards (DWQS).

3.2 Geological and Hydrogeological Characterization

Shelby-tube soil samples collected from monitoring well borings MW-1A and MW-4A consist of dark yellowish brown, moderately to well-sorted silt and clay. Table 1 summarizes the results of the geotechnical analyses that were performed on soils collected from the upper portion of the aquifer at monitoring well locations MW-1A and MW-4A. Appendix F contains the complete geotechnical analyses results. As shown in Table 1, the characteristics of both samples are similar. The sample collected from MW-4A contained slightly more clay, and had a lower hydraulic conductivity and cation exchange capacity. This indicates that soils in the upper portion of the aquifer at Site 1 and Site 4 are consistent, suggesting that this portion of the aquifer can be considered as homogeneous.

TABLE 1
Geotechnical Evaluation Results

Parameter	MW-1A	MW-4A
Mean grain size	Silt-clay	Silt-clay
USCS Classification	ML	CL
Porosity	40.7%	40.7%
Hydraulic Conductivity	5.7×10^{-3} (feet/day)	6.9×10^{-4} (feet/day)
Cation Exchange Capacity	27.9 mequiv/100g	7.8 mequiv/100g
Dry Bulk Density	99.9	100.6
Wet Bulk Density	125.2	125.8
Specific Gravity	2.70	2.70

Interpretations of the hydraulic conductivity tests (Appendix B) using the Bouwer and Rice method (Bouwer and Rice, 1976) indicate that the monitoring wells at Site 4 (MW-4A and MW-4B) have similar hydraulic conductivity values to monitoring well MW-1A at Site 1. As shown in Table 2, hydraulic conductivity values for the Site 4 monitoring wells range from 0.52 to 1.36 ft/day for the rising head tests, and 1.24 to 1.59 ft/day for the falling head tests. At monitoring well MW-1A, the hydraulic conductivity for the rising head and falling head tests are 0.09 ft/day and 1.12 ft/day respectively. These data suggests that the hydraulic conductivity is relatively homogeneous across Sites 1 and 4, similar to the findings from the geotechnical data.

TABLE 2
Hydraulic Conductivity Test Results

Test	MW-1A	MW-4A	MW-4B
Rising Head (ft/day)	0.09	0.52	1.36
Falling Head (ft/day)	1.12	1.59	1.24

Groundwater elevation measurements of the water table aquifer were collected at Site 4 on January 12, 2004, and at Sites 1 and 4 during the February 3, 2004 groundwater sampling activities (Table 3).

TABLE 3
Depth to Groundwater Measurements

		January 12, 2004		February 3, 2004	
Monitoring Well	Measuring Point Elevation (feet AMSL)	Depth to Groundwater (ft)	Water Level Elevation (feet AMSL)	Depth to Groundwater (ft)	Water Level Elevation (feet AMSL)
MW-1A	400.37	NM	NM	11.58	388.79
MW-4A	396.53	3.67	392.86	3.87	392.66
MW-4B	396.49	4.06	392.43	3.55	392.94
MW-9	397.63	NM	NM	8.41	389.22
MW-11	400.10	NM	NM	10.25	389.85
MW-12	398.89	NM	NM	11.13	387.76
MW-13	398.77	NM	NM	11.61	387.16
MW-16	398.79	4.41	394.38	5.42	393.37
MW-17	398.19	4.97	393.22	5.46	392.73
MW-18	398.16	4.00	394.16	4.74	393.42

NM - Not Measured

AMSL – Above mean sea level

Groundwater elevations measured on February 3, 2004 as part of a groundwater sampling event were contoured on Figures 7, 8, and 9 for Site 1, Site 4, and the overall ANG Base, respectively. Groundwater flow at Site 1 (Figure 7) is to the east-southeast under a hydraulic gradient of about 0.007 ft/ft. At Site 4 (Figure 8), the groundwater flow direction is to the northeast-east under a hydraulic gradient of about 0.004 ft/ft. Overall, groundwater flow of the water table aquifer at the ANG Base (Figure 9) is generally to the east under an apparent hydraulic gradient of about 0.005 ft/ft (Figures 7, 8, and 9).

3.3 Background Soil Borings

A summary of the detected analytes from the background soil borings are summarized on Tables 5, 6, and 7 for VOCs, SVOCs and metals, respectively. To establish a background standard for metals concentrations in soil at Hancock Field, the soils metals data (Table 7) were evaluated in accordance with the NYSDEC Technical Guidance for Site Investigation and Remediation. Table 4 summarizes the site specific criteria for Hancock Field. For each metal on Table 4, the NYSDEC Recommended Soil Cleanup Objectives (RSCO), the highest concentrations detected in the January 2004 soil samples, and the established background standard for Hancock Field are presented. The background standard was established by selecting the highest concentration from the RSCO and the January 2004 soil samples for each metal. This established background standard for metals in soil will be used in this report to compare metals results in soil at investigated sites.

Appendix E contains a complete listing of subsurface soil results.

TABLE 4

Soil Cleanup Criteria For Metals

Analytes	NYSDEC Recommended Soil Cleanup Objectives (mg/Kg)	Highest Concentration from Site Investigation Background Soil Samples (mg/Kg)	Established Background Standard for Site Investigation (mg/Kg)
Aluminum	SB	10,600	10,600
Antimony	SB	ND	ND
Arsenic	7.5 or SB	5.3	7.5
Barium	300 or SB	67.6	300
Beryllium	0.16 or SB	0.54	0.54
Cadmium	1 or SB	0.21	1
Calcium	SB	51,900	52,000
Chromium	10 or SB	14.4	15
Cobalt	30 or SB	7.1	30
Copper	25 or SB	22.6	25
Iron	2000 or SB	17,900	17,900
Lead	SB	44.9	45
Magnesium	SB	15,400	15,400

TABLE 4

Soil Cleanup Criteria For Metals

Analytes	NYSDEC Recommended Soil Cleanup Objectives (mg/Kg)	Highest Concentration from Site Investigation Background Soil Samples (mg/Kg)	Established Background Standard for Site Investigation (mg/Kg)
Manganese	SB	640	640
Mercury	0.1	0.05	0.1
Nickel	13 or SB	17.5	17.5
Potassium	SB	922	922
Selenium	2 or SB	ND	2
Silver	SB	ND	ND
Sodium	SB	262	262
Thallium	SB	ND	ND
Vanadium	150 or SB	19.8	150
Zinc	20 or SB	49.2	50

ND - Not Detected
N/A - Not Analyzed
SB - Site Background

The VOC concentrations in the background soil samples were below the NRCO Standards (Table 5). As shown on Table 6, limited detections of SVOCs, specifically benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and dibenzo(a,h)anthracene, were noted above the RSCO standards in the five soil background samples collected from the surface (0 to 2-inch sample). Soil samples from greater depths are below standards. These data indicate that the SVOC-impacted soil is limited to the near-surface and suggest that these SVOC compounds represent a base-wide background condition.

3.4 Site 1

Soil

A summary of the analytical detections in soil are presented on Tables 8, 9, and 10 for VOC, SVOC, and metals analyses, respectively.

Two VOCs, xylene and toluene, were detected during the SA investigation above NYSDEC RSCO criteria in shallow subsurface soil samples SB-06 (4-8 ft) and SB-07 (0-2 ft and 4-8 ft) (Table 8). Soil samples collected from borings installed laterally around the SB-06 and SB-07 locations (Figure 2) did not contain VOCs at concentrations above the RSCO Standard.

These data indicate that the xylene and toluene detections in soil are limited in nature and extent.

The SVOCs benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and dibenzo(a,h)anthracene were detected at concentrations above the RSCO Standards in the shallow soil samples (0 to 2-inch samples) (Table 9). These compounds are also found in the shallow soils (0 to 2-inch) in the background soil borings and may represent a background condition at the ANG Base. The SVOCs phenol and benzo(a)pyrene were detected in soil samples SB-1C (5 ft depth) and MW-1A (3 ft), respectively, at concentrations exceeding the RSCO Standard. These exceedances are limited in nature and extent to the area immediately adjacent to the concrete pad.

The metals aluminum, arsenic, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, sodium, and zinc were detected at concentrations above the established background standard (Table 10). Several of the detections were slightly above the established standard. The distribution of the detected metals concentrations in soil is apparently random and is inconsistent with a source at or near the concrete pad area. The exceedances appear to be limited in areal extent and are considered to be isolated occurrences.

Groundwater

A summary of the analytical detections in groundwater are presented on Tables 11 and 12 for VOC and SVOC, respectively. Tables 13 and 14 summarized the total (unfiltered) and dissolved (filtered) analytical results for metals analysis of the groundwater samples.

A review of Tables 11 and 12 indicates there were no exceedances of VOCs or SVOCs detected in groundwater at Site 1. These data indicate that the isolated xylene and toluene exceedances in the soil are insufficient to impact groundwater at Site 1.

Groundwater samples obtained during the SA investigations were collected using bailers, which tends to provide highly turbid samples and these samples were not filtered prior to analysis (total metals). The groundwater sampling method employed during the Site Investigations was focused on reducing the turbidity of the samples submitted for total metals (unfiltered) using low-flow sampling methods. Also, filtered samples were collected during the sampling event to further assess the dissolved fraction of metals in groundwater. The total metals (unfiltered) results are summarized in Table 13. The analytical results demonstrate that the low-flow sampling method effectively reduced the metals concentrations in the unfiltered groundwater samples, suggesting that particles in the groundwater samples are likely resulting in the number of metals exceeding the groundwater quality standard. As such, the thirteen metals that exceed the groundwater standard (aluminum, arsenic, cadmium, chromium, cobalt, copper, iron, lead, magnesium, manganese, nickel, silver, and sodium) are not likely representative of the dissolved metals that could migrate in the groundwater.

Six metals exceeded the NYSDEC DWQS in the dissolved (filtered) groundwater samples collected from Site 1 monitoring wells (Table 14), and these are aluminum, iron, magnesium, manganese, nickel, and sodium. Comparing these filtered groundwater metals with the metals found in soil indicate that only magnesium and nickel were found to exceed the

standards for both the soil and groundwater samples. It is noted that the exceedances of magnesium and nickel in groundwater are from monitoring well MW-1A located near the concrete pad and in the hydraulically downgradient wells MW-12 and MW-13 (Figure 7).

3.5 Site 4

Soil

A summary of the analytical detections in soil are presented on Tables 15, 16, and 17 for VOC, SVOC, and metals analysis, respectively.

No VOCs were detected above NYSDEC RSCO criteria in soil samples collected from Site 4 (Table 15).

SVOCs, specifically benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and dibenzo(a,h)anthracene, were detected in the shallow soil samples (0 to 2-inch) at concentrations above the RSCO Standards in the shallow soil samples (Table 16). These compounds are also found in the shallow soils (0 to 2-inch) in the background soil borings and may represent a background condition at the ANG Base. In the shallow soil samples (0 - 2-inch), Indeno(1,2,3-cd)pyrene and Phenol were also detected at concentrations above the RSCO Standards. However, these specific SVOCs were also found in deeper soil samples in exceedance of the RSCO values, especially associated with the test pit locations.

In addition, other SVOCs were detected at concentrations that exceed the NYSDEC RSCOs, including dimethylphthalate and pyrene. These SVOC exceedances in soil are likely related to the debris that was found in the test pits. The extent of the SVOC exceedances in soil has not been delineated.

The metals beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, mercury, nickel, potassium, sodium, and zinc were detected at concentrations above the established background standard (Table 17). Several of the detections were slightly above the established standard. The distribution of the detected metals concentrations in soil is apparently random and are likely related to the occurrence of buried metal and debris encountered during the test pit activities. The exceedances appear to be limited in areal extent and are considered to be isolated occurrences.

Groundwater

A summary of the analytical detections in groundwater are presented on Tables 18 and 19 for VOC and SVOC, respectively. Tables 20 and 21 summarize the total (unfiltered) and dissolved (filtered) analytical results respectively for metals analysis of the groundwater samples.

A review of Tables 18 and 19 indicates there were no exceedances of the NYSDEC DWQS by VOCs or SVOCs detected in groundwater at Site 4. These data indicate that the SVOC exceedances in the soils are insufficient to impact groundwater at Site 4.

As discussed under Site 1, groundwater samples from the SA investigations were collected using a bailer, which tends to provide highly turbid samples and these samples were not

filtered prior to analysis (total metals). The groundwater sampling method employed during the Site Investigations was focused on reducing the turbidity of the samples submitted for total metals (unfiltered) using low-flow sampling methods. Also, filtered samples were collected during the sampling event to further assess the dissolved fraction of metals in groundwater. The total metals (unfiltered) results are summarized in Table 20. The analytical results demonstrate that the low-flow sampling method effectively reduced the detected metals concentrations in the unfiltered groundwater samples, suggesting that particles in the groundwater samples are likely causing the exceedances of the metals standards. As such, the fourteen metals that exceed the groundwater standard (aluminum, antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, and nickel) are not likely representative of the dissolved metals that could migrate in the groundwater.

Two metals exceeded the NYSDEC DWQS in the dissolved (filtered) groundwater samples collected from Site 4 monitoring wells, and these are iron and manganese (Table 21). Comparing these filtered groundwater metals with the metals found in soil indicate that iron and manganese were found to exceed the standards for both the soil and groundwater samples. It is noted that the iron and manganese exceedances in groundwater are from the upgradient monitoring well MW-18 (Figure 8).

3.6 Site 9

Soil

Based on the information from the SA Report, a summary of the analytical detections in soil are presented on Tables 22 and 23 for VOC and metals analysis, respectively. SVOCs were not detected in the soil samples collected from Site 9.

At Site 9, xylene was detected above the NYSDEC RSCO criteria in soil boring SB-01 at a depth interval of 4-8 feet (Table 22). There were no exceedances of VOCs detected in deeper intervals at SB-01, and there were no exceedances of VOCs in soil samples collected from remaining soil borings SB-02, SB-03, and SB-04. This indicates that xylene contamination in the shallow soil around soil boring SB-01 is limited (Figure 4).

Exceedances of metals were only detected in soil borings SB-01, SB-02, and SB-03, at depths ranging from 2 to 12 feet below grade (Table 23). The specific metals that exceeded the established background standard are arsenic, cadmium, calcium, cobalt, copper, iron, magnesium, manganese, mercury, and sodium. There were no exceedances of metals in the remaining soil boring SB-04, suggesting that metals in soils near SB-01, SB-02, and SB-03 are limited (Figure 4).

Groundwater

Based on the information contained in the SA Report, VOCs and SVOCs met the NYSDEC DWQC, suggesting that the xylene concentrations in soil are not impacting the groundwater. Metals analysis conducted for the SA Report were previously considered misleading due to the highly turbid samples collected from temporary well points. Installation and sampling of monitoring wells to collect representative groundwater

samples from this site was not identified as a data gap by the NYSDEC and was not included as part of this Site Investigation.

3.7 Site 11

Soil

Based on the information from the SA Report, a summary of the analytical detections in soil are presented on Tables 24 and 25 for VOC and metals analysis, respectively. SVOCs were not detected in the soil samples collected from Site 11.

At Site 11, xylene was detected at concentrations below the NYSDEC RSCO criteria in the collected soil samples (Table 24). As such, the soils at Site 11 meet the regulatory criteria.

Aluminum, cadmium, chromium, cobalt, iron, nickel, potassium, and sodium were detected in soils at concentrations exceeding the established background standard (Table 25). A review of the data indicate that the exceedances are slightly above criteria.

Groundwater

Based on the information contained in the SA Report, the detected VOC and SVOC concentrations were below the NYSDEC DWQC. Metals analysis conducted for the SA Report were previously considered misleading due to the highly turbid samples collected from temporary well points. Installation and sampling of monitoring wells to collect representative groundwater samples from this site was not identified as a data gap by the NYSDEC and was not included as part of this Site Investigation.

3.8 AOC-P

Sediment

A summary of the analytical detections in sediments are presented on Tables 26, 27, and 28 for VOC, SVOCs, and metals analyses, respectively.

A review of Tables 26 and 27 indicates that detected VOCs and SVOCs were below the NYSDEC RSCO criteria.

Arsenic, cadimum, cobalt, manganese, mercury, sodium, and zinc were detected in sediments at concentrations exceeding the established criteria (Table 28). A review of the data indicate that the exceeded aresnic and zinc are slightly above criteria and that the exceedances are of limited in extent.

Surface Water

A summary of the analytical detections in surface water are presented on Table 29 for total metals (unfiltered). VOCs and SVOCs were not detected in the surface water samples (Appendix E).

The metals in surface water that exceeded the NYSDEC DWQS are aluminum, iron, magnesium, and manganese (Table 29). It is noted that the exceedances were in both

surface water samples collected (upstream and downstream locations) suggesting that the detections are representative of background (upgradient) conditions. Also, the arsenic and zinc exceedances noted in the sediment samples are not adversely affecting the surface water quality.

Table 5
Summary of VOCs Detected In Soil
Background Soil Borings
Air National Guard - Hancock Field

Sample ID		1,2-Dichloropropane	Acetone	Bromoform	Ethylbenzene	Toluene	Trichloroethene	Xylene (Total)
	Units	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Soil Borings	*Standard	NS	200	NS	5500	1500	700	1200
SB-B1 0.15 ft		1U	88J	4.2U	1.0 J	1.0 J	1.0 J	6
SB-B1 3 ft		1.1UJ	67J	4.4UJ	4.4UJ	5.5UJ	1.2 J	3.1 J
SB-B1 9 ft		1.2U	28 J	4.7U	0.5 J	1.3 J	1.9	2.3 J
SB-B2 0.15 ft		1.2U	140 J	4.6U	0.8 J	1.5 J	1.5	3.8 J
SB-B2 3 ft		1.1	20 J	4.3U	0.4 J	1.6 J	1.2	2.2 J
SB-B2 5 ft		1.2U	24 J	4.6U	0.4 J	1.7J	1.7	2.2 J
SB-B3 0.15 ft		1.2U	64 J	4.6U	0.5 J	1.9 J	1.4	1.9 J
SB-B3 3 ft		1.2U	38J	4.8U	0.7 J	1.8 J	2.2	3.0 J
SB-B3 5 ft		1.2U	29J	5U	0.6 J	2.0 J	2.1	2.9 J
SB-B4 0.15 ft		1.2U	27 J	4.8U	4.8U	2.1 J	1.4	6U
SB-B4 3 ft		1.2U	20J	4.7U	4.7U	2.0 J	1.5	5.9U
SB-B4 7 ft		1.1U	45J	2.0 J	0.6 J	2.1 J	1.6	2.7 J
SB-B5 0.15 ft		1.2U	31J	4.8U	4.8U	6.1U	1.1 J	6.1U
SB-B5 3 ft		1.2U	40J	4.8U	0.5 J	2.1 J	2.1	3.0 J
SB-B5 5 ft		1.2U	43J	5U	0.5 J	2.3 J	2.2	3.1 J

J - Estimated value
U - Compound not detected, reporting limit shown
UJ - Undetected due and biased low due to QA/QC deficiencies, reporting limit shown
R - Result rejected due to serious deficiencies in analysis. The presence of absence of the analyte cannot be verified.

* - NYSDEC Recommended Soil Cleanup Objective (ppb)

Table 6
Summary of SVOCs Detected In Soil
Background Soil Borings
Air National Guard - Hancock Field

Soil Boring Number and Depth		Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Pyrene
	Standard*	224	61	1100	1100	400	14	3200	50000
Current Site Investigation	SB-B1 0.15 ft	2400	2200	1700	2300	2600	330	1100	4600
	SB-B1 3 ft	39U	39U	8.2 J	12 J	390U	39U	39U	390U
	SB-B1 9 ft	40U	40U	40U	40U	400U	40U	40U	400U
	SB-B2 0.15 ft	230	220	140	220	260 J	39	120	420
	SB-B2 3 ft	38U	38U	38U	38U	380U	38U	38U	380U
	SB-B2 5 ft	40U	40U	40U	40U	400U	40U	40U	400U
	SB-B3 0.15 ft	180	180	130	190	190 J	41U	85	310 J
	SB-B3 3 ft	40U	40U	40U	40U	400U	40U	40U	400U
	SB-B3 5 ft	43U	43U	43U	43U	430U	43U	43U	430U
	SB-B4 0.15 ft	81	89	78	100	110 J	40U	49	160 J
	SB-B4 3 ft	24 J	41U	41U	41U	33 J	41U	41U	48 J
	SB-B4 7 ft	37U	37U	37U	37U	370U	37U	37U	370U
	SB-B5 0.15 ft	160	210	170	210	220 J	40U	96	320 J
	SB-B5 3 ft	40U	40U	40U	40U	400U	40U	40U	400U
	SB-B5 5 ft	44U	44U	44U	44U	440U	44U	44U	440U

Units are in ug/kg

B - Detected in laboratory blanks
J - Estimated value
U - Compound not detected. Reporting limit shown
UJ - Undetected and biased low due to QA/QC deficiencies. Reporting limit shown
*Standard - NYSDEC Recommended Soil Cleanup Objective
Exceeds NYSDEC Recommended Soil Cleanup Objective

Table 7
Summary of Metals Detected in Soil
Background Soil Borings
Air National Guard - Hancock Field

Soil Boring Number and Depth		Aluminum	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Sodium	Vanadium	Zinc
	*Standard	10,600	7.5	300	0.54	1.0	52,000	15	30	25	17,900	45	15,400	640	0.1	17.5	922	262	150	50
Current Site Investigation	SB-B1 0.15 ft	8920J	4.1	61.1	0.46 B	0.21 B	22500	12.8	6.7 B	15.5	16000J	44.9	4160J	640	0.02UJ	12.2	604 B	95.6U	16.9	49.2
	SB-B1 3 ft	6760J	2.6	24.4 B	0.21B	0.094U	1090 B	6.8	4.9 B	4.5 B	9820J	4.9	1170J	369	0.02UJ	7.9 B	290 B	93.1U	11.4	28.7
	SB-B1 9 ft	3980J	2.8	12.3 B	0.24 B	0.097U	754 B	5.6	4.5 B	19.9	10000J	3.6	1210J	277	0.02UJ	6.8 B	435 B	95.8U	9.0 B	17.8
	SB-B2 0.15 ft	5570J	5.3	53	0.28 B	0.093U	35800	7.3	5.8 B	22	14500J	8.9	7690J	619	0.019UJ	9.5	496 B	111 B	11.5 B	33.9
	SB-B2 3 ft	3860J	4.4	23.7 B	0.22 B	0.091U	47300	6.7	5.1 B	22.6	11900J	3.6	11100J	397	0.019UJ	9.5	490 B	89.8U	8.2 B	24.2
	SB-B2 5 ft	2600J	1.7	12.2 B	0.13 B	0.097U	26500	4.2	3.1 B	9.3	7050J	2.7	7360J	240	0.02UJ	6.1 B	397 B	95.8U	6.1 B	15.1
	SB-B3 0.15 ft	7550J	4.3	41.7 B	0.32 B	0.097U	4990	9.6	4.9 B	12.4	12400J	12.4	2810J	278	0.05J	10.7	552 B	96.3U	14.4	35.4
	SB-B3 3 ft	10600J	3.6	59.7	0.54	0.095U	1570	14.1	7.0 B	17.6	17900J	5.6	2990J	344	0.02UJ	15.7	736 B	94.3U	19.8	32.3
	SB-B3 5 ft	6250J	3.4	31.4 B	0.30 B	0.1U	13200	9.4	6.4 B	13.8	14400J	5.2	5830J	419	0.022UJ	13.1	588 B	120 B	14.7	32.5
	SB-B4 0.15 ft	5600J	2.9	29.1 B	0.28 B	0.096U	28300	7.5	4.4 B	12.2	10600J	10.6	5730J	273	0.02UJ	9.1 B	415 B	262 B	11.8 B	31.2
	SB-B4 3 ft	4560J	2.2	26.0 B	0.18 B	0.097U	5930	6.5	3.2 B	7.1	9820J	9	2530J	188	0.02UJ	6.5 B	334 B	96.3U	11.4 B	18.4
	SB-B4 7 ft	3890J	3.4	39.7 B	0.17 B	0.09U	51900	6.4	6.4 B	18.7	11400J	3.8	15400J	411	0.019UJ	11.5	762 B	111 B	8.4 B	22.2
	SB-B5 0.15 ft	4200J	2.7	23.2 B	0.13 B	0.12 B	21100	5.6	2.2 B	9.7	6940J	14.6	2440J	137	0.02UJ	5.3 B	388 B	96.1U	8.9 B	30.5
	SB-B5 3 ft	3780J	1.5	10.0 B	0.13 B	0.097U	360 B	3.5	2.4 B	5.0 B	4740J	2.1	938 J	58.9	0.02UJ	4.6 B	204 B	95.6U	5.1 B	11.6
	SB-B5 5 ft	9890J	2.6	67.6	0.45 B	0.11U	6280	14.4	7.1 B	17.7	16900J	5.9	3860J	339	0.022UJ	17.5	922 B	123 B	18.4	36.1

Units are in mg/kg

B - Detected in laboratory blanks
J - Estimated value
U - Compound not detected. Reporting limit shown
UJ - Undetected and biased low due to QA/QC deficiencies. Reporting limit shown
NS - No standard
*Standard - Established Background Standard (mg/kg)
Exceeds established background standard

Table 8
Summary of VOCs Detected in Soil
Site 1 Soil Borings
Air National Guard - Hancock Field

Soil Boring Number and Depth		2-Butanone	Acetone	Benzene	cis-1,2-Dichloroethene	Ethylbenzene	Xylenes (total)	Styrene	Toluene
Standard*		200	200	60	NS	5500	1200	NS	1500
Previous SA Report	SS-01	NA	NA	NA	NA	37U	173	37U	149
	SS-02	NA	NA	NA	NA	37U	89J	37U	37U
	SS-03	NA	NA	NA	NA	37U	37U	37U	37U
	SS-04	NA	NA	NA	NA	37U	37U	37U	37U
	SS-11	NA	NA	NA	NA	37U	150	<37	81J
	SB-01 0-2 ft	NA	NA	NA	NA	281	568	30U	54
	SB-02 0-2 ft	NA	NA	NA	NA	353	1057	220	69
	SB-03 0-2 ft	NA	NA	NA	NA	374	30U	30U	30U
	SB-04 0-2 ft	NA	NA	NA	NA	30U	30U	30U	30U
	SB-05 0-2 ft	NA	NA	NA	NA	207	405	49	61
	SB-05 8-10 ft	NA	NA	NA	NA	30U	242	30U	30U
	SB-05 10-12 ft	NA	NA	NA	NA	30U	30U	30U	30U
	SB-06 0-2 ft	NA	NA	NA	NA	30U	80	30U	30U
	SB-06 4-8 ft	NA	NA	NA	NA	30U	3594	2640	538
	SB-06 8-10 ft	NA	NA	NA	NA	30U	30U	64	30U
	SB-07 0-2 ft	NA	NA	NA	NA	566	2579	819	155
	SB-07 4-8 ft	NA	NA	NA	NA	5500	1835	7000	4900
	SB-07 8-10 ft	NA	NA	NA	NA	269	1112	305	30U
	SB-08 0-2 ft	NA	NA	NA	NA	30U	30U	30U	30U
	SB-08 6-8 ft	NA	NA	NA	NA	30U	30U	30U	30U
	SB-08 8-10 ft	NA	NA	NA	NA	30U	30U	30U	30U
Current Site Investigation	SB-1A 0.15 ft	7R	7R	1.4U	7U	5.6U	7U	7U	7U
	SB-1A 4 ft	19J	6.3U	1.3U	6.3U	5.1U	6.3U	6.3U	6.3U
	SB-1B 0.15 ft	7.2R	74J	1.4UJ	7.2UJ	5.7UJ	7.2UJ	7.2UJ	7.2UJ
	SB-1B 4 ft	6.5R	64	1.3U	6.5U	5.2U	6.5U	6.5U	6.5U
	SB-1C 0.15 ft	6.7R	74	1.3U	6.7U	5.4U	6.7U	6.7U	6.7U
	SB-1C 2 ft	14J	150	1.2U	6.2U	4.9U	6.2U	6.2U	6.2U
	SB-1C 5 ft	5.9R	87J	1.2UJ	5.9UJ	4.7UJ	5.9UJ	5.9UJ	5.9UJ
	MW-1A 0.15 ft	6.3R	22J	1.3U	6.3U	5U	6.3U	6.3U	6.3U
	MW-1A 0.15 ft	6.4R	84	1.3U	6.4U	5.1U	6.4U	6.4U	6.4U
	MW-1A 3 ft	14J	65	1.3	1.0 J	4.6U	5.8U	5.8U	1.2 J
	MW-1A 8 ft	11J	6.1U	1.2U	6.1U	4.9U	6.1U	6.1U	6.1U

Units are in ug/kg

J - Estimated value
U - Compound not detected. Reporting limit shown
UJ - Undetected and biased low due to QA/QC deficiencies. Reporting limit shown
NA - Data not available
NS - No standard
R - Result rejected due to deficiencies in analysis. The presence or absence of the analyte cannot be verified.
*Standard - NYSDEC Recommended Soil Cleanup Objective
Exceeds NYSDEC Recommended Soil Cleanup Objective

Table 9
Summary of SVOCs Detected in Soil
Site 1 Soil Borings
Air National Guard - Hancock Field

Soil Boring Number and Depth		Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Phenol	Pyrene
Standard*		224	61	1100	1100	400	14	NS	3200	30	50000
Previous SA Report Borings	SS-01	NA	NA	NA	NA	NA	NA	500U	NA	NA	500 UJ
	SS-02	NA	NA	NA	NA	NA	NA	5,400 J	NA	NA	5,400J
	SS-03	NA	NA	NA	NA	NA	NA	460 UJ	NA	NA	460 UJ
	SS-04	NA	NA	NA	NA	NA	NA	480 UJ	NA	NA	480 UJ
	SB-02 0-2 ft	NA	NA	NA	NA	NA	NA	1370	NA	NA	NA
Current Site Investigation Borings	SB-1A 0.15 ft	250	240	230	310	310 J	43 J	520	180	490U	420 J
	SB-1A 4 ft	43U	43U	43U	43U	430U	43U	15 J	43U	430U	12 J
	SB-1B 0.15 ft	850	740	680	850	910	160	1700	430	500U	1400
	SB-1B 4 ft.	1700U	1700U	1700U	1700U	1700U	1700U	1700U	1700U	430U	1700U
	SB-1C 0.15 ft	420	470	500	500	540	87	880	380	460U	840
	SB-1C 2 ft	13 J	16 J	14 J	18 J	17 J	42U	30 J	42U	420U	28 J
	SB-1C 5 ft	9.6 J	39UJ	39UJ	39UJ	390UJ	39UJ	20 J	39UJ	120 J	26 J
	MW-1A 0.15 ft	1100	1100	810	1000	1200	210	2000	830	440U	2200
	MW-1A 0.15 ft	1800	1500	1100	1700	1800	270	3000	860	430U	2700
	MW-1A 3 ft	66	69	64	87	100 J	40U	180 J	47	400U	160 J
	MW-1A 8ft	42U	42U	42U	42U	420U	42U	420U	42U	420U	420U

Units are in ug/kg

J - Estimated value
U - Compound not detected. Reporting limit shown
UJ - Undetected and biased low due to QA/QC deficiencies. Reporting limit shown
NA - Data not available
NS - No standard
*Standard - NYSDEC Recommended Soil Cleanup Objective
Exceeds NYSDEC Recommended Soil Cleanup Objective

Table 10
Summary of Total Metals Detected in Soil
Site 1 Soil Borings
Air National Guard - Hancock Field

Soil Boring Number and Depth		Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Sodium	Thallium	Vanadium	Zinc
	*Standard	10,600	NS	7.5	300	0.54	1.0	52,000	15	30	25	17,900	45	15,400	640	0.1	17.5	922	262	NS	150	50
Previous SA Report	SS-01	10,500	<43	4J	110	0.43	13.3 J	5200	25	54	93	16,400	340J	2,500	630J	0.24J	28	980J	400J	5.6	<43	330
	SS-02	7,800	<41	7.3	54	0.40	3.4J	7200	16	43	19	12,800	42J	3,500	310J	<0.1	24	740J	420J	<0.4	<41	57
	SS-03	9,300	<38	4.4	43	0.35	3.2J	2400	15	54	13.1	16,200	17J	2,100	490J	<0.1	22	610J	400J	<0.5	<38	46
	SS-04	11,000	<41	10	99	0.83	11.1J	1600	33	80	119	22,900	39J	4,900	240J	<0.1	39	1,400J	500J	<0.5	<41	97
	SS-11	10,100	<45	7.3J	112	0.30	12.2J	5100	26	49	77	15,900	380J	2,500	620J	<0.1	25	880J	450J	3.5	<45	290
	SB-01 0-2 ft	7100	<35	8.7	<35	0.21	1.9	900	13	34	8.9	9600	<12	2200	100	<0.1	18	570	340	<0.4	<35	26
	SB-02 0-2 ft	5300	31	3.8	<31	0.26	2	19800	10	33	17	10000	<10.4	2900	220	<0.1	18	760	350	0.4	<31	26
	SB-03 0-2 ft	4000	<34	8	<34	0.38	2.7	50000	10.3	36	29	10900	<11	7500	400	<0.1	21	1200	460	<0.4	<34	32
	SB-04 0-2 ft	3600	<30	4.2	<30	0.38	2.2	26000	9.1	32	20	9700	<9.9	4600	374	<0.1	19	1100	300	<0.4	<30	23
	SB-05 0-2 ft	16700	<31	9.6	77	0.68	3.6	1000	30	65	18	20200	<10.1	3900	250	<0.1	29	1100	300	<0.4	35	52
	SB-05 8-10 ft	5100	<39	2.3	<39	0.33	2.5	15600	13	42	14	12600	<13	9100	1800	<0.1	25	820	530	<0.4	<39	31
	SB-05 10-12 ft	4600	<35	2.5	<35	0.42	2.5	51800	13	31	15	9400	<11.5	16900	400	<0.1	24	870	420	<0.4	<35	30
	SB-06 0-2 ft	18300	<34	6.3	146	1.18	5.7	2700	33	89	28	26800	13	5400	660	<0.1	44	1900	380	<0.4	42	67
	SB-06 4-8 ft	2400	<31	2.5	<31	0.28	1.8	41400	8.1	28	10.5	6700	<10.2	6400	310	<0.1	16	640	250	4.5	<31	14
	SB-06 8-10 ft	6200	<32	2.6	<32	0.51	3J	60000	15	42	17	11900	<10.6 UJ	11100	405J	<0.1	25	1100J	390J	<0.4	<32	35
	SB-07 0-2 ft	10800	<33	0.48	40	0.20	2.7J	1800	15	38	9.2	12900	<11 UJ	1900	102J	<0.1	17	760J	260J	<0.4	<33	35
	SB-07 4-8 ft	6200	<33	1.6	<33	0.44	2.6J	37800J	15	39	15	11800	13 J	17100J	590J	<0.1	24	1500J	360J	4.1J	<33	32
	SB-07 8-10 ft	5000	<31	2.7	<31	0.44	3.2J	64600	13	34	17	10900	<10.1 UJ	13400	540J	<0.1	22	1100J	310J	3	<31	29
	SB-08 0-2 ft	8700	<28	2.8	51	0.31	2.4J	9100	13	38	13	10800	13J	2600	130J	<0.1	19	720J	320J	<0.4	<28	33
	SB-08 6-8 ft	8300	<35	9.1	54	0.59	2.8J	10100	19	55	23	16900	<11.5UJ	3900	470J	<0.1	28	1000J	430J	5.2	<35	42
	SB-08 8-10 ft	8500	<33	1.8	45	0.37	2.9J	2800	18	45	15	14900	<11.3UJ	2600	380J	<0.1	22	1200J	410J	<0.4	<33	33
Current Site investigation	SB-1A 0.15 ft	6890	1.1U	3.6	129	0.29 B	1.5	18200	16.2	5.3 B	29.2	12800	74.9	5050	529	0.024U	10.1 B	794 B	105U	1.3U	14.2 B	78.4
	SB-1A 4 ft	18700	1U	5.2 B	143	0.92	0.1U	6830	25.6	12.4 B	23.4	28700	11.8	5580	547	0.03 B	27.4	1350	93.9U	1.1U	31.1	56.6
	SB-1B 0.15 ft	6830	1.2U	3.5	144	0.33 B	0.76 B	18200	12.9	5.6B	21.1	15900	36.6	4080	459	0.025U	10.8 B	728 B	110U	1.3U	15.3	59.9
	SB-1B 4 ft	17500	1U	2.1 B	114	0.65	0.1U	2990	22.6	7.9 B	18.4	18300	9.7	4060	189	0.03 B	21.2	1100 B	93.8U	1.1U	28.3	55.2
	SB-1C 0.15 ft	5390	1.1U	2.8	102	0.26 B	0.33 B	28100	10.3	5.3 B	17.2	13100	26.8	12500	419	0.023U	11.3	741 B	100U	1.2U	12.1 B	48.3
	SB-1C 2 ft	12700	0.98U	6.0 B	97.6	0.69	0.1U	6390	19.1	9.4 B	19.7	24700	7.9	4110	562	0.03 B	21.6	798 B	90.7U	1.1U	26.5	43.2
	SB-1C 5 ft	2880	0.92U	3.9 B	21.9 B	0.18 B	0.094U	34200	4.1	5.4 B	16.6	8490	6.3	5710	274	0.02U	8.5 B	574 B	84.9U	1U	5.3 B	19.3
	MW-1A 0.15 ft	6910	1U	2.9	77.9	0.33 B	0.39 B	24000	10.8	5.7 B	16.8	14100	28	7820	468	0.022U	12.5	713 B	95.9U	1.2U	15.3	50.3
	MW-1A 3 ft	6190	0.93U	5.0 B	29.5 B	0.26 B	0.095U	14600	6.9	4.9 B	17.5	12900	5.2	2940	353	0.04 B	8.8 B	554 B	86U	1U	11.0 B	24.8
	MW-1A 8 ft	6150	0.98U	2.5 B	27.1 B	0.30 B	0.1U	2100	10.2	4.9 B	13	11400	5.4	2200	118	0.021U	13.5	442B	90.5U	1.1U	13.4	30.2

Units are in mg/kg

B - Detected in laboratory blanks
J - Estimated value
U - Compound not detected, reporting limit shown
UJ - Undetected due and biased low due to QA/QC deficiencies, reporting limit shown
NA - Data not available
NS - No standard
*Standard - ANG Hancock Site-Specific Standard
Exceeds site specific background standard.

Table 11
Summary of VOCs Detected in Groundwater
Site 1 Monitoring Wells
Air National Guard - Hancock Field

Monitoring Well Number		2-Butanone	Acetone	Benzene	cis-1,2-Dichloroethene	Ethylbenzene	Xylenes (total)	Styrene	Toluene
Standard*		50	50	0.7	NS	5	5	NS	5
Current Site Investigation	MW-1A	5R	5U	1U	9.5	4U	5U	5U	5U
	MW-09	5R	5U	1U	5U	4U	5U	5U	5U
	MW-11	5R	5U	1U	5U	4U	5U	5U	5U
	MW-12	5R	5U	1U	5U	4U	5U	5U	5U
	MW-13	5R	5U	1U	5U	4U	5U	5U	5U

Units are in ug/L

J - Estimated value
U - Compound not detected, reporting limit shown
UJ - Undetected due and biased low due to QA/QC deficiencies, reporting limit shown
NA - Data not available
NS - No standard
R - Result rejected due to deficiencies in analysis. The presence or absence of the analyte cannot be verified.
Standard* - NYSDEC Drinking Water Quality Standard (DWQS)
Exceeds NYSDEC DWQS

Table 12
Summary of SVOCs Detected in Groundwater
Site 1 - Monitoring Wells
Air National Guard - Hancock Field

Monitoring Well Number		Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	bis(2-Ethylhexyl)phthalate	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Phenol	Pyrene
Standard*		NS	NS	NS	NS	50	NS	50	NS	NS	1	50
Current Site Investigation	MW-1A	1.1U	1.1U	1.1U	1.1U	2.7 J	11U	1.1U	11U	1.1U	11U	11U
	MW-09	1.1U	1.1U	1.1U	1.1U	11U	11U	1U	11U	1.1U	10U	11U
	MW-11	1U	1U	1U	1U	10U	10U	1U	10U	1U	10U	10U
	MW-12	1U	1U	1U	1U	10U	10U	1U	10U	1U	10U	10U
	MW-13	48U	12U	12U	12U	48U	1.2U	12U	12U	12U	12U	12U

Units are in ug/L

J - Estimated value
U - Compound not detected, reporting limit shown
UJ - Undetected due and biased low due to QA/QC deficiencies, reporting limit shown
NA - Data not available
NS - No standard
Standard* - NYSDEC Drinking Water Quality Standard (DWQS)
Exceeds NYSDEC DWQS

Table 13
Summary of Total Metals Detected in Groundwater
Site 1 - Monitoring Wells
Air National Guard - Hancock Field Syracuse, NY

	Monitoring Well Number	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Silver	Sodium	Thallium	Vanadium	Zinc
	Standard*	100	3	50	1000	11	5	NS	50	50	200	300	50	35000	300	0.7	100	NS	50	20000	NS	NS	NS
Previous SA Report	MW-09	16000	3U	6	300U	3U	5	160000	50U	60	40	25000	9	43000	600	0.4U	100	6800	50U	6600	3U	300U	60
	MW-11	79000	3U	25	500	8	37	800000	180	440	250	140000	450	270000	4500	0.5	290	17000	50U	8300	31	300U	400
	MW-12	120000	3U	24	600	10	52	890000	250	760	380	220000	60	300000	9200	0.5	430	16000	90	9000	41	300U	670
	MW-13	18000	3U	6	300U	3U	9	200000	130	90	50	28000	11	65000	550	0.4U	180	8000	50U	29000	3U	300U	100
Current Site Investigation	MW-1A	18100	3.9U	6	203	0.77 UB	0.4U	270000	28.8	14.9 B	41.8	30600	13.6	101000	2430	0.1U	39.8 B	4030 B	0.7U	10900	4.4U	32.3 B	89.3
	MW-09	401	3.9U	3.4U	31.2 B	0.1U	0.4U	151000	2.8U	3.5U	2.1U	2680	2.2U	26700	235	0.1U	4.1 B	387 B	0.7U	4990	4.4U	1.5U	7.9 B
	MW-11	55800	3.9U	35.7	284	2.7	0.92 UB	532000	95.7	42.4 B	146	107000	57.8	203000	4380	0.12 B	117	7030	0.7U	5730	4.4U	97	285
	MW-12	59300	3.9U	52.1	314	2.9	1.1 UB	570000	99.3	44.8 B	173	142000	45.6	205000	4450	0.12 B	129	7010	0.7U	37000	4.4U	105	297
	MW-13	20900	6.3 B	14.2	180 B	0.89 UB	0.4U	320000	21200	137	277	113000	18.1	116000	1880	0.1U	2200	3780 B	0.98 B	54500	4.4U	107	273

Units are in ug/L

B - Compound detected in associated field blank
U - Compound not detected, reporting limit shown
UB - Undetected due to blank contamination
NS - No standard
Standard* - NYSDEC Drinking Water Quality Standard (DWQS)
Exceeds NYSDEC DWQS

Table 14
Summary of Dissolved Metals Detected in Groundwater
Site 1 - Monitoring Wells
Air National Guard - Hancock Field Syracuse, NY

Monitoring Well Number		Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Silver	Sodium	Thallium	Vanadium	Zinc
	*Standard	100	3	50	1000	11	5	NS	50	50	200	300	50	35000	300	0.7	100	NS	50	20000	NS	NS	NS
Current Site Investigation	MW-1A	427	3.9U	3.4U	118 B	0.1U	0.4U	130000	2.8U	3.5U	4.1 UB	625	2.2U	43900	1420	0.1U	5.5 B	1240 B	0.7U	11100	4.4U	1.5U	17.1 B
	MW-09	77.4U	3.9U	3.4U	31.8 B	0.1U	0.4U	154000	2.8U	3.5U	2.1U	982	2.2U	27300	233	0.1U	3.9U	415 B	0.7U	5130	4.4U	1.5U	9.8 B
	MW-11	77.4U	3.9U	3.4U	33.8 B	0.1U	0.4U	133000	2.8U	3.5U	2.1U	39.7U	2.2U	29200	2.9U	0.1U	3.9U	724 B	0.7U	3960 B	4.4U	1.5U	7.4 B
	MW-12	77.4U	3.9U	3.4U	36.4 B	0.1U	0.4U	158000	2.8U	3.5U	2.1U	39.7U	2.2U	41600	407	0.1U	3.9U	607 B	0.7U	37000	4.4U	1.5U	6.7 B
	MW-13	77.4U	3.9U	3.4U	25.5 B	0.1U	0.4U	141000	2.8U	16.2 B	2.1U	39.7U	2.2U	42600	148	0.1U	662	428 B	0.7U	53300	4.4U	1.5U	7.0 B

Units are in ug/L

B - Compound detected in associated field blank
U - Compound not detected, reporting limit shown
UB - Undetected due to blank contamination
NS - No Standard
*Standard - NYSDEC Drinking Water Quality Standard (DWQS)
Exceeds NYSDEC DWQS

Table 15
Summary of VOCs Detected In Soil
Site 4 Soil Borings
Air National Guard - Hancock Field

Soil Boring Number and Depth		Acetone	Methylene Chloride	Tetrachloroethene	Toluene	Xylenes (total)
	Standard*	200	100	1400	1500	1200
Previous SA Report	SB-01 2-4 ft	NA	NA	NA	NA	30U
	SB-01 5-7 ft	NA	NA	NA	NA	30U
	SB-02 2-4 ft	NA	NA	NA	NA	198
	SB-02 4-6 ft	NA	NA	NA	NA	30U
	SB-02 8-10 ft	NA	NA	NA	NA	30U
	SB-03 2-4 ft	NA	NA	NA	NA	25U
	SB-03 4-6 ft	NA	NA	NA	NA	25U
	SB-04 2-4 ft	NA	NA	NA	NA	95
	SB-04 4-6 ft	NA	NA	NA	NA	25U
Current Site Investigation	SB-4A 0.15 ft	22J	0.6 UB	1.1UJ	5.5UJ	5.5UJ
	SB-4B 0.15 ft	140J	4UJ	1.3UJ	6.6UJ	6.6UJ
	SB-4B 3 ft	33J	3.7U	1.2U	6.2U	6.2U
	SB-4B 5 ft	26	0.9 UB	1.2U	5.9U	5.9U
	SB-4C 0.15 ft	36J	4UJ	1.3UJ	6.6UJ	6.6UJ
	SB-4C 3 ft	18J	3.4U	1.1U	5.7U	5.7U
	SB-4C 0.15 ft	32J	3.5UJ	1.2UJ	5.9UJ	5.9UJ
	SB-4D 0.15 ft	6R	3.6U	1.2U	6U	6U
	SB-4D 3 ft	34J	1.0 UB	1.2UJ	1.4 J	6.2UJ
	SB-4D 7 ft	19J	3.5U	1.2U	1.1 J	5.9U
	MW-4A 0.15 ft	52J	3.4UJ	1.1UJ	1.1 J	5.7UJ
	MW-4A 3 ft	24J	1.4 UB	1.3U	6.3U	6.3U
	MW-4A 11 ft	29J	3.6UJ	1.2UJ	5.9UJ	5.9UJ
	MW-4B 0.15 ft	60J	4UJ	1.4UJ	1.9 J	6.8UJ
	MW-4B 3 ft	21J	0.7 UB	1.1U	5.7U	5.7U
	MW-4B 6 ft	23J	2.5 UB	1.2UJ	5.9UJ	5.9UJ
	TP-4A 4 ft - A	6.4U	3.9U	1.3U	6.4U	6.4U
	TP-4A 4 ft - B	22	8	0.6 J	5.6U	5.6U
	TP-4A 4 ft - C	45	8.9	1.3U	6.4U	6.4U
	TP-4B 4.5 ft - A	23	12	1.1U	5.7U	5.7U
	TP-4B 4.5 ft - B	37	18	1.1U	5.6U	5.6U
	TP-4B 5 ft - C	39	12	1.1U	5.6U	5.6U
	TP-4C 3 ft - A	34	9.4	1.2U	5.9U	5.9U
	TP-4C 4 ft - B	73	16	210	6.2U	6.2U
	TP-4C 5 ft - C	41	20	1.2U	6U	6U

Units are in ug/kg

J - Estimated value
U - Compound not detected, reporting limit shown
UJ - Undetected due and biased low due to QA/QC deficiencies, reporting limit shown
NA - Data not available
NS - No standard
Standard* - NYSDEC Recommended Soil Cleanup Objective
Exceeds NYSDEC Recommended Soil Cleanup Objective

Table 16
Summary of SVOCs Detected in Soil
Site 4 Soil Borings
Air National Guard - Hancock Field

	Soil Boring Number and Depth	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(ghi)perylene	Benzo(k)fluoranthene	Carbazole	Chrysene	Dibenz(a,h)anthracene	Dibenzofuran	Dimethylphthalate	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Napthalene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
	Standard*	NS	224	61	1100	NS	1100	NS	400	14	NS	2000	NS	NS	3200	NS	NS	NS	30	50000
Previous SA Report Borings	SB-01 2-4 ft	3900U	3900U	3900U	3900U	3900U	3900U	3900U	3900U	NA	3900U	NA	6500	3900U	3900U	3900U	7800	4500	NA	5400
	SB-01 5-7 ft	400U	400U	400U	400U	400U	400U	400U	400U	NA	400U	NA	400U	400U	400U	400U	800	400U	NA	400U
	SB-02 2-4 ft	19000U	19000U	19000U	19000U	19000U	19000U	19000U	19000U	NA	19000U	NA	44000	19000U	19000U	19000U	38000U	45000	NA	40000
	SB-02 4-6 ft	810	970	780	980	440	410	380U	840	NA	380U	NA	2400	380U	470	380U	760	2400	NA	1800
	SB-02 8-10 ft	390U	390U	390U	390U	390U	390U	390U	390U	NA	390U	NA	390U	390U	390U	390U	780	390U	NA	390U
	SB-03 2-4 ft	3900U	7600	7400	8300	4700	4000	3900U	6800	NA	3900	NA	16000	3900	4600	3900U	7800	12000	NA	14000
	SB-03 4-6 ft	380	380	380	380	380	380	380	380	NA	380	NA	380	380	380	380	760	380	NA	380
	SB-04 2-4 ft	10000	13000	10000	13000	5400	5800	4300	11000	NA	4900	NA	26000	6200	5700	4100	8100	33000	NA	25000
	SB-04 4-6 ft	390U	390U	390U	390U	390U	390U	390U	390U	NA	390U	NA	390U	390U	390U	390U	780	390U	NA	390U
Current Site Investigation Borings	SB-4A 0.15 ft	380U	2500	2800	2400	3300	2700	310 J	3400	920	110 J	380U	5000	220 J	2800	38 J	1500U	2700	380U	6300
	SB-4B 0.15 ft	24 J	2700	2600	1800	2100	2300	640 J	2800	580	670 J	940U	5100	770 J	2000	120 J	3800U	5800	940U	6100
	SB-4B 3 ft	420U	9.5 J	42U	42U	420U	42U	420U	420U	42U	420U	420U	17 J	420U	42U	420U	1700U	420U	420U	15 J
	SB-4B 5 ft	420U	42U	42U	42U	420U	42U	420U	420U	42U	420U	420U	15 J	420U	42U	420U	1700U	420U	420U	13 J
	SB-4C 0.15 ft	4400U	11000	8200	6500	4400 J	7900	2800 J	9800	1600	5000	4400U	25000	7600	4700	3100 J	18000U	34000	6500	23000
	SB-4C 3 ft	390U	39U	39U	39U	390U	39U	390U	390U	39U	390U	390U	390U	390U	39U	390U	1600U	390U	390U	390U
	SB-4C 5 ft	400U	40U	40U	40U	400U	40U	400U	400U	40U	400U	400U	400U	400U	40U	400U	1600U	400U	400U	400U
	SB-4D 0.15 ft	2000U	7300	6700	5000	5500	5500	1200 J	7400	1900	880 J	2000U	12000	1700 J	5200	440 J	8200U	12000	2000U	16000
	SB-4D 3 ft	440U	1600	1600	1200	1300	1400	200 J	1800	360	96 J	440U	3100	220 J	1200	37 J	1800U	2200	440U	3800
	SB-4D 7 ft	410U	41U	41U	41U	410U	41U	410U	410U	41U	410U	410U	410U	410U	41U	410U	1600U	410U	410U	410U
	MW-4A 0.15 ft	400U	40 J	39 J	31 J	23 J	40 J	400U	48 J	40U	400U	400U	96 J	400U	21 J	400U	1600U	68 J	400U	74 J
	MW-4A 3 ft	420U	280	310	280	260 J	330	77 J	340 J	55	24 J	420U	590	26 J	230	20 J	1700U	410 J	420U	540
	MW-4A 11 ft	420U	42U	42U	42U	420U	42U	420U	420U	42U	420U	420U	420U	420U	42U	420U	1700U	420U	420U	420U
	MW-4B 0.15 ft	450U	31 J	38 J	36 J	450U	45 J	450U	56 J	45U	450U	450U	85 J	450U	25 J	450U	1800U	50 J	450U	85 J
	MW-4B 3 ft	400U	40U	40U	40U	400U	40U	400U	400U	40U	400U	400U	400U	400U	40U	400U	1600U	400U	400U	400U
	MW-4B 6 ft	410U	41U	41U	41U	410U	41U	410U	410U	41U	410U	410U	410U	410U	41U	410U	1600U	410U	410U	410U
	TP-4A 4 ft - A	440U	2000	1900	1400	1600J	1800	300 J	2100	480	280 J	440U	3600	540	1500	110 J	24 J	3400	440U	5300J
	TP-4A 4 ft - B	3800U	22000	18000	14000	14000J	18000	3800U	21000	4500	3800U	3800	47000	6500	13000	1400 J	15000U	41000	3800U	53000J
	TP-4A 4 ft - C	850U	4600	5100	4000	2900J	4300	470 J	5100	1200	450 J	850U	7100	910	3100	84 J	920 J	6400	850U	9800J
	TP-4B 4.5 ft - A	390U	2200	2000	1600	1500J	2000	290 J	2300	420	160 J	390U	4300	330 J	1400	65 J	1600U	3000	390U	4700J
	TP-4B 4.5 ft - B	3800U	18000	18000	14000	12000J	16000	2600 J	19000	35000	2200 J	3800U	37000	4200	11000	1300 J	15000U	30000	3800U	43000J
	TP-4B 5 ft - C	760U	5500	5300	3800	3500J	5000	750 J	5900	1300	550 J	760U	9100	990	3700	180 J	3000U	8700	760U	12000J
	TP-4C 3 ft - A	790U	4700	4500	3500	2800J	3800	740 J	5400	1100	540 J	790U	8100	880	2700	180 J	3200U	8100	790U	8700J
	TP-4C 4 ft - B	4200U	23000	22000	19000	15000J	21000	3700J	24000	5300	1600J	4200U	49000	3600J	13000	560J	17000U	31000	4200U	52000J
	TP-4C 5 ft - C	410U	3200	3000	2500	2800J	2500	310 J	3500	970	210 J	410U	5600	440	2500	56 J	490 J	4100	410U	7200J

Units are in ug/kg

J - Estimated value
U - Compound not detected, reporting limit shown
UJ - Undetected due and biased low due to QA/QC deficiencies, reporting limit shown
NA - Data not available
NS - No Standard
Standard* - NYSDEC Recommended Soil Cleanup Objective
Exceeds NYSDEC Recommended Soil Cleanup Objective

Table 17
Summary of Metals Detected in Soil
Site 4 Soil Borings
Air National Guard - Hancock Field

	Soil Boring Number and Depth	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Silver	Sodium	Thallium	Vanadium	Zinc
	*Standard	10,600	NS	7.5	300	0.54	1.0	52,000	15	30	25	17,900	45	15,400	640	0.1	17.5	922	NS	262	NS	150	50
Previous SA Report Borings	SB-01 2-4 ft	5500	34U	6.2	40	0.12	1.8	12000	10	27	14	7800	29	3100	240	0.22	9.7	680	5.6U	440	2.4	34U	94
	SB-01 5-7 ft	3800	33U	2.4	33	0.11	1.1	18000	7.4	21	11	6700	11U	7700	430	0.1U	10	400	5.4U	370	2.6	33U	14
	SB-02 2-4 ft	5900	30U	1.2	32	0.3	22	47000	12	32	22	9200	25	13000	310	0.21	14	740	5.1U	300	0.4U	30U	55
	SB-02 4-6 ft	5800	28U	2.1	49	0.21	1.8	2400	7.1	17	6.7	4900	9.4U	13000	74	0.1U	5.5	470	4.7U	290	0.4U	28U	16
	SB-02 8-10 ft	7600	50 J	2.9	78	0.34	2.1	3200	14	49	18	12000	11U	11000	540	0.1U	20	1300	5.6U	370	4.9	34U	31
	SB-03 2-4 ft	4000	31U	3.3	31	0.13	0.94	41900	10.1	29	15	10400	27	5800	310	0.1U	11	470	5.2U	380	0.4U	31U	52
	SB-03 4-6 ft	3900	35U	3.2	35	0.59	0.82	1700	9.5	32	11	11100	13	2000	125	0.33	10.9	340	5.9U	330	0.4U	35U	23
	SB-04 2-4 ft	5600	36U	2.7	49	0.25	1.4	51000	12	20	15	5800	33	8500	130	0.2	12	540	NA	280	0.4U	36U	63
	SB-04 4-6 ft	6100	34U	2.7		0.14	1.2	2400	12	34	12	1000	11	2100	160	0.1U	12	470	5.7	240	0.4U	34U	22
Current Site Investigation Borings	SB-4A 0.5 ft	2310	0.89U	3.4	23.1 B	0.11 B	1.1 B	200000	5.7	2.6 B	14.4	6070	24.8	10000	193	0.019U	7.8 B	353 B	0.16U	82.5U	1U	6.9 B	37
	SB-4B 0.5 ft	5490	1.1U	3.5	44.9 B	0.27 B	0.17 B	79600	8.3	4.5 B	14.4	11300	19.2	8540	366	0.023U	9.9 B	542 B	0.2U	102U	1.2U	12.7 B	42.3
	SB-4B 3 ft	6010	0.97U	3	51.6	0.31 B	0.1U	1920	10.2	5.5 B	12.7	13600	4.1	2230	468	0.021U	12.5	542 B	0.17U	90U	1.1U	15.5	23 3
	SB-4B 5 ft	10300	0.98U	4.1	86.8	0.55	0.1U	2470	16.3	6.5 B	19.8	22200	6.9	3480	284	0.021U	23.1	755 B	0.18U	90.5U	1.1U	21.9	39
	SB-4C 0.5 ft	5760	1U	3.5	41.4 B	0.21 B	0.41 B	7910	7.3	3.3 B	10.8	8270	29.7	1730	158	0.03 B	8.0 B	295 B	0.19U	96U	1.2U	11.8 B	128
	SB-4C 3 ft	3510	0.91U	4.6	30.6 B	0.21 B	0.094U	2560	6.3	3.4 B	9.4	8150	3.4	1860	226	0.019U	7.4 B	345 B	0.16U	84.4U	1U	10.3 B	15.4
	SB-4C 5 ft	6290	0.93U	6.2	84.8	0.31 B	0.095U	36300	10.7	6.7 B	16	14800	5.3	15600	534	0.02U	15.7	821 B	0.17U	85.7U	1U	15	31.8
	SB-4D 0.5 ft	6000	0.96U	3.7 B	48.8	0.26 B	0.37 B	19200	9.9	4.6 B	14.9	11000	40.1	4070	305	0.05	10.4	577 B	0.17U	89U	1.1U	14.2	72.7
	SB-4D 3 ft	6970	1U	3.8 B	50.4 B	0.30 B	0.28 B	18500	9	4.1 B	12.7	9790	36	3540	228	0.05	9.9 B	414 B	0.19U	95.5U	1.2U	13.8	47.4
	SB-4D 7 ft	6180	0.95U	2.7	51	0.32 B	0.098U	44500	10.5	6.0 B	17.8	13900	6	16000	337	0.02U	14.1	798 B	0.17U	91.1	1.1U	14.6	29.5
	MW-4A 0.5 ft	5750	0.95U	2.3	28.4 B	0.15 B	0.097U	1370	4	2.2 B	2.9 B	7510	3.6	750 B	35.2	0.02U	4.2 B	165 B	0.17U	87.6U	1.1U	9.6 B	8.3
	MW-4A 3 ft	6790	0.98U	5.1	84.5	0.37 B	0.1U	29300	11.5	6.7 B	20.1	16900	6.9	12200	386	0.021U	16	791 B	0.18U	91.2U	1.1U	18.7	33.8
	MW-4A 11 ft	5140	0.98U	1.9	59.8	0.25 B	0.1U	59000	8.8	5.0 B	11	12500	5	23100	415	0.021U	12.2	813 B	0.18U	97.9 B	1.1U	11.7 B	28.1
	MW-4B 0.5 ft	4100	1.1U	1.5 B	23.2 B	0.07 B	0.11U	3960	2.3 B	0.95U	3.5 B	2450	9.3	466 B	45.4	0.04 B	2.0 B	68.6 B	0.19U	97.8U	1.2U	4.3 B	8.3
	MW-4B 3 ft	5810	0.94U	6.4	70.6	0.35 B	0.096U	6110	9.6	6.1 B	13.2	15900	4.8	3920	239	0.02U	12	593 B	0.17U	86.9U	1.1U	15.3	21.9
	MW-4B 6 ft	7260	0.96U	3.5 B	160	0.37 B	0.099U	58700	12.9	6.4 B	14.5	16300	5.8	16300	398	0.021U	15	1090 B	0.17U	86.4 B	1.1U	17.4	31.9
	TP-4A 4 ft - A	6110J	1.5UJ	3.6	47.3 B	0.29 B	1.4	9640J	11	5.4 B	70.9	13000	54.9J	2850J	355	0.14J	15.3	371 J	0.37U	133 J	1.2U	12.3 UB	1140
	TP-4A 4 ft - B	10200J	1.3UJ	4.7	74.3	0.54	0.092U	36200J	15	8.4 B	16	19200	10J	6360J	457	0.019U	18.2	585 J	0.32U	180 UB	1.1U	23.6	39.1
	TP-4A 4 ft - C	7070J	1.5UJ	3.4	54.1	0.36 B	0.56 B	17700J	12.1	5.3 B	20.4	13200	50J	3610J	316	0.05	12.5	430 J	0.36U	132 UB	1.2U	14.6	180
	TP-4B 4.5 ft - A	5620J	1.4UJ	2.8	44.4	0.26 B	0.21 B	37100J	9.4	4.9 B	17.1	10700	26.1J	4950J	301	0.02U	10.1	376 J	0.33U	148 UB	1.1U	12.6	48.7
	TP-4B 4.5 ft - B	5460J	1.3UJ	3.5	39.2 B	0.25 B	0.17 B	43000J	8.8	5.2 B	14.3	10700	29.2J	6350J	360	0.03	11.1	380 J	0.32U	160 UB	1.1U	13.5	53.3
	TP-4B 5 ft - C	6540J	1.3UJ	3.6	44.2	0.31 B	0.12 B	22000J	11.3	5.7 B	17.1	14600	35.4J	5700J	354	0.03	11.7	414 J	0.32U	183 UB	1.1U	13.5	59.1
	TP-4C 3 ft - A	4660J	1.4UJ	2.8	46.0 B	0.28 B	1.7	101100J	8.9	4.2 B	12.3	9600	91J	7500J	315	0.02U	11.2	400 J	0.33U	219 UB	1.1U	16.8	142
	TP-4C 4 ft - B	5890J	1.5UJ	3.4	46.0 B	0.30 B	0.79 B	35000J	10.1	4.8 B	16.4	11200	41.6J	5030J	338	0.05	10.3	405 J	0.35U	200 UB	1.2U	13.3	82.1
	TP-4C 5 ft - C	6540J	1.4UJ	3.5	91.1	0.31 B	0.71 B	31600J	11.7	5.5 B	32	13200	55.6J	10400J	412	0.07	11.4	416 J	0.34U	158 UB	1.1U	14.5	155

Units are in mg/kg

J - Estimated value
U - Compound not detected, reporting limit shown
UJ - Undetected due and biased low due to QA/QC deficiencies, reporting limit shown
NA - Data not available
NS - No standard
*Standard - ANG Hancock Site-Specific Standard
Exceeds site specific background standard.

Table 18
Summary of VOCs Detected in Groundwater
Site 4 Monitoring Wells
Air National Guard - Hancock Field

Monitoring Well Number		Acetone	Methylene Chloride	Tetrachloroethane	Toluene	Xylenes (total)
	Standard*	50	5	5	5	5
Previous SA Report	MW-17GW	5U	3U	1U	5U	0.05U
Current Site Investigation	MW-4A	5U	3U	1U	5U	5U
	MW-4B	5U	3U	1U	5U	5U
	MW-16	5U	3U	1U	5U	5U
	MW-17	5U	3U	1U	5U	5U
	MW-18	5U	3U	1U	5U	5U

Units are in ug/L

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NA - Data not available
NS - No standard
Standard* - NYSDEC Drinking Water Quality Standard (DWQS)
Exceeds NYSDEC DWQS

Table 19
Summary of SVOCs Detected in Groundwater
Site 4 Monitoring Wells
Air National Guard - Hancock Field

Monitoring Well Number		Acenaphthene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(ghi)perylene	Benzo(k)fluoranthene	Carbazole	Chrysene	Dibenz(a,h)anthracene	Dibenzofuran	Dimethylphthalate	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Napthalene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
Standard*		20	NS	NS	NS	NS	NS	NS	NS	NS	50	NS	50	NS	50	NS	NS	1	50	1	50
Previous SA Report	MW-17 GW	NA	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	10U	5U	5U	5U
Current Site Investigation	MW-4A	11U	11U	1.1U	1.1U	1.1U	11U	1.1U	11U	11U	1.1U	11U	11U	11U	11U	1.1U	11U	42U	11U	11U	11U
	MW-4B	10U	10U	1U	1U	1U	10U	1U	10U	10U	1U	10U	10U	10U	10U	1U	10U	40U	10U	10U	10U
	MW-16	10UJ	10UJ	1UJ	1UJ	1UJ	10UJ	1UJ	10UJ	10UJ	1UJ	10UJ	10UJ	10UJ	10UJ	1UJ	10UJ	42UJ	0.7J	10UJ	0.3J
	MW-17	11U	11U	1.1U	1.1U	1.1U	11U	1.1U	11U	11U	1.1U	11U	11U	11U	11U	1.1U	11U	46U	11U	11U	11U
	MW-18	1.4 J	10U	1U	1U	1U	10U	1U	10U	10U	1U	10U	10U	10U	0.4 J	1U	10U	41U	10U	10U	10U

Units are in ug/L

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U - Compound not detected, reporting limit shown
UJ - Undetected due and biased low due to QA/QC deficiencies, reporting limit shown
NA - Data not available
NS - No standard
Standard* - NYSDEC Drinking Water Quality Standard (DWQS)
Exceeds NYSDEC DWQS

Table 20
Summary of Total Metals Detected in Groundwater
Site 4 Monitoring Wells
Air National Guard - Hancock Field Syracuse, NY

Monitoring Well Number		Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Silver	Sodium	Thallium	Vanadium	Zinc
	Standard*	100	3	50	1000	11	5	NS	50	50	200	300	50	35000	300	0.7	100	NS	50	20000	NS	NS	NS
Previous SA Report	MW-17 GW	180000	500	10	1400	11	62	390000	300	590	39	190000	200	130000	7300	1.2	370	18000	50	12000	3	300	830
Current Site Investigation	MW-4A	401	3.9U	3.4U	223	0.1U	0.4U	53800	4.6 B	3.5U	29.6	462	3	16200	72.8	0.1U	3.9U	721	0.7U	3690 B	4.4U	1.5U	23.7 B
	MW-4B	32400	3.9U	16.4	706	1.4 B	0.4U	200000	42.1	21.0 B	64	49100	22.7	82800	1440	0.1U	53.8UB	7400	0.7U	5480	4.4U	49.1 B	133
	MW-16	1110	3.9U	5.1	332	0.1U	0.4U	41300	7.6 B	3.5U	7.7 B	1350	2.9 B	11500	92.2	0.1U	5.9UB	776 B	0.75 UB	4810 B	4.4U	1.5U	11.2 B
	MW-17	6790	3.9U	142	374	0.62 B	0.4U	86400	8.0 B	3.5U	26 1	30200	12	26400	904	0.1U	8.7U B	1530 B	0.7U	5210	4.4U	9.1 B	33.8
	MW-18	1050	3 9U	16.4	83.0 B	0.1U	0.4U	100000	6.7 B	3 5U	5.8 B	11200	2.2U	19100	1960	0.1U	7.1 UB	568UB	0.7U	2590 B	4.4U	2.3 B	10.0 B

Units are in ug/L

B - Compound detected in associated field blank
U - Compound not detected, reporting limit shown
UB - Undetected due to blank contamination
NS - No Standard
Standard* - NYSDEC Drinking Water Quality Standard (DWQS)
Exceeds NYSDEC DWQS

Table 21
Summary of Dissolved Metals Detected in Groundwater
Site 4 Monitoring Wells
Air National Guard - Hancock Field Syracuse, NY

Monitoring Well Number		Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Silver	Sodium	Thallium	Vanadium	Zinc
*Standard		100	3	50	1000	11	5	NS	50	50	200	300	50	35000	300	0.7	100	NS	50	20000	NS	NS	NS
Current Site Investigation	MW-4A	77.4U	3.9U	3.4U	222	0.1U	0.4U	56200	2.8U	3.5U	3.0 B	46.9 B	2.2U	16900	65.7	0.1U	3.9U	633 UB	0.7U	3720 B	4.4U	1.5U	9.9 B
	MW-4B	192 B	3.9U	3.4U	271	0.1U	0.4U	39700	2.8U	3.5U	24.6 B	273	3 3	9880	36.7	0.1U	3.9U	727 UB	0.7U	4080 B	4.4U	1.5U	30.3
	MW-16	77.4U	3.9U	3 4U	314	0.1U	0.4U	39000	2.8U	3.5U	5.0 B	39.7U	2.2U	10900	2.9U	0.1U	3.9U	591UB	0.7U	4740 B	4.4U	1.5U	5.8U
	MW-17	77.4U	3.9U	3.4U	147 B	0.1U	0.4U	53000	2.8U	3.5U	2.1U	57 5 B	2.2U	13800	208	0.1U	3.9U	512 UB	0.7U	5150	4.4U	1.5U	6.7 B
	MW-18	77.4UJ	3.9UJ	4.7 J	74 8 J	0.1UJ	0.4UJ	133000J	2 8UJ	3.5UJ	3.9 J	7360J	2.2UJ	18800J	2090J	0.1UJ	5.1 UB	458 UB	0.7UJ	3110 J	4.4UJ	1.5UJ	133J

Units are In ug/L

B - Compound detected in associated field blank
U - Compound not detected, reporting limit shown
UB - Undetected due to blank contamination
NS - No Standard
Standard* - NYSDEC Drinking Water Quality Standard (DWQS)
Exceeds NYSDEC DWQS

Table 22
Summary of VOCs Detected in Soil
Site 9 Soil Borings
Air National Guard - Hancock Field

Soil Boring Number and Depth		tert-Butylbenzene	sec-Butylbenzene	Ethylbenzene	n-Butylbenzene	Isopropyl benzene	4-Isopropyltolune	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene	Xylenes (total)	Styrene	Toluene
	Standard*	NS	NS	5500	NS	NS	NS	NS	NS	1200	NS	1500
Previous SA Report	SB-01 2-4 ft	181	200	42	261	99	166	107	166	202	30U	24
	SB-01 4-8 ft	1700	454	227	1310	454	511	57	1400	2268	568	398
	SB-01 10-12 ft	30U	30U	30U	290	30U	30U	30U	73	30U	30U	30U
	SB-02 2-4 ft	30U	30U	30U	30U	30U	30U	30U	30U	30U	30U	30U
	SB-02 6-8 ft	30U	30U	30U	30U	30U	30U	30U	30U	30U	30U	30U
	SB-02 8-10 ft	25U	25U	25U	25U	25U	25U	25U	25U	25U	71	6
	SB-03 0-2 ft	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U
	SB-03 2-4 ft	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U
	SB-04 0-2 ft	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U
	SB-04 2-4 ft	5500	315	582	1910	1120	1570	381	3600	1130	2630	530

Units are in ug/kg

J - Estimated value
U - Compound not detected, reporting limit shown
NS - No standard
Standard* - NYSDEC Recommended Soil Cleanup Objectives
Exceeds NYSDEC Recommended Soil Cleanup Objectives

Table 23
Summary of Total Metals Detected in Soil
Site 9 Soil Borings
Air National Guard - Hancock Field

Soil Boring Number and Depth		Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Silver	Sodium	Thallium	Vanadium	Zinc
	Standard*	**10,600**	**NS**	**7.5**	**300**	**0.54**	**1.0**	**52,000**	**15**	**30**	**25**	**17,900**	**45**	**15,400**	**640**	**0.1**	**17.5**	**922**	**NS**	**262**	**NS**	**150**	**50**
Previous SA Report	SB-01 2-4 ft	2500	33U	1.2	33	0.11	0.55U	630	5.5U	12	5.7	4100	11U	810	79	0.1U	3.3U	450	5.5U	170	0.4U	33U	6.6
	SB-01 4-8 ft	3800	32U	2.9	32U	0.11	0.52U	1000	8.2	25	18	9000	10.5U	1800	490	0.1U	10.6	720	5.2U	250	0.4U	32U	18
	SB-01 10-12 ft	2900	28U	4.6	28U	0.22	0.93	77700	5.4	47	34	14900	12	23400	580	0.1U	10	610	4.7U	210	0.4U	28U	28
	SB-02 2-4 ft	4300	33U	5.4	33U	0.19	1.4	61000	8.3	42	30	11000	11U	12000	460	0.1U	13	840	5.5	340	0.04U	33U	26
	SB-02 6-8 ft	3400	30U	6.9	30U	0.17	0.7	60200	8	41	30	14000	10.1U	14000	630	0.1U	10.5	710	5.1U	320	3.2	30U	40
	SB-02 8-10 ft	3500	32U	9.4	33	0.15	1.6	66300	8.8	59	51	18900	15	17900	880	0.33	16	640	5.3U	360	0.4U	32U	35
	SB-03 0-2 ft	1700	34U	4.6	34U	0.12	0.57U	26000	5.8U	21	13	6300	11U	5300	250	0.1U	7.4	580	19	250	0.4U	34U	15
	SB-03 2-4 ft	1300	30U	3.6	30U	0.11	0.5	24000	5.1U	18	15	5900	10.1U	9300	240	0.1U	7.3	490	5.1U	320	0.4U	30U	20
	SB-04 0-2 ft	2500	29U	5.5	29U	0.15	0.67	34000	5.2	27	17	6100	9.8U	7800	250	0.1U	11	740	4.9U	200	1.9	29U	19
	SB-04 2-4 ft	2300	33U	3.5	33U	0.12	0.74	30000	5.6	23	19	6600	11U	6700	220	0.1U	10	700	5.5U	160	0.4U	33	18

Units are in mg/kg

J - Estimated value
U - Compound not detected, reporting limit shown
NS - No standard
*Standard - ANG Hancock Site-Specific Standard
Exceeds site-specific criteria

Table 24
Summary of VOCs Detected in Soil
Site 11 Soil Borings
Air National Guard - Hancock Field

Soil Boring Number and Depth		Xylenes (total)
	Standard*	1200
Previous SA Report	SB-01 2-4 ft	30U
	SB-01 4-6 ft	60
	SB-01 6-8 ft	32
	SB-02 2-4 ft	30U
	SB-02 4-6 ft	30U
	SB-20 6-8 ft	67
	SB-03 2-4 ft	30U
	SB-03 5-6 ft	30U
	SB-04 2-4 ft	30U
	SB-04 4-6 ft	30U

Units in ug/Kg

U - Compound not detected, reporting limit shown
Standard* - NYSDEC Recommended Soil Cleanup Objectives

Table 25
Summary of Total Metals Detected in Soil
Site 11 Soil Borings
Air National Guard - Hancock Field

Soil Boring Number and Depth		Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Nickel	Potassium	Sodium	Thallium	Zinc
Standard*		10,600	NS	7.5	300	0.54	1.0	52,000	15	30	25	17,900	45	15,400	640	17.5	922	262	NS	50
Previous SA Report	SB-01 2-4 ft	12000	64	4.1	82	0.37	2.6	20000	21	57	22	17000	12U	8800	210	20	1500	400	0.4U	42
	SB-01 4-6 ft	6000	32U	2.6	32	0.12	1.6	30000	11	35	13	11000	11U	9100	350	12	820	450	3	26
	SB-01 6-8 ft	13000	34U	3.8	67	0.42	2.6	33000	20	58	19	16000	11U	8700	370	22	1900	540	2.5	44
	SB-02 2-4 ft	6800	36U	2.6	36U	0.12	1.5	21000	11	32	11	10000	12U	7900	270	9.2	1200	420	3.4	25
	SB-02 4-6 ft	3600	37U	3.4	37U	0.12	1	29000	6.9	22	10	6500	12U	11000	280	5.4	810	440	0.4U	16
	SB-20 6-8 ft	5700	34U	7.1	34	0.16	1.6	34000	11	38	14	11000	11U	11000	340	13	1100	390	0.4U	26
	SB-03 2-4 ft	5000	35U	3.4	110	0.12U	1.1	16000	7.9	34	18	9700	12U	4300	93	15	710	370	2.3	24
	SB-03 5-6 ft	4000	31U	2.9	31U	0.11U	0.68	520	5.2U	18	3.5	6500	10	990	60	3.1U	530	300	0.4U	9.2
	SB-04 2-4 ft	5300	33U	5.4	180	0.23U	2.5	45000	10	63	18	18000	11U	5400	170	20	760	390	0.4U	23
	SB-04 4-6 ft	4200	30U	2.3	30	0.11U	0.8	1100	6.7	24	9.8	7500	9.9U	1600	180	4.7	600	300	0.4U	15

Units are in mg/kg

J - Estimated value
U - Compound not detected, reporting limit shown
NS - No standard
*Standard - ANG Hancock Site-Specific Standard
Exceeds site-specific criteria

Table 26
Summary of VOCs Detected in Sediment
AOC-P
Air National Guard - Hancock Field

Sediment Sample Number and Depth		2-Butanone	Acetone	Carbon Disulfide	Tetrachloroethene
	Standard*	200	200	2700	1400
Current Site Investigation	SD-01 0.15 ft	8.6R	92	8.6U	1.7U
	SD-02 0.15 ft	23J	110	7.3 J	0.7 J

Units are in ug/Kg

J - Estimated value
U - Compound not detected, reporting limit shown
R - Rejected data
*Standard - NYSDEC Recommended Soil Cleanup Objectives

Table 27
Summary of SVOCs Detected in Sediment
AOC-P
Air National Guard - Hancock Field

Sediment Sample Number and Depth		Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Fluoranthene	Pyrene
	Standard*	61	1100	1100	50000	50000
Current Site Investigation	SD-01 0.15 ft	14J	15J	17J	33J	31J
	SD-02 0.15 ft	56U	56U	56U	560U	560UJ

Units are in ug/Kg

J - Estimated value
UJ - Undetected due and biased low due to QA/QC deficiencies, reporting limit shown
*Standard - NYSDEC Recommended Soil Cleanup Objectives

Table 28
Summary of Metals Detected in Sediment
AOC-P
Air National Guard - Hancock Field

Sediment Sample Number and Depth		Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Vanadium	Zinc
	Standard*	10,600	NS	7.5	300	0.54	1.0	52,000	15	30	25	17,900	45	15,400	640	0.1	17.5	922	NS	NS	262	150	50
Previous SA Report Borings	SD-1A	4500	100U	42	110	0.33	2.7	13000	17U	54	23	17000	33U	3000	1400	44	10U	550	0.520	18	1000	100U	95
	SD-2A	4500	60U	16	60U	0.2	1	11000	10U	32	17	10000	20U	4200	210	0.38	6U	510	0.2U	10U	580	60U	54
	SD-3A	4300	57U	15	57U	0.19	1.4	22000	9.5U	25	16	8800	19U	6000	110	0.32	5.7U	550	0.210	9.5U	660	57U	110
Current Site Investigation	SD-01 0.15 ft	3810J	2.1UJ	14.1	73.3	0.23B	0.59B	7300J	5.5	6.3 B	17.2	11400	12.9J	1660 J	402	0.09	8.6B	218J	1.5U	0.5U	214UB	7.2UB	85.7
	SD-02 0.15 ft	5780J	1.9UJ	9.2	40.2B	0.25B	0.13U	37400J	8	5.2 B	21.7	17400	7.3J	9130J	258	0.028U	16.2	293J	1.4U	0.47U	213UB	9.7UB	124

Units are in mg/kg

B - Detected in laboratory blanks
J - Estimated value
U - Compound not detected, reporting limit shown
UJ - Undetected due and biased low due to QA/QC deficiencies, reporting limit shown
NS - No standard
*Standard - Site-specific criteria for Hancock Field
Exceeds site-specific standard

Table 29
Summary of Metals Detected in Surface Water
AOC-P
Air National Guard - Hancock Field

Surface Water Sample		Aluminum	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Vanadium	Zinc
Standard*		100	50	1000	11	5	NS	50	50	200	300	50	35000	300	0.7	100	NS	10	50	20000	NS	NS
Current Site Investigation	SW-01	2480	21.9	204	0.1U	0.63UB	121000	2.8U	9.3 B	13.7UB	13900	7.6	46600	4830	0.1UJ	6.3 B	2230	3.9U	0.7U	14600	4.7 B	74.2UB
	SW-02	393	3.4U	72.4	0.1UJ	0.4U	116000	2.8U	3.5U	5.2UB	1140	2.2U	48600	554	0.2UB	3.9U	760	3.9U	0.7U	19300	1.5U	19.4 UB

Units are in ug/L

B - Detected in laboratory blanks
J - Estimated value
U - Compound not detected, reporting limit shown
UB - Undetected due to blank contamination
UJ - Undetected due and biased low due to QA/QC deficiencies, reporting limit shown
NS - No standard
*Standard - Site-specific criteria for Hancock Field
Exceeds NYSDEC DWQS

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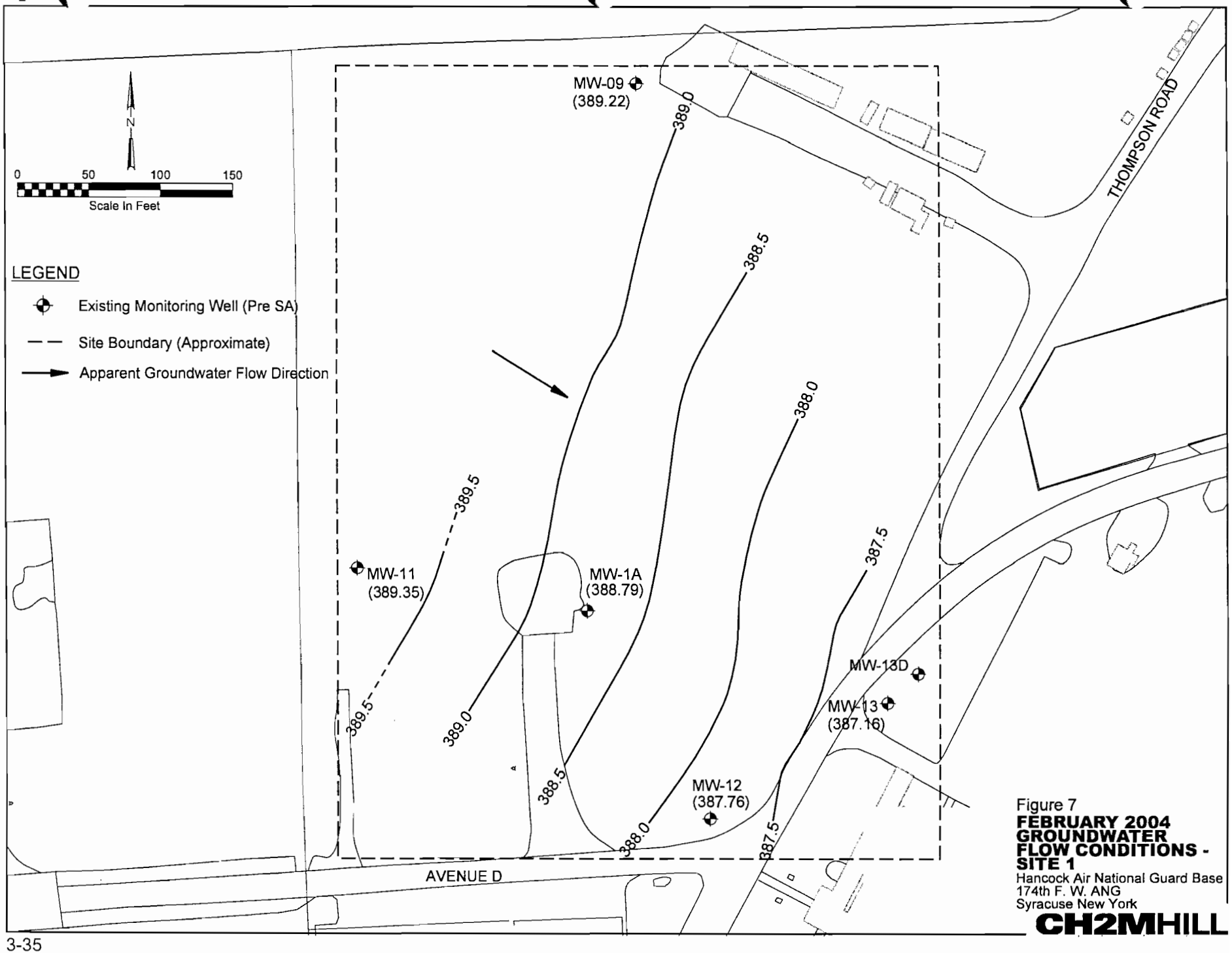

Figure 7
FEBRUARY 2004 GROUNDWATER FLOW CONDITIONS - SITE 1
Hancock Air National Guard Base
174th F. W. ANG
Syracuse New York

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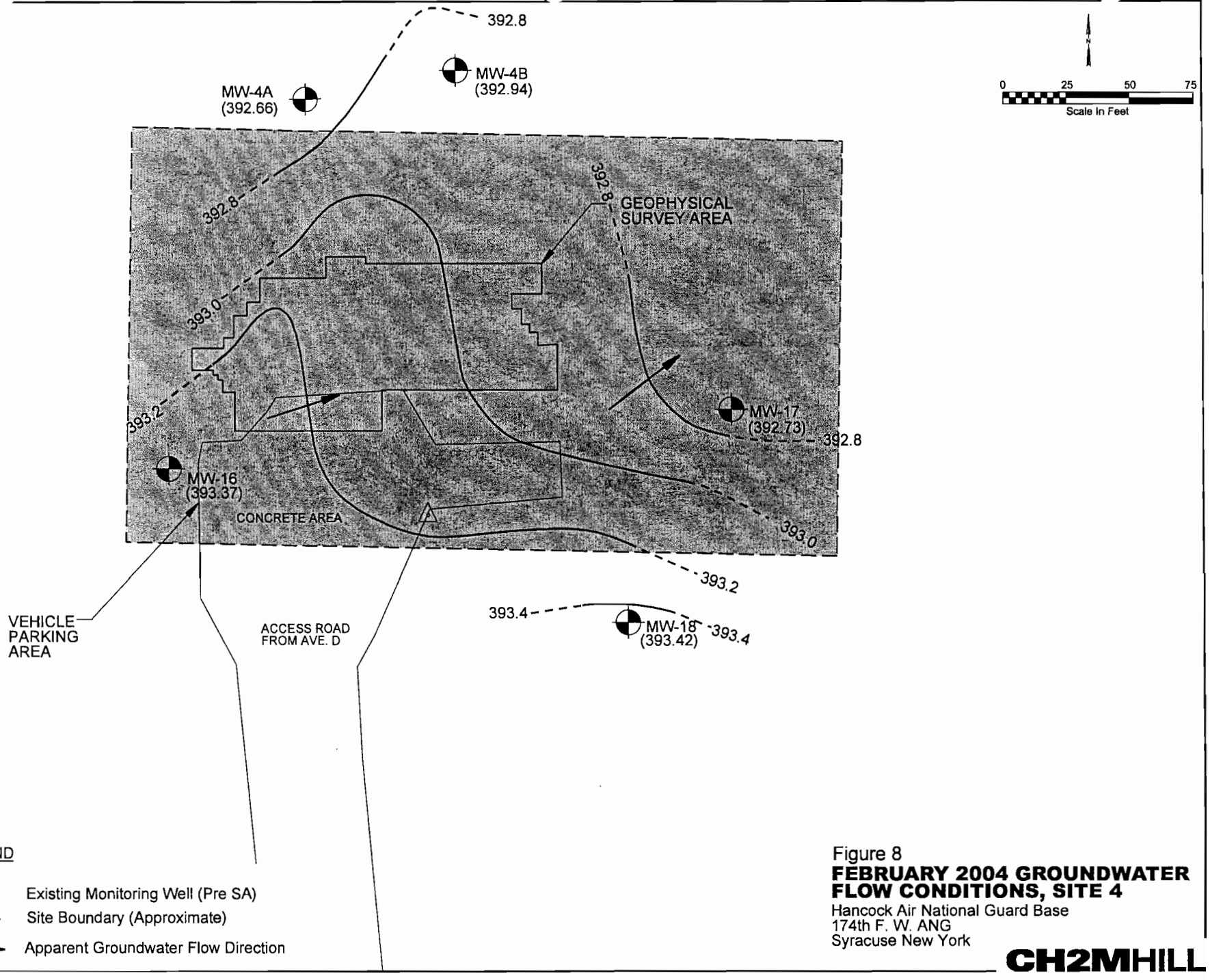

Figure 8
FEBRUARY 2004 GROUNDWATER FLOW CONDITIONS, SITE 4
Hancock Air National Guard Base
174th F. W. ANG
Syracuse New York

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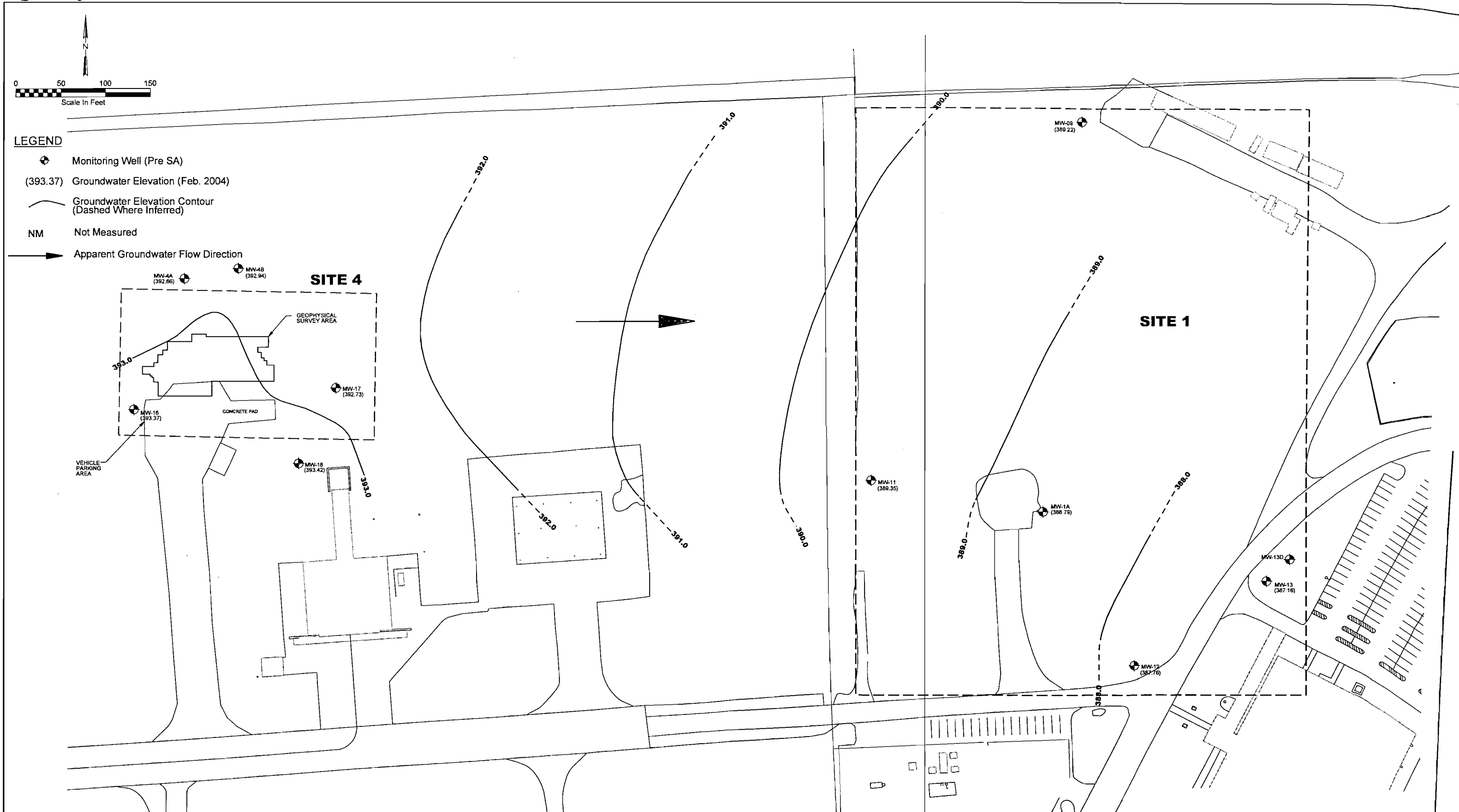

Figure 9
GROUNDWATER FLOW CONDITIONS SITES 1 AND 4
Hancock Air National Guard Base
174th F. W. ANG
Syracuse New York

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4.0 Conclusions

The following is a summary of the conclusions based on the results of the Site Investigation activities.

4.1 Background

The collected background soil samples were used to generate a background concentration for metals in soil for comparison purposes. The soil samples were collected at various depths and locations across the site where the ANG representative indicated that there was no evidence of historical activities. Limited detections of SVOCs, specifically benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and dibenzo(a,h)anthracene, were noted above the NYSDEC RSCO standards in the five shallow (0 - 2 inch depth) soil samples indicate that these SVOC compounds potentially represent a base-wide background condition. It is recognized that future change in use of the sites at the ANG Base will need to consider the potential for SVOCs to occur in the shallow soils (0 to 2-inch depth).

4.2 Site 1

The exceedances of VOCs (xylene and toluene) and SVOCs (phenol and benzo(a)pyrene) in soil are limited in nature and extent to the area immediately adjacent to the concrete pad. These soil concentrations have not impacted the groundwater at the site. The SVOCs benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and dibenzo(a,h)anthracene were detected at concentrations above the RSCO Standards in the shallow (0 to 2 inch depth) soil samples and, as these compounds are also found in the shallow background soil samples, these detections may represent a background condition at the ANG Base.

Aluminum, iron, magnesium, manganese, nickel, and sodium were found to exceed the applied standards for both the soil and groundwater samples. It is noted that the exceedances of aluminum, magnesium, manganese, nickel, and sodium in groundwater are from monitoring well MW-1A located near the concrete pad and in the hydraulically downgradient wells MW-12 and MW-13.

4.3 Site 4

Metal and other debris were uncovered during the test pit activities at Site 4 and are the likely cause of the geophysical anomalies noted in the SA Report (February 2003). The VOCs detected in soils were below the applicable NYSDEC RSCO standard. Several SVOCs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and dibenzo(a,h)anthracene, dimethylphthalate, indeno(1,2,3-cd)pyrene, phenol, and pyrene) were detected in the shallow and deeper soil samples at concentrations above the RSCO Standards. These SVOC exceedances in soil are likely related to the debris that

was found in the test pits. The SVOCs detected in groundwater were below the applicable standard and therefore the SVOC exceedances in the soils are insufficient to impact groundwater.

Two metals (iron and manganese) were found to exceed the established standards for both soil and groundwater samples. It is noted that the iron and manganese exceedances in groundwater are from the upgradient monitoring well MW-18, suggesting that these metals may not be related to the buried metals at the site.

4.4 Site 9

The exceedances of VOCs (xylene) in soil are limited in nature and extent. SVOCs were not detected in the soil. Concentrations of metals (arsenic, cadmium, calcium, cobalt, copper, iron, magnesium, manganese, mercury, and sodium) in soil exceeded the established background standard in three soil borings (SB-01, SB-02, and SB-03), also suggesting that the metals are of limited nature and extent. As monitoring well installation and sampling activities were not identified by the NYSDEC as a data gap, an evaluation of the potential impact to groundwater from these VOC and metals concentrations in soil cannot be evaluated at the present time.

4.5 Site 11

No VOC or SVOC exceeded the NYSDEC RSCO standard in soil at Site 11. Concentrations of metals (aluminum, cadmium, chromium, cobalt, iron, nickel, potassium, and sodium) in soil exceeded the established background standard, although the data suggest that the specific concentrations are slightly above criteria. As monitoring well installation and sampling activities were not identified by the NYSDEC as a data gap, an evaluation of the potential impact to groundwater from these VOC and metals concentrations in soil cannot be evaluated at the present time.

4.6 AOC-P

No VOC or SVOC concentration exceeded the NYSDEC RSCO criteria. Concentration of metals (arsenic and zinc) in sediment exceeded the established background standard, although these detections are not adversely affecting the surface water quality.

5.0 Recommendations

The following recommendations were developed based on the conclusions drawn in this report.

5.1 Site 1

As metals, specifically magnesium and nickel, were detected in both soil and groundwater at the site in hydraulically downgradient locations, additional groundwater samples collected from the site monitoring wells is recommended to confirm the detections and to monitor the concentrations. It is recommended that this work be performed under an expanded site investigation.

5.2 Site 4

The presence of buried debris at Site 4 was confirmed during the course of investigation activities. However, the full extent of buried debris is currently unknown. Additional soil borings should be advanced around the perimeter of the geophysical survey area to define the extent of buried debris. Also, test pits may be necessary to aid in mapping the buried debris. At a minimum, one of the borings should be located in a northeast direction from the perimeter of the geophysical survey area and converted to a monitoring well to further assess the groundwater quality in the area.

An additional round of groundwater samples should be collected from the shallow monitoring wells at Site 4 to verify that there is not an upgradient source of metals contamination in groundwater.

These tasks should be performed under an expanded site investigation.

5.3 Site 9

No additional activities are recommended for Site 9 as the VOC and metal concentration in soils that exceeded the established criteria appear to be of limited extent.

5.4 Site 11

No additional activities are recommended for Site 11 as the metal concentration in soils that exceeded the established criteria appear to be of limited extent.

5.5 AOC-P

No additional activities are recommended for Site AOC-P as the metal concentration in sediments that exceeded the selected criteria do not appear to be adversely affecting the surface water.

6.0 References

Bouwer and Rice. (1976) "A Slug Test for Determining Hydraulic Conductivity of Unconfined Aquifers with Completely or Partially Penetrating Wells." Water Resources Reseach, v. 12, 423-428.

Appendixes

Appendix A

CH2MHILL

PROJECT NUMBER	BORING NUMBER	
180533.PM.FI	MW-1A	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Hancock Air National Guard LOCATION : Syracuse, NY

ELEVATION : DRILLING CONTRACTOR SJB Services

DRILLING METHOD AND EQUIPMENT USED : CME 850 HSA and Split Spoons

WATER LEVELS : START : 01/09/2004 END: 01/09/2004 LOGGER: B. Wied, I. Zmudzin

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
	0-2'	SS1	16"	2-5-7-9	Surface: Grass, snow Very Fine Sand & Silt, 10 YR 4/2, dark yellowish brown, moist (frozen), loose	0.0 ppm
	2-4'	SS2	20"		Medium Sand & Silt, 10 YR 5/4, moderate yellowish brown, moist (frozen), loose	0.0 ppm
5	4-6'	SS3	20"	3-4-4-8	SAA, Saturated near bottom	0.0 ppm
	6-8'	SS4	25"		Fine Sand & Silt, 10 YR 4/2, dark yellowish brown, wet, loose	0.0 ppm
	8-10'	SS5	24"	Full Push - 24	Shelby Tube collected, Full Push - 24, Full recovery	Driller notes possible water table at 8'
10	10-12'	SS6	15"	1-1-1-2	Fine Sand & Silt, 10 YR 4/2, dark yellowish brown, wet, loose	0.6 ppm near bottom
	12-14'	SS7	20"	1-2-2-2	SAA	0.0 ppm
15	14-16'	SS8	21"	1-1-2-1	SAA	0.0 ppm
20						
25						

CH2MHILL

PROJECT NUMBER	BORING NUMBER	
180533.PM.FI	MW-4B	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Hancock Air National Guard LOCATION : Syracuse, NY

ELEVATION : DRILLING CONTRACTOR SJB Services

DRILLING METHOD AND EQUIPMENT USED : CME 850 HSA and Split Spoons

WATER LEVELS : START : 01/07/2004 END: 01/07/2004 LOGGER : B. Wied, I. Zmudzin

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
	0-2'	SS1	15"	1-1-2-3	Surface: Grass Fine Sand, N1-5 YR 4/4 moderate brown, well-sorted, rounded, little silt, moist, loose, roots	0.0 ppm
	2-4'	SS2	19"	2-2-2-3	Fine Sand & Silt, 10 YR 5/4 moderate yellowish brown, well-sorted, saturated, rounded faint mottling - clay at ~3.5'	0.0 ppm Perched water table ~2-4'
5	4-6'	SS3	18"	WOH-2-2-3	SAA, saturated	0.0 ppm
	6-8'	SS4	25"	5-6-5-5	SAA, saturated	0.0 ppm Water table ~8'
	8-10'	SS5	14"	2-2-2-2	SAA, saturated, medium plasticity, mostly silt	0.0 ppm
10	10-12'	SS6	17"	WOH	SAA	0.0 ppm
	12-14'	SS7	25"	WOH-1.2-1-2	SAA, Clayey Silt	0.0 ppm
15	14-16'	SS8	23"	WOH-1.5-1	SAA	0.0 ppm
	16-20	SS9	25"	WOH-1-1	SAA	0.0 ppm
20					B.O.B 18' Set Screen 8-18'	
25						

CH2MHILL

PROJECT NUMBER	BORING NUMBER	
180533.PM.FI	MW-4A	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Hancock Air National Guard — LOCATION : Syracuse, NY

ELEVATION : — DRILLING CONTRACTOR SJB Services

DRILLING METHOD AND EQUIPMENT USED : CME 850 HSA and Split Spoons

WATER LEVELS : — START : 01/08/2004 — END: 01/08/2004 — LOGGER : B. Wied, I. Zmudzin

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone / Headspace
	0-2'	SS1	10"	WOH-1-7-5	Surface: Grass, snow, ice Top 2" - Very Fine Sand, 10 YR 2/2, dusky yellowish brown, moist, loose Bottom 8" - Fine Sand, 5 YR 4/4, moderate brown, moist, loose	N/A*
	2-4'	SS2	19"	WOH-WOH-WOH-3	Very Fine Sand & Silt, 10 YR 4/2, dark yellowish brown, moist, loose, saturated, Clayey Silt near bottom of spoon	N/A Water table ~3'
5	4-6'	SS3	24"	Full Push - 24	3" Shelby Tube, Full Push - 24, Full Recovery	N/A
	6-8'	SS4	22"	1-1-1-1	Clayey Silt, 10 YR 4/2, dark yellowish brown, wet, loose, saturated, medium plasticity	N/A
	8-10'	SS5	18"	2-2-2-2	SAA, Saturated	N/A
10	10-12'	SS6	15"	WOH-1-1-1	SAA, Saturated	N/A
	12-14'	SS7	23"	1-1-1-1	SAA, Saturated	N/A
					B.O.B. at 14' BGS Set well from 4-14'	
15						
20						
25						* Frozen PID

CH2MHILL

PROJECT NUMBER	BORING NUMBER	
180533.PM.FI	SB-1A	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Hancock Air National Guard — LOCATION : Syracuse, NY

ELEVATION : — DRILLING CONTRACTOR : CH2MHill

DRILLING METHOD AND EQUIPMENT USED : Hand Auger - Stainless Steel

WATER LEVELS : — START : 01/09/2004 — END: 01/09/2004 — LOGGER : B. Wied, I. Zmudzin

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION — SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS — DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
	0-2'	HA-1	N/A	N/A	Fine Sand, some silt, 5 YR 4/4, moderate brown well sorted, subround, moist, loose	0.0 ppm 1.1 ppm at 1.5'
	3'				Silt w/ trace clay, 10 YR 4/2, dark yellowish brown, very low plasticity, moist	1.0 ppm at 3'
5	4'				Clayey Silt, 10 YR 4/2, dark yellowish brown, clayey silt, low to medium plasticity, moist, trace medium sand	Water table at 5.7 ft
	6'				SAA, moist, saturated	Stop hand augering at 6.5' Start split spooning
10						
15						
20						
25						

CH2MHILL

PROJECT NUMBER	BORING NUMBER	
180533.PM.FI	SB-1B	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Hancock Air National Guard LOCATION : Syracuse, NY

ELEVATION : DRILLING CONTRACTOR : CH2MHill

DRILLING METHOD AND EQUIPMENT USED : Hand Auger - Stainless Steel

WATER LEVELS : START : 01/09/2004 END: 01/09/2004 LOGGER : B. Wied, I. Zmudzin

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
	0-2'	HA-1			Fine Sand, Some Silt, 5 YR 4/4, moderate brown, well sorted, subround, moist, loose	0.0 ppm
	2-4'	HA-2			3' - Trace clay, 10 YR 4/2, dark yellowish brown, very low plasticity, moist	2.6 ppm
	4-6'	HA-3			4' - Clayey Silt, 10 YR 4/2, dark yellowish brown, moist, loose to medium, very low plasticity, saturated at bottom ~6'	
5						Water table at 5.7'
					B.O.B. at 6.5', let boring sit for 30 minutes, Water level at 5.7'	
10						
15						
20						
25						

CH2MHILL

PROJECT NUMBER	BORING NUMBER	
180533.PM.FI	SB-1C	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Hancock Air National Guard LOCATION : Syracuse, NY

ELEVATION : DRILLING CONTRACTOR : CH2MHill

DRILLING METHOD AND EQUIPMENT USED : Hand Auger - Stainless Steel

WATER LEVELS : START : 01/09/2004 END: 01/9/2004 LOGGER : B. Wied, I. Zmudzin

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
	0-2'	HA-1			Fine Sand, Little Silt, 5 YR 4/2, moderate brown, well sorted, subround, moist, loose	0.9ppm
	2-4'	HA-2			3.5' - Silt, trace to little clay, 10 YR 4/2, dark yellowish brown, very low plasticity, moist, little fine sand	0.0 ppm
5	4-6'	HA-3			Clayey Silt, 10 YR 4/2, dark yellowish brown, moist to saturated, low plasticity	Water table at 5.7'
					B.O.B. at 6' Water level ~ 5.7'	
10						
15						
20						
25						

CH2MHILL

PROJECT NUMBER	BORING NUMBER	
180533.PM.FI	SB-4A	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Hancock Air National Guard LOCATION : Syracuse, NY

ELEVATION : DRILLING CONTRACTOR : CH2MHill

DRILLING METHOD AND EQUIPMENT USED : Hand Auger - Stainless Steel

WATER LEVELS : START : 01/08/2004 END: 01/08/2004 LOGGER : B. Wied, I. Zmudzin

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
	0-1'	HA-1			Sand & Silt, 10 YR 4/2, Dark yellowish brown, bimodal w/ coarse, angular gravel, loose to hard, moist	0.0 ppm
						Water table ~12"
					B.O.B. at ~15"	
					Water level ~12"	
5						
10						
15						
20						
25						

CH2MHILL

PROJECT NUMBER	BORING NUMBER	
180533.PM.FI	SB-4B	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Hancock Air National Guard LOCATION : Syracuse, NY

ELEVATION : DRILLING CONTRACTOR : CH2MHill

DRILLING METHOD AND EQUIPMENT USED : Hand Auger - Stainless Steel

WATER LEVELS : START : 01/08/2004 END: 01/08/2004 LOGGER : B. Wied, I. Zmudzin

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION] SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
	0-2'	HA-1			Fine Sand & Silt, 10 YR 4/2, dark yellowish brown, moist, loose, moderately sorted	0.0 ppm
	2-4'	HA-2			Sandy Silt, 10 YR 4/2, dark yellowish brown, fine sand, saturated, loose	0.0 ppm Water table at ~3.5'
5					B.O.B. at 4' Water level ~3.5'	
10						
15						
20						
25						

CH2MHILL

PROJECT NUMBER	BORING NUMBER	
180533.PM.FI	SB-4C	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Hancock Air National Guard LOCATION : Syracuse, NY

ELEVATION : DRILLING CONTRACTOR SJB Services

DRILLING METHOD AND EQUIPMENT USED : CME 850 HSA and Split Spoons

WATER LEVELS : START : END: LOGGER : B. Wied, I. Zmudzin

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
	0-2'	SS1	12"	1-1-1-2	Very Fine Sand & Silt, 10 YR 4/2, dark yellowish brown, moist, loose	N/A*
	2-4'	SS2	17"	2-2-4-5	Very Fine Sand & Silt, 5 YR4/4, moderate brown, moist, loose, increased silt at bottom of spoon	N/A Note: Boring located right next to a stream hit saturated soil in 2-4' spoon
5	4-6'	SS3	25"	2-2-2-2	Top 12" - Medium Sand, 10 YR 5/4, moderate yellowish brown, moist, loose, very well sorted Bottom 13" - Silt, 10 YR 4/2, dark yellowish brown, moist, loose, very well sorted	N/A
10						
15						
20						
25						* Frozen PID

CH2MHILL

PROJECT NUMBER	BORING NUMBER	
180533.PM.FI	SB-4D	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Hancock Air National Guard — LOCATION : Syracuse, NY

ELEVATION : — DRILLING CONTRACTOR SJB Services

DRILLING METHOD AND EQUIPMENT USED : CME 850 HSA and Split Spoons

WATER LEVELS : — START : 01/07/2004 — END: 01/07/2004 — LOGGER : B. Wied, I. Zmudzin

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION — SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS — DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
	0-2'	SS1	6"	1-2-1-2	Very Fine Sand & Silt, 5 YR 3/2, grayish brown, very loose, trace gravel, trace mottling	N/A*
	2-4'	SS2	21"	3-5-5-7	Very Fine Sand & Silt, 10 YR 4/2, dark yellowish brown, moist, loose, some gravel Trace Mottling, 5 YR 5/6, few, medium, prominent	N/A
5	4-6'	SS3	18"	2-3-3-2	Fine to Medium Sand & Silt, 5 YR 4/4, moderate brown, moist, loose, very well sorted, mostly sand w/ trace silt	N/A
	6-8'	SS4	22"	2-3-3-5	SAA, saturated	N/A
	8-10'	SS5	25"	2-1-1-1	SAA, saturated	N/A
10						
15						
20						
25						* Frozen PID

CH2MHILL

PROJECT NUMBER	BORING NUMBER	
180533.PM.FI	SB-B1	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Hancock Air National Guard LOCATION : Syracuse, NY

ELEVATION : DRILLING CONTRACTOR SJB Services

DRILLING METHOD AND EQUIPMENT USED : CME 850 HSA and Split Spoons

WATER LEVELS : START : 01/05/2004 END: 01/05/2004 LOGGER : B. Wied, I. Zmudzin

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
	0-2'	SS1	15"	2-3-5-2	Surface: Snow covered grass 0-8" - Sandy Silty Clay, 10 YR 4/2, dark yellowish brown, moist, loose, fine sand, very low plasticity 8"-2' - Silty Clay, 10 YR 5/4, moderate brown, moist, medium plasticity	0.2 ppm
	2-4'	SS2	25"	4-4-4-5	Very Fine Sand & Silt, 5 YR 4/4, moderate brown, moist, loose, very well sorted, subrounded	0.7 ppm
5	4-6'	SS3	21"	5-5-5-5	Very Fine Sand & Silt, 5 YR 4/4, moderate brown, dry to moist, loose, very well sorted, well rounded, mottling - few, medium, faint	0.0 ppm
	6-8'	SS4	22"	4-5-4-3	Very Fine Sand & Silt w/ little clay, 5 YR 4/4, moderate brown, saturated, Sand- very fine, very well sorted, subrounded Clay - medium plasticity	
10						
15						
20						
25						

CH2MHILL

PROJECT NUMBER	BORING NUMBER	
180533.PM.FI	SB-B2	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Hancock Air National Guard — LOCATION : Syracuse, NY

ELEVATION : — DRILLING CONTRACTOR SJB Services

DRILLING METHOD AND EQUIPMENT USED : CME 850 HSA and Split Spoons

WATER LEVELS : — START : 01/06/2004 — END: 01/06/2004 — LOGGER : B. Wied, I. Zmudzin

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION — SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS — DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
	0-2'	SS1	16"	2-3-4-4	Surface: Snow covered grass Fine Sand & Silt, 10 YR 4/2, dark yellowish brown, moist, soft, subrounded, mottled - few, medium, faint, medium plasticity, some cobbles & gravel	PID Malfunction - samples taken w/out use of PID
	2-4'	SS2	19"	4-6-6-8	Fine Sand & Silt, 10 YR 4/2, dark yellowish brown, moist, loose, subrounded, mottling - few, medium, faint, low plasticity, no cobbles or gravel	N/A
5	4-6'	SS3	17"	4-5-5-3	Very Fine Sand & Silt, 5 YR 3/4, moderate brown, moist to wet, loose, subrounded, no mottling, medium plasticity, no cobbles or gravel	N/A
	6-8'	SS4	20"	1-1-1-1	SAA, Saturated	N/A
10						
15						
20						
25						

CH2MHILL

PROJECT NUMBER	BORING NUMBER	
180533.PM.FI	SB-B3	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Hancock Air National Guard — LOCATION : Syracuse, NY

ELEVATION : — DRILLING CONTRACTOR SJB Services

DRILLING METHOD AND EQUIPMENT USED : CME 850 HSA and Split Spoons

WATER LEVELS : — START : 01/06/2004 — END: 01/06/2004 — LOGGER : B. Wied, I. Zmudzin

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION — SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS — DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
	0-2'	SS1	19"	1-2-2-3	Surface: snow/grass Sand & Silt, 10 YR 4/2, dark yellowish brown, moist, very well sorted, very fine sand, subround, trace clay, low plasticity	0.0 ppm
	2-4'	SS2	19"	6-4-4-4	Sand & Silt, 10 YR 5/4, moderate yellowish brown, little clay, saturated, very fine to fine, well sorted, subround	0.0ppm Water table at ~2-4'
5	4-6"	SS3	21"		SAA, increased clay, saturated	
10						
15						
20						
25						

CH2MHILL

PROJECT NUMBER	BORING NUMBER	
180533.PM.FI	SB-B4	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Hancock Air National Guard — LOCATION : Syracuse, NY

ELEVATION : — DRILLING CONTRACTOR SJB Services

DRILLING METHOD AND EQUIPMENT USED : CME 850 HSA and Split Spoons

WATER LEVELS : — START : 01/06/2004 — END: 01/06/2004 — LOGGER : B. Wied, I. Zmudzin

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION — SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS — DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
	0-2'	SS1	19"	1-1-2-4	Very Fine Sand & Silt, 10 YR 4/2, dark yellowish brown, moist, very loose, mottling - few, fine, faint, trace clay, very low plasticity, very well sorted, trace fine rounded gravel	0.0 ppm
	2-4'	SS2	25"	5-7-8-12	Sand & Silt Top 16" - 10 YR 4/2, dark yellowish brown, Mid. of core - 10 YR 5/4, moderate yellowish brown Bottom 9" - 5 YR 4/4, moderate brown, Moist, loose to medium, faint laminations, very agated light to dark brown, very well sorted	0.0 ppm Water table at ~4-6'
5	4-6'	SS3	18"	8-9-15-16	Silty Clay, 5 YR 6/4, Light Brown, Saturated, Mottling, 10 YR 6/6, medium, prominent, little to some gravel, fine to medium, subrounded	0.0 ppm
	6-8'	SS4	22"	10-13-15-15	SAA, Saturated	0.0 ppm
10						
15						
20						
25						

CH2MHILL

PROJECT NUMBER	BORING NUMBER	
180533.PM.FI	SB-B5	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Hancock Air National Guard LOCATION : Syracuse, NY

ELEVATION : DRILLING CONTRACTOR SJB Services

DRILLING METHOD AND EQUIPMENT USED : CME 850 HSA and Split Spoons

WATER LEVELS : START : 01/06/2004 END: 01/06/2004 LOGGER : B. Wied, I. Zmudzin

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
	0-2'	SS1	19"	2-3-4-7	Very Fine 50/50 Sand & Silt, 5 YR 2/2, dusky brown moist, loose	0.0 ppm
	2-4'	SS2	21"	4-4-5-7	Very Fine Sand & Silt, 10 YR 5/4, moderate yellowish brown. moist, loose, very well sorted	0.0 ppm
	4-6'	SS3	21"	5-2-2-4	SAA	0.0 ppm
5						Driller notes saturation at 5.8'
	6-8'	SS4	18"	1-1-1-1	SAA, Saturated	0.0 ppm
10						
15						
20						
25						

CH2MHILL

PROJECT NUMBER	BORING NUMBER	
180533.PM.FI	SB-B5	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Hancock Air National Guard — LOCATION : Syracuse, NY

ELEVATION : — DRILLING CONTRACTOR SJB Services

DRILLING METHOD AND EQUIPMENT USED : CME 850 HSA and Split Spoons

WATER LEVELS : — START : 01/06/2004 — END: 01/06/2004 — LOGGER : B. Wied, I. Zmudzin

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION — SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS — DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
	0-2'	SS1	19"	2-3-4-7	Very Fine 50/50 Sand & Silt, 5 YR 2/2, dusky brown moist, loose	0.0 ppm
	2-4'	SS2	21"	4-4-5-7	Very Fine Sand & Silt, 10 YR 5/4, moderate yellowish brown. moist, loose, very well sorted	0.0 ppm
	4-6'	SS3	21"	5-2-2-4	SAA	0.0 ppm
5						Driller notes saturation at 5.8'
	6-8'	SS4	18"	1-1-1-1	SAA, Saturated	0.0 ppm
10						
15						
20						
25						

CH2MHILL

PROJECT NUMBER	BORING NUMBER	
180533.PM.FI	SB-B5	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Hancock Air National Guard LOCATION : Syracuse, NY

ELEVATION : DRILLING CONTRACTOR SJB Services

DRILLING METHOD AND EQUIPMENT USED : CME 850 HSA and Split Spoons

WATER LEVELS : START : 01/06/2004 END: 01/06/2004 LOGGER : B. Wied, I. Zmudzin

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
	0-2'	SS1	19"	2-3-4-7	Very Fine 50/50 Sand & Silt, 5 YR 2/2, dusky brown moist, loose	0.0 ppm
	2-4'	SS2	21"	4-4-5-7	Very Fine Sand & Silt, 10 YR 5/4, moderate yellowish brown. moist, loose, very well sorted	0.0 ppm
	4-6'	SS3	21"	5-2-2-4	SAA	0.0 ppm
5						Driller notes saturation at 5.8'
	6-8'	SS4	18"	1-1-1-1	SAA, Saturated	0.0 ppm
10						
15						
20						
25						

CH2MHILL

PROJECT NUMBER	WELL NUMBER	
180533.PM.FI	MW-1A	SHEET 1 OF 1

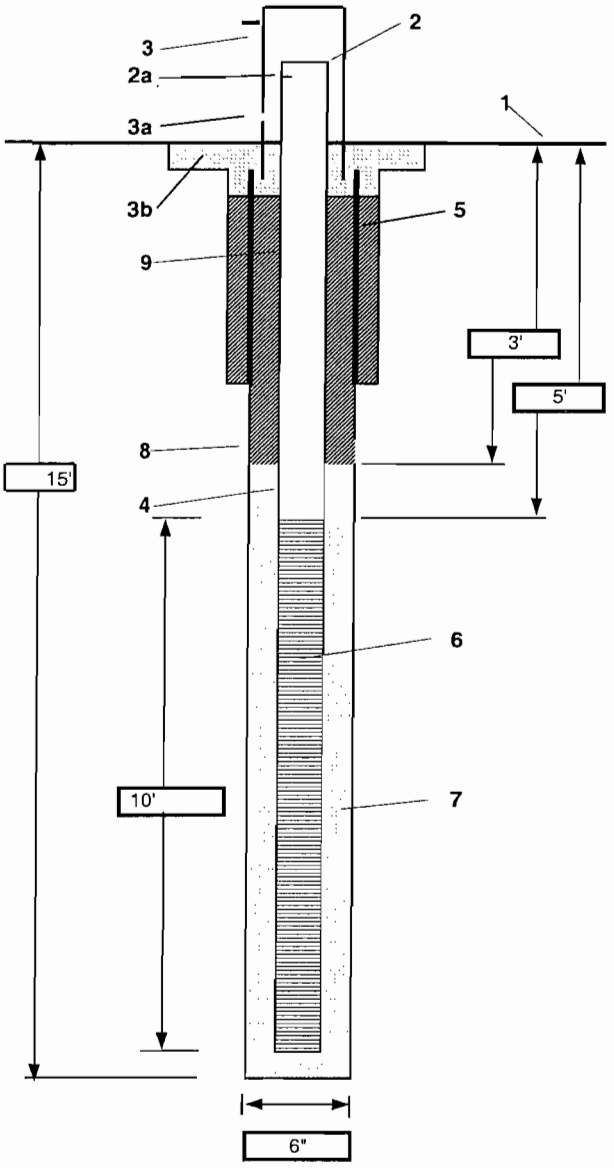
WELL COMPLETION DIAGRAM

PROJECT : ANG Hancock Field LOCATION : Syracuse, NY

DRILLING CONTRACTOR : SJB Services

DRILLING METHOD AND EQUIPMENT USED : CME 850 HSA and Split Spoons

WATER LEVELS : 11.58 START : 01/09/2004 END : 01/09/2004 LOGGER : B. Wied, I. Zmudzin



1- Ground elevation at well: 397.93

2- Top of casing elevation: 400.37
a) vent hole? N/A

3- Wellhead protection cover type: Stick-up
a) weep hole? N/A
b) concrete pad dimensions: 2' x 2'

4- Dia./type of well casing: 2" diameter schedule 40 PVC riser

5- Dia./type of surface casing: 6" Diameter steel stick-up casing

6- Type/slot size of screen: 2" diameter, schedule 40 PVC 0.010" slot screen

7- Type screen filter: No. 0 Sand
a) Quantity used

8- Type of seal: N/A
a) Quantity used

9- Grout
a) Grout mix used: Hydrated bentonite chips
b) Method of placement: Poured
c) Vol. of surface casing grout: 8 gallons
d) Vol. of well casing grout

Development method: Stainless-steel bailer

Development time: 30 minutes

Estimated purge volume: 10 gallons

Comments

CH2MHILL

PROJECT NUMBER	WELL NUMBER	
180533.PM.FI	MW-4A	SHEET 1 OF 1

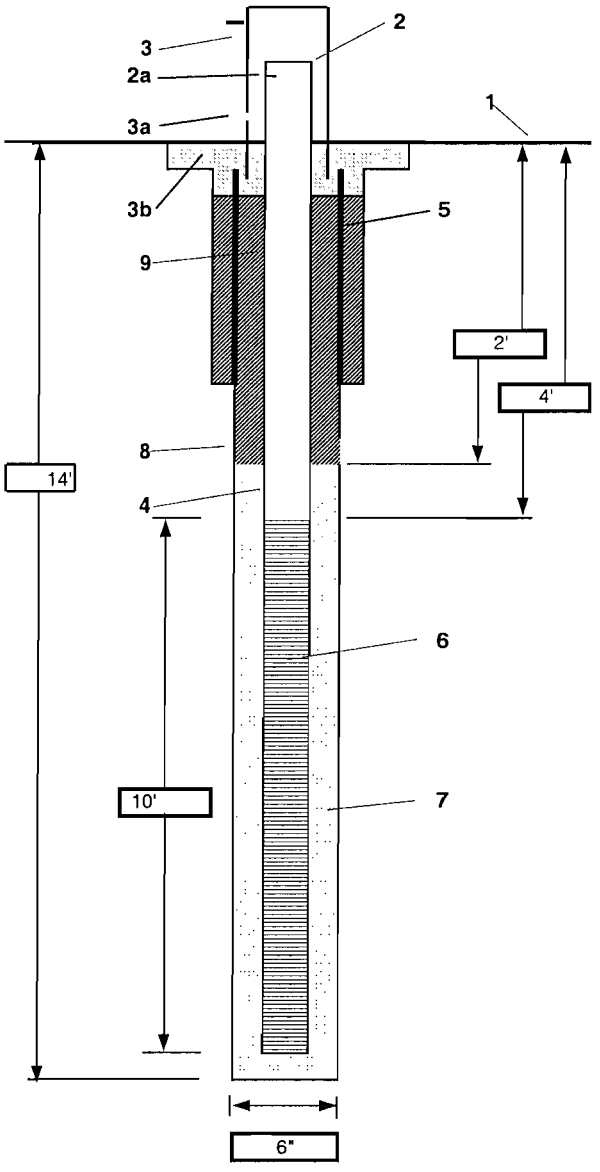
WELL COMPLETION DIAGRAM

PROJECT : ANG Hancock LOCATION : Syracuse, NY

DRILLING CONTRACTOR : SJB Services

DRILLING METHOD AND EQUIPMENT USED : CME 850 HSA and Split Spoons

WATER LEVELS : 3.87 START : 01/08/2004 END : 01/08/2004 LOGGER : B. Wied, I. Zmudzin



1- Ground elevation at well: 393.87

2- Top of casing elevation: 396.53
a) vent hole? N/A

3- Wellhead protection cover type: Stick-up
a) weep hole? N/A
b) concrete pad dimensions: 2' x 2'

4- Dia./type of well casing: 2" diameter schedule 40 PVC riser

5- Dia./type of surface casing: 6" diameter steel stick-up

6- Type/slot size of screen: 2" diameter schedule 40 PVC 0.010" slot screen

7- Type screen filter: No. 0 sand
a) Quantity used

8- Type of seal: N/A
a) Quantity used

9- Grout
a) Grout mix used: Hydrated bentonite chips
b) Method of placement: Poured
c) Vol. of surface casing grout: 6 gallons
d) Vol. of well casing grout

Development method: Stainless-steel bailer

Development time: 30 minutes

Estimated purge volume: 10 gallons

Comments

CH2MHILL

PROJECT NUMBER	WELL NUMBER	
180533.PM.FI	MW-4B	SHEET 1 OF 1

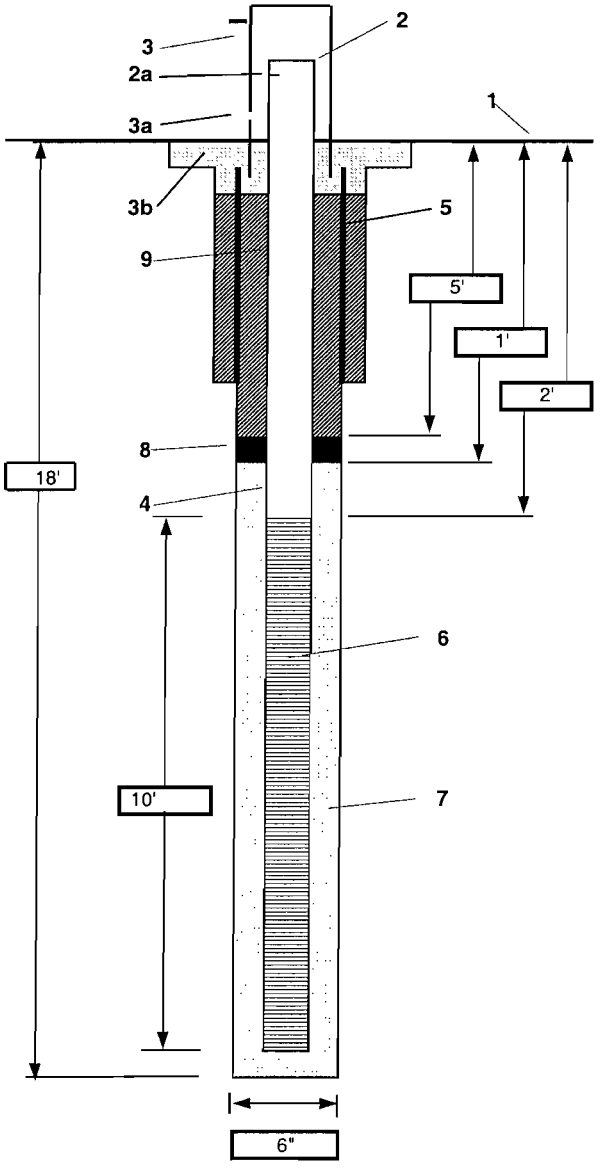
WELL COMPLETION DIAGRAM

PROJECT : ANG Hancock Field LOCATION : Syracuse, NY

DRILLING CONTRACTOR : SJB Services

DRILLING METHOD AND EQUIPMENT USED : CME 850 HSA and Split Spoons

WATER LEVELS : 3.55 START : 01/07/2004 END : 01/07/2004 LOGGER : B. Wied, I. Zmudzin



1- Ground elevation at well: 394.43

2- Top of casing elevation: 396.49
a) vent hole? N/A

3- Wellhead protection cover type: Stick-up
a) weep hole? N/A
b) concrete pad dimensions: 2' x 2'

4- Dia./type of well casing: 2" diameter schedule 40 PVC riser

5- Dia./type of surface casing: 6" diameter steel stick-up casing

6- Type/slot size of screen: 2" diameter, schedule 40 PVC 0.010" slot screen

7- Type screen filter: No. 1 sand
a) Quantity used

8- Type of seal: Hydrated bentonite chips
a) Quantity used

9- Grout
a) Grout mix used: Type I Portland Cement
b) Method of placement: Poured
c) Vol. of surface casing grout: 10 gallons
d) Vol. of well casing grout

Development method: Stainless-steel bailer

Development time: 45 minutes

Estimated purge volume: 12 gallons

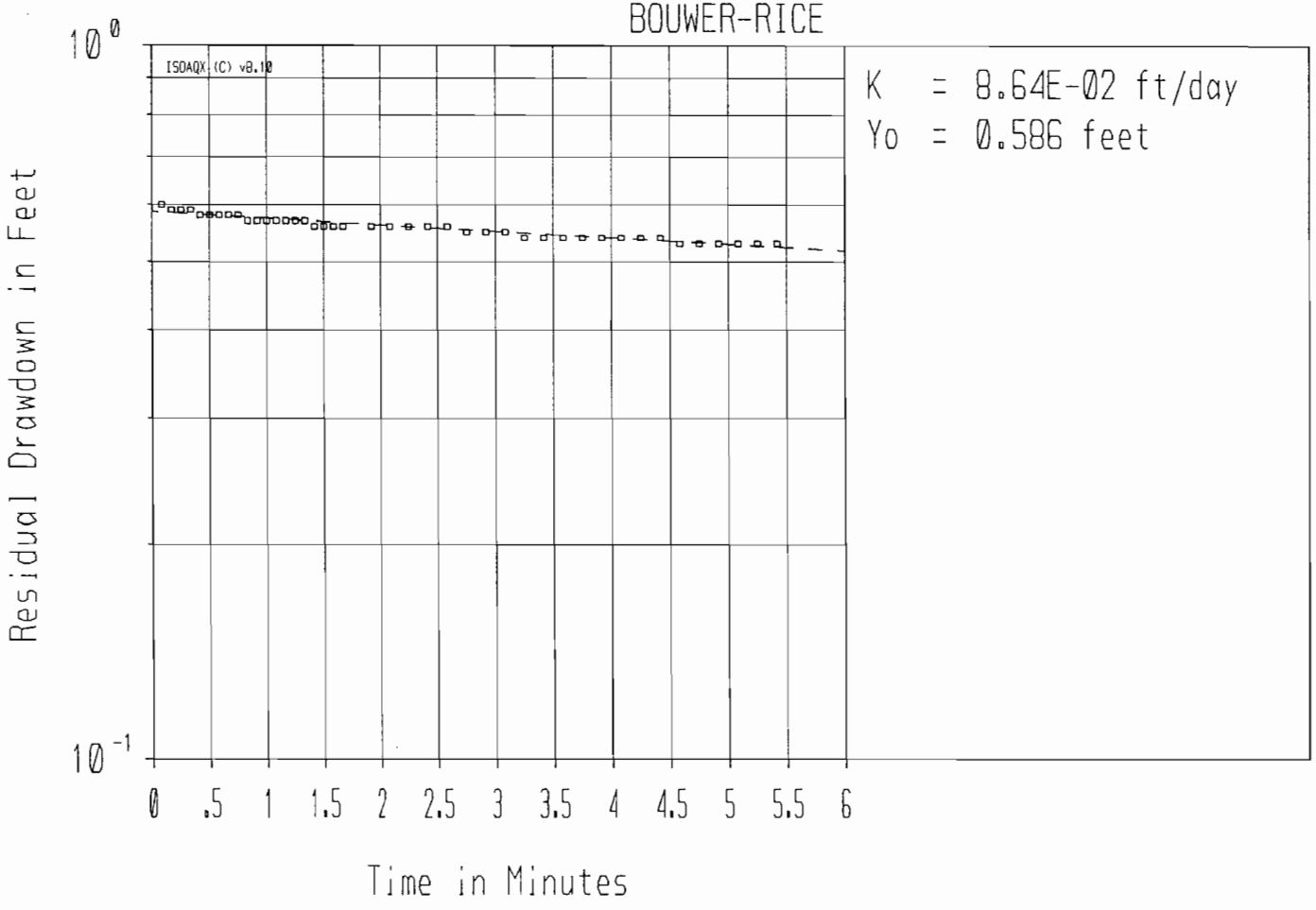
Comments

Appendix B

MW-1A

RISING HEAD TEST

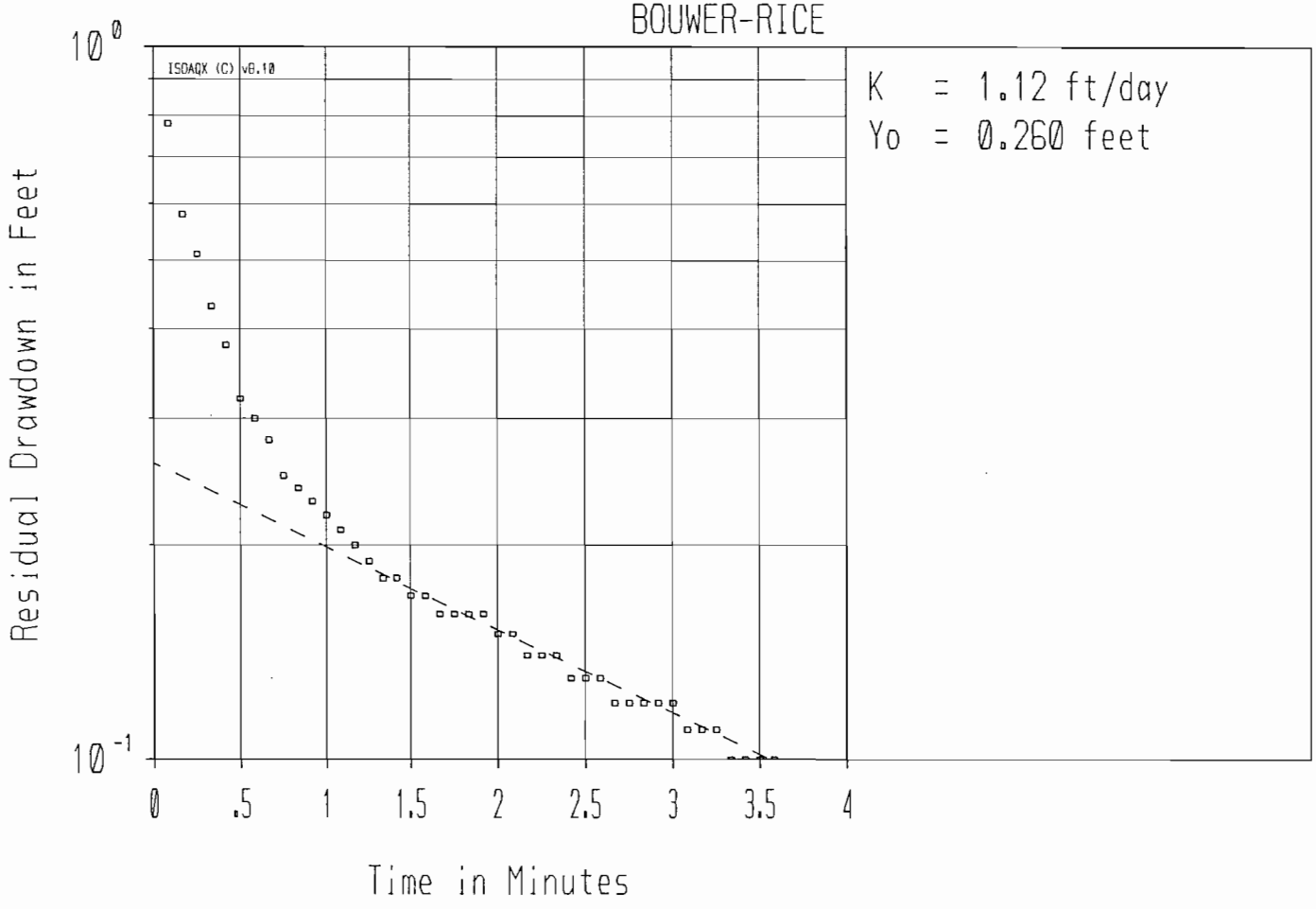
BOUWER-RICE



MW-1A

FALLING HEAD TEST

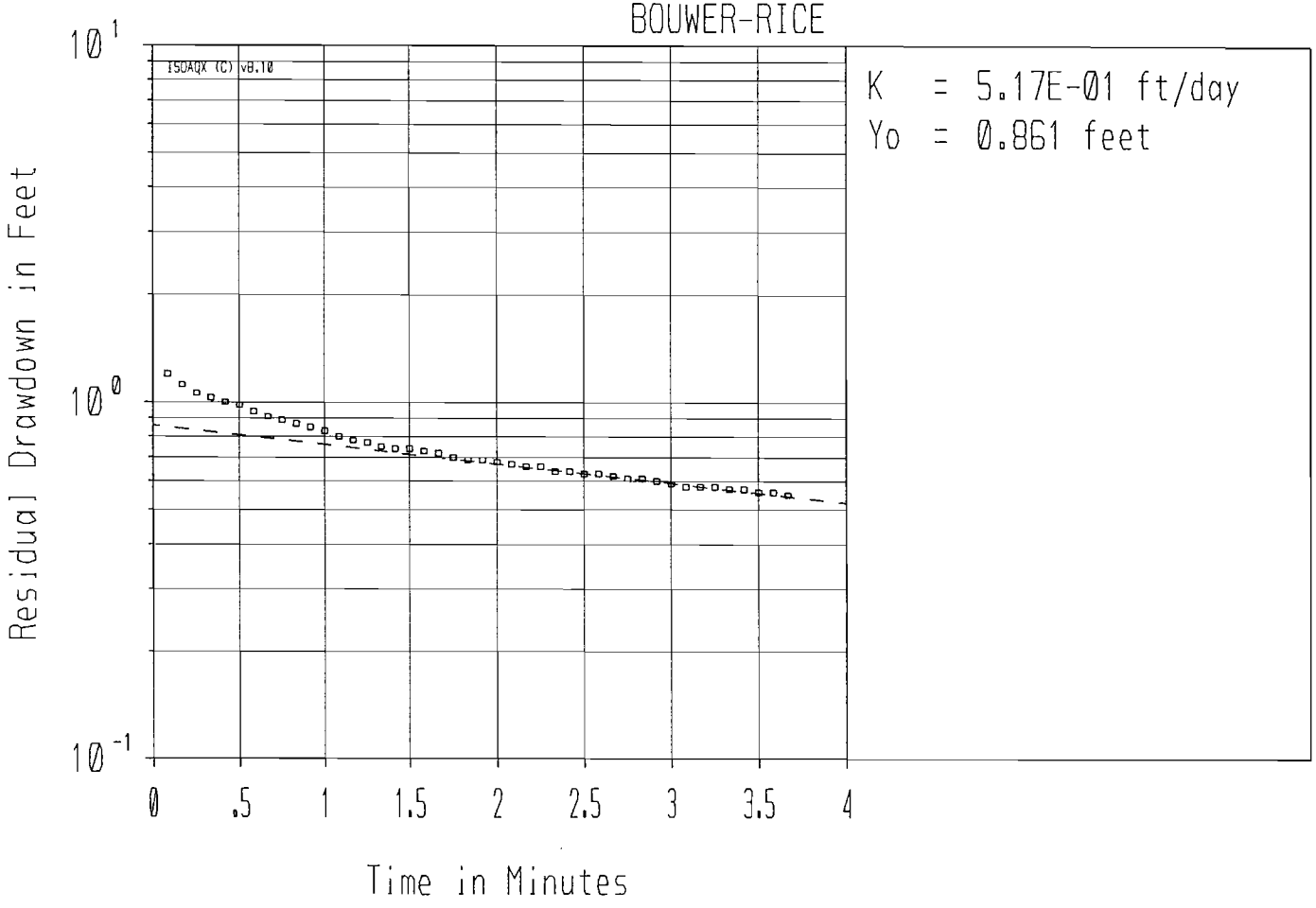
BOUWER-RICE



MW-4A

RISING HEAD TEST

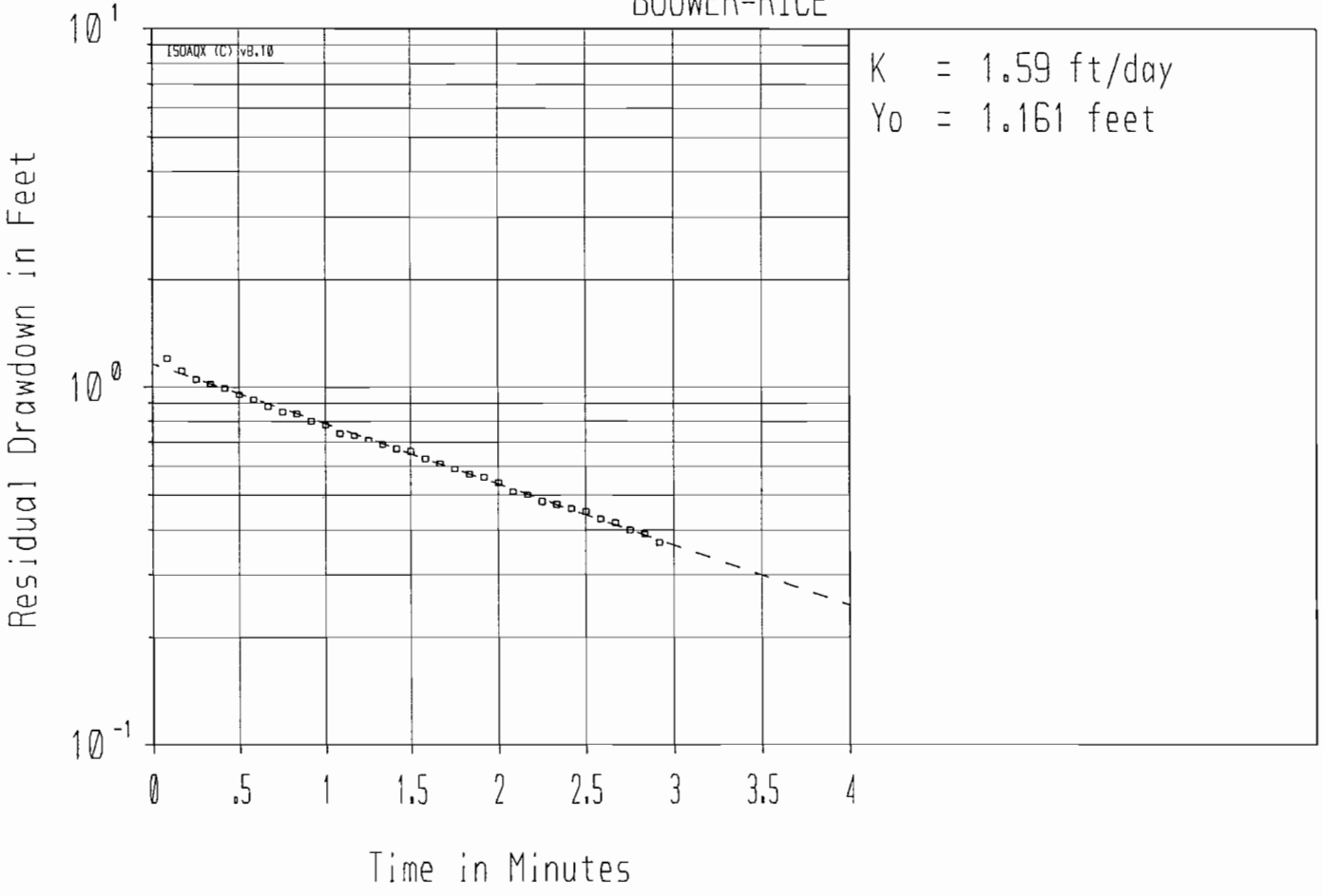
BOUWER-RICE



MW-4A

FALLING HEAD TEST

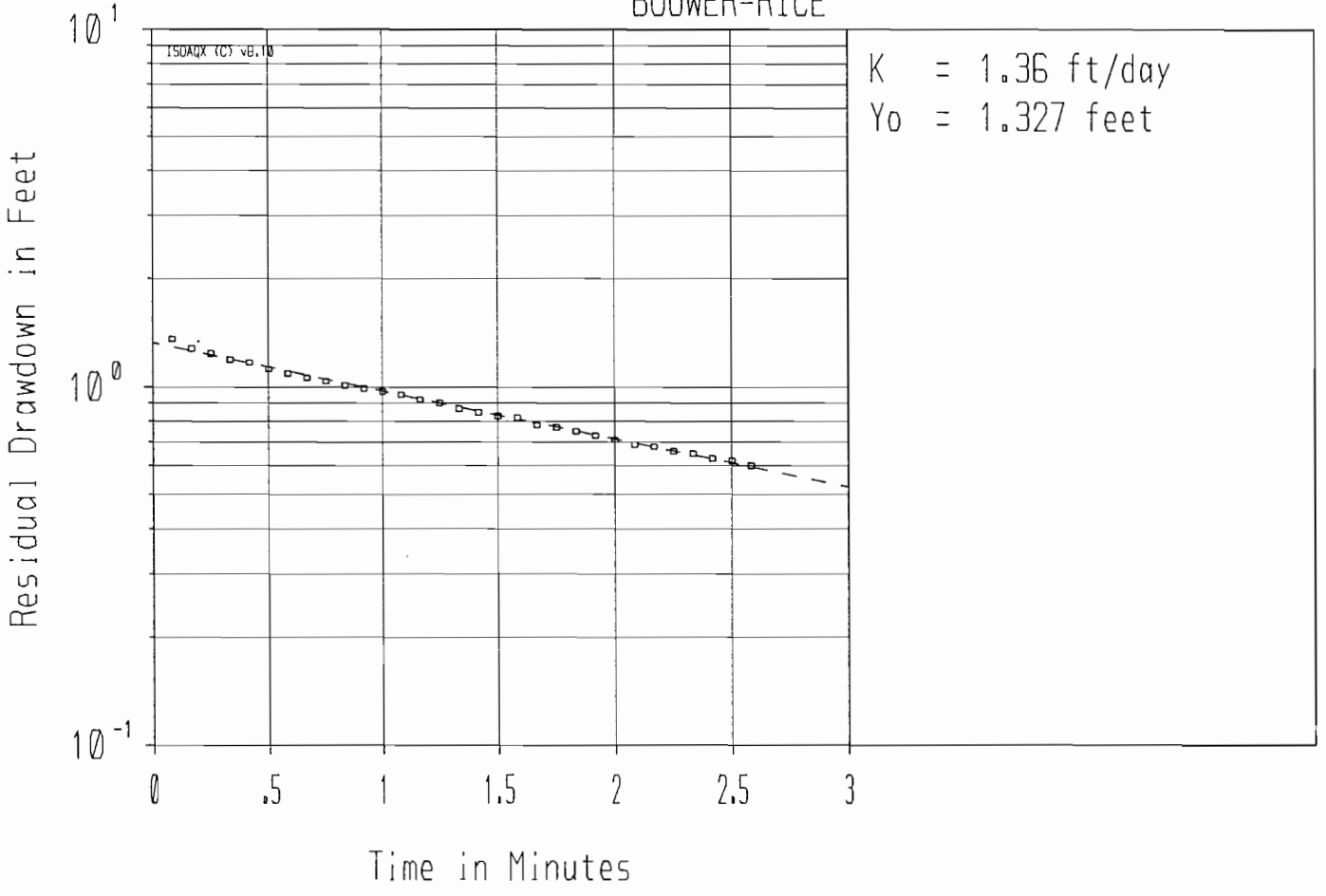
BOUWER-RICE



MW-4B

RISING HEAD TEST

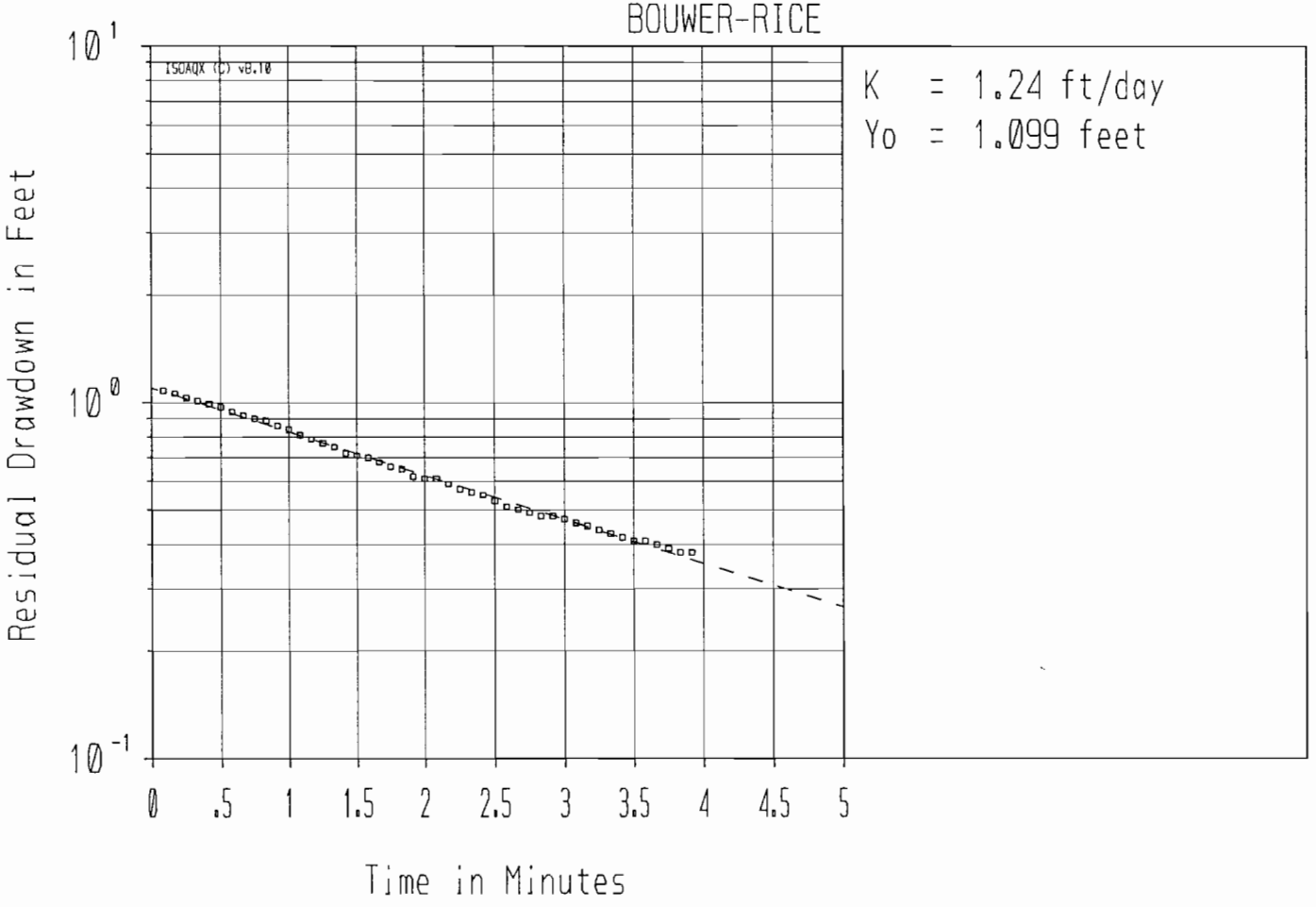
BOUWER-RICE



MW-4B

FALLING HEAD TEST

BOUWER-RICE



Appendix C

Appendix D

MEMORANDUM **CH2MHILL**

Air National Guard – Hancock Field Data Review

PREPARED FOR: John Mason/CH2M HILL

PREPARED BY: Heather Hodach/CH2M HILL

COPIES: Steven Paukner/CH2M HILL, Brian Wied/CH2M HILL

DATE: March 30, 2004

Introduction

The sampling event for the Air National Guard- Hancock Field site in Syracuse, New York, took place from January 5, 2004 to February 3, 2004. During this time, fifty-nine soil samples including three matrix spike/ matrix spike duplicates (MS/MSDs), two sediment, fifteen ground water including one MS/MSD, and two field blanks (FB) were collected. Four trip blanks (TB) were also included in this sampling event. These samples were sent to Severn Trent Laboratories, Inc. of Edison, New Jersey by overnight delivery for testing of selected volatile and semivolatile organics and metals. The data were reviewed to assess its accuracy, precision, and completeness using the criteria established in the *USEPA National Functional Guidelines for Data Review*. Data quality control (QC) summary forms and data reports were reviewed. Data qualifiers were added when the QC data indicated a bias. These changes and comments are noted below.

Standard data qualifiers were used as a means of classifying the data as to their conformance to QC requirements. The data qualifiers are defined as follows:

[UB] Undetected due to blank contamination. Used when the concentration of an analyte in the sample does not meet or exceed a 95% confidence interval as compared to the blank contamination.

[UJ] Indicates an estimated value. The analyte was not detected above the RL and is deemed to be biased low as a result of QC deficiencies.

[J] Estimated. The associated numerical value is the approximate concentration of the analyte in the sample. The estimated concentration is a result of a QC deficiency or an analyte being detected at a concentration above the method detection limit (MDL) but below the reporting limit (RL).

[R] The data is unusable due to serious deficiencies in analyzing the sample and meeting QC criteria. The presence or absence of the analyte cannot be certain.

Organic Analyses of Samples

The organic analyses were reviewed for the following QC requirements:

- Completeness (were all the samples analyzed for the requested analytical parameters)

- SD-02_0.5_011304
  - 2-butanone (J)

The method blank (MB) associated with this SDG contained a detected methylene chloride at 1.1 ug/Kg. The methylene chloride concentrations in samples SD-02_0.5_011304 and SD-01_.5_011304R did not exceed the 95% confidence interval (5 X blank concentration) of 5.5 ug/Kg and were therefore qualified and flagged "UB" as undetected due to blank contamination.

SDG W028

The MB associated with this SDG contained a detected concentration of methylene chloride at 1.8 ug/Kg, which did not exceed the 95% confidence interval of 9.0 ug/Kg. Therefore, the following samples and corresponding analytes were qualified and flagged "UB" as undetected due to blank contamination.

- SB-B1_.5_010504R, SB-B1_3_010504R, SB-B2_.5_010604R, SB-B2_3_010604R, SB-B2_5_010604R, SB-B3_3_010604R, SB-B3_5_010604R, SB-B5_.5_010604R, SB-B5_3_010604R, SB-B5_5_010604R, SB-B4_3_010604R, SB-B4_7_010604R
  - Methylene chloride (UB)

The ICV run on January 11, 2004, associated with this SDG did not meet the RRF minimum QC requirement of 0.05 for acetone and 2-butanone (see Table 1-1 in appendix). All non-detected analyte concentrations were qualified and flagged "R" as rejected due to initial calibration QC deficiencies. Detected analyte concentrations were qualified and flagged "J" as estimated in quantity. The following samples and corresponding analytes were qualified and flagged:

- SB-B1_.5_010504R, SB-B1_3_010504R, SB-B1_9_010504R, SB-B2_.5_010604R, SB-B2_3_010604R, SB-B2_5_010604R, SB-B4_.5_010604R,SB-B3_.5_010604R, SB-B3_3_010604R, SB-B3_5_010604R, SB-B5_.5_010604R, SB-B5_3_010604R, SB-B5_5_010604R, SB-B4_3_010604R, SB-B4_7_010604R, SB-B4_.5_010604D
  - acetone (J), 2-butanone (R)

Two of the continuing calibration verifications (CCV) associated with files K37306 and K37350 within this SDG contained analytes having a percent difference (%D) greater than the QC limit of ±25% (see Table 1-2 in appendix). Detected concentrations were qualified and flagged "J" as detected and estimated in quantity and the non-detected concentrations were qualified and flagged "UJ" as undetected and estimated in quantity. The following samples and corresponding analytes were qualified and flagged:

- SB-B4_.5_010604D
  - 4-methyl-2-pentanone (UJ), 2-hexanone (UJ)
- SB-B1_.5_010504R, SB-B1_3_010504R, SB-B1_9_010504R, SB-B2_.5_010604R, SB-B2_3_010604R, SB-B2_5_010604R, SB-B4_.5_010604R,SB-B3_.5_010604R, SB-B3_3_010604R, SB-B3_5_010604R, SB-B5_.5_010604R, SB-B5_3_010604R, SB-B5_5_010604R, SB-B4_3_010604R, SB-B4_7_010604R

- methylene chloride (UB)

The MB (KV019) associated with this SDG contained detected concentrations of methylene chloride at 1.7 ug/Kg, which did not exceed the 95% confidence interval of 8.5 ug/Kg. Therefore, the following samples and corresponding analytes were qualified and flagged "UB" as undetected due to blank contamination.

- SB4B-5-010804R
  - methylene chloride (UB)

The internal standards for samples within this SDG did not meet the minimum area criteria for one or more of the internal standard analytes. This indicates that the sensitivity and response of the instrument may not have been stable during the analysis of this sample Therefore, all of the analytes not previously qualified with detected concentrations were qualified and flagged "J" as detected and estimated in quantity and the non-detected concentrations were qualified and flagged "UJ" as undetected and estimated in quantity. The following samples were qualified and flagged:

- MW4B-0.5-01704R, MW4B-6-010704R, SB4D-3-010704R, SB4C-0.5-010804R, SB4C-5-010804R, MW4A-0.5-010804R, MW4A-11-010804R, SB4B-0.5-010804R, SB4A-0.5-010804R, SB1B-0.5-010804R

SDG W304

The ICV run on January 12, 2004 associated with this SDG exhibited RRF values below the QC limit of 0.05 for 2-butanone (see Table 1-1 in appendix). Detected analyte concentrations were qualified and flagged "J" as estimated in quantity. All non-detected analyte concentrations were qualified and flagged "R" as rejected due to initial calibration QC deficiencies. The following samples and corresponding analytes were qualified and flagged:

- MW-1A_3_010904R, MW-1A_8_010904R, SB-1A_4_010904R, SB-1C_2_010904R
  - 2-butanone (J)
- SB-1B_4_010904R, SB-1C_5_010904R
  - 2-butanone (R)

The MB associated with this SDG detected methylene chloride at 1.9ug/kg. The methylene chloride concentrations in the samples listed below did not exceed the 95% confidence interval of 9.5ug/kg and were therefore qualified and flagged "UB" as undetected due to blank contamination. The following samples and corresponding analytes were qualified and flagged:

- MW-1A_3_010904R, MW-1A_8_010904R, SB-1A_4_010904R, SB-1B_4_010904R, SB-1C_2_010904R
  - methylene chloride (UB)

The internal standards for samples within this SDG did not meet the minimum area criteria for one or more of the internal standard analytes. This indicates that the sensitivity and response of the instrument may not have been stable during the analysis of this sample

- 2,4-Dinitrophenol (UJ), Benzo(g,h,i)perylelne (UJ)

SDG W028

The ICV run on January 9,2004 associated with this SDG exhibited RRF values below the QC limit of 0.05 for pentachlorophenol and hexachlorocyclobutadiene (see Table 1-1 in appendix). Detected analyte concentrations were qualified and flagged "J" as estimated in quantity. All non-detected analyte concentrations were qualified and flagged "R" as rejected due to initial calibration QC deficiencies. The following samples and corresponding analytes were qualified and flagged:

- SB-B1_.5_010504R, SB-B1_3_010504R, SB-B1_9_010504R, SB-B2_.5_010604R, SB-B2_3_010604R, SB-B2_5_010604R, SB-B4_.5_010604R,SB-B3_.5_010604R, SB-B3_3_010604R, SB-B3_5_010604R, SB-B5_.5_010604R, SB-B5_3_010604R, SB-B5_5_010604R, SB-B4_3_010604R, SB-B4_7_010604R, SB-B4_.5_010604D

- pentachlorophenol (R), hexachlorocyclobutadiene (R)

SDG W237

The ICV run on January 14, 2004 associated with this SDG reported a %R for hexachlorocyclopentadiene of 31.1%, which exceeds the QC limit of ±30% (see Table 1-1 in appendix). Detected concentrations were qualified and flagged "J" as detected and estimated in quantity, while non-detected concentrations were qualified and flagged "UJ" as undetected and estimated due to initial calibration QC deficiencies. The following samples and corresponding analytes were qualified and flagged:

- MW4B-0.5-010704R, MW4B-3-010704R, MW4B-6-010704R, SB4D-0.5-010704R, SB4D-3-010704R, SB4D-7-010704R, SB4C-0.5-010804R, SB4C-3-010804R, SB4C-5-010804R, MW4A-0.5-010804R, MW4A-3-010804R, MW4A-11-010804RRE, SB4B-0.5-010804R, SB4B-3-010804RRE, SB4B-5-010804R, SB4A-0.5-010804R, SB1A-0.5-010804RRE, SB1B-0.5-010804RRE, SB1C-0.5-010804R, MW1A-0.5-010804R, MW1A-.5-010804RD

  - Hexachlorocyclopentadiene (UJ)

The MB associated with this SDG contained a detected concentration of methylene chloride at 76 ug/Kg, which did not exceed the 95% confidence interval of 380 ug/Kg. Therefore, sample MW4B-6-010704R was qualified and flagged "UB" as undetected due to blank contamination.

SDG W304

The CCV associated with file U14220 within this SDG contained %Ds greater than the ±25% QC limit for 2,4-dinitrophenol and 4,6-dinitro-2-methylphenol (see Tables 1-2 and 1-3 in appendix). Detected concentrations were qualified and flagged "J" as detected and estimated in quantity, while non-detected concentrations were qualified and flagged "UJ" as undetected and estimated due to QC deficiencies. The following samples and corresponding analytes were qualified and flagged:

- MW-1A_3_010904R, MW-1A_8_010904R, SB-1A_4_010904R, SB-1B_4_010904R, SB-1C_2_010904R, SB-1C_5_010904R

  - 2,4-dinitro-2-methylphenol (UJ), 4,6-dinitro-2-methylphenol

The initial calibration blank (ICB) for soils associated with this SDG contained a detected concentration of sodium at 402.0 ug/Kg. Samples containing concentrations that did not exceed the 95% confidence interval of 2010 ug/Kg were qualified and flagged "UB" as undetected due to blank contamination. The following samples and corresponding analytes were qualified and flagged:

- TP-4AA4_011204D, TP-4AB4_011204R, TP-4AC4_011204R, TP-4CA3_011204R, TP-4CB4_011204R, TP-4CC5_011204R, TP-4BA4.5_1104R, TP-4BB4.5_11204R, TP-4BC_011204R, SD-02_0.5_-11304, SD-01_.5_011304R
  - sodium (UB)

The ICB associated with water samples in this SDG contained a detected concentration of cadmium and copper at 0.7 ug/L and 3.0 ug/L, respectively. Samples containing concentrations that did not exceed the 95% confidence intervals of 3.5ug/L and 15ug/L, respectively, were qualified and flagged "UB" as undetected due to blank contamination. The following samples and corresponding analytes were qualified and flagged:

- SW-02-011304R
  - copper (UB)
- SW-01-011304R
  - cadmium (UB), copper (UB)

The continuing calibration blank (CCB) associated with the soil samples in this SDG contained a detected concentration of vanadium at 2.5 ug/Kg. Samples containing concentrations that did not exceed the 95% confidence interval of 12.5 ug/Kg were qualified and flagged "UB" as undetected due to blank contamination. The following samples and corresponding analytes were qualified and flagged:

- TP-4AA4_011204R, TP-4AA4_011204D, SD-02_0.5_011304, SD-01_.5_011304R
  - vanadium (UB)

The CCB associated with the water samples in this SDG contained detected concentrations of mercury and zinc at –0.104 ug/L and –16.1ug/L, respectively. Samples containing concentrations that did not exceed the 95% confidence intervals of 0.52 ug/Kg and 80.5 ug/Kg, respectively, were qualified and flagged "UB" as undetected due to blank contamination. The following samples and corresponding analytes were qualified and flagged:

- SW-02-011304R
  - mercury (UB), zinc (UB)
- SW-01-011304R
  - zinc (UB)

The MS associated with batch 15457 exhibited %Rs for antimony (38.5%), calcium (1731.5%), lead (74%), magnesium (174.3%), and potassium (63.9%) that were outside the QC limits (see Table 2-1 in appendix). Detected sample concentrations were qualified and flagged "J"

- MW4B-0.5-010704R
  - arsenic, beryllium, copper, lead, mercury, potassium (UB)
- MW4B-3-010704R, MW4B-6-010704R, SB4D-7-010704R, SB4C-3-010804R, SB4C-5-010804R, MW4A-0.5-010804R, MW4A-3-010804R, MW4A-11-010804R, SB4B-3-010804R, SB4B-5-010804R,
  - arsenic, beryllium, copper, lead, potassium (UB)
- SB4D-0.5-010704R, SB4D-3-010704R, SB4C-0.5-010804R, MW1A-.5-010804RD
  - arsenic, beryllium, cadmium, copper, mercury, potassium (UB)
- SB4D-0.5-010704R, SB4D-3-010704R, SB4C-0.5-010804R, SB4B-0.5-010804R, SB4A-0.5-010804R, SB1A-0.5-010804R, SB1B-0.5-010804R, SB1C-0.5-010804R, MW-0.5-010804R
  - arsenic, beryllium, cadmium, copper, potassium (UB)

The LCS associated this SDG contained %Rs for aluminum and antimony of 79% and 67.7%, respectively, which were below the QC limit of 80%-120%. A low LCS %R indicates a potential low analytical bias. Therefore, detected concentrations were qualified and flagged "J" as detected and estimated in quantity, while non-detected concentrations would be qualified "UJ" as undetected and estimated in quantity. The following samples and corresponding analytes were qualified and flagged:

- MW4B-0.5-010704R, MW4B-3-010704R, MW4B-6-010704R, SB4D-0.5-010704R, SB4D-3-010704R, SB4D-7-010704R, SB4C-0.5-010804R, SB4C-3-010804R, SB4C-5-010804R, MW4A-0.5-010804R, MW4A-3-010804R, MW4A-11-010804R, SB4B-0.5-010804R, SB4B-3-010804R, SB4B-5-010804R, SB4A-0.5-010804R, SB1A-0.5-010804R, SB1B-0.5-010804R, SB1C-0.5-010804R, MW1A-0.5-010804R, MW1A-.5-010804RD
  - aluminum (J)
  - antimony (UJ)

The field duplicate MW1A-0.5-010804RD within this SDG exhibited an relative percent difference (RPD) for chromium of 54.9%, and selenium of 200.0% when compared to native sample MW1A-0.5-010804R, which exceeded the QC limit of 20% for aqueous samples. The detected concentrations of affected analytes were qualified and flagged "J" as detected and estimated in quantity. Non detected concentrations were qualified and flagged "UJ". The following samples and corresponding analytes were qualified and flagged:

- MW1A-0.5-010804R, MW1A-0.5-010804RD
  - chromium (J)
  - selenium (UJ)

SDG W304

The ICB associated with this SDG contained detected concentrations of arsenic (4.5 ug/Kg), barium (2.5 ug/Kg), beryllium (0.2 ug/Kg), cadmium (0.8 ug/Kg), copper (5.3 ug/Kg) and lead (2.5 ug/Kg). Samples containing concentrations that did not exceed the 95% confidence

- copper (UB)

SDG X470

The ICB associated with this SDG contained detected concentrations of nickel and silver at 11.8 ug/L and 1.4 ug/L, respectively. Samples containing concentrations that did not exceed the 95% confidence intervals of 59 ug/L and 7.0 ug/L, respectively, were qualified and flagged "UB" as undetected due to blank contamination. The following samples and corresponding analytes were qualified and flagged:

- MW-16-020304R, MW-17-020304R, MW-18-020304R, MW-4B-020304R, MW-18-020304RD
  - nickel (UB)
- MW-16-020304R
  - silver (UB)

The preparation blank (PB) associated with this SDG contained a concentration of potassium at 130.2 ug/L. Samples containing concentrations that did not exceed the 95% confidence interval of 651.2 ug/L were qualified and flagged "UB" as undetected due to blank contamination. The following samples and corresponding analytes were qualified and flagged:

- MW-18-020304R, MW-16-020304RD, MW-17-020304RD, MW-18-020304RD, MW-4A,020304RD
  - potassium (UB)

The CCB associated with this SDG contained a detected concentration of potassium at 148.3 ug/Kg. Samples containing concentrations that did not exceed the 95% confidence intervals of 741.5ug/Kg, were qualified and flagged "UB" as undetected due to blank contamination. The following samples and corresponding analytes were qualified and flagged:

- MW-4B-020304RD
  - potassium (UB)

The field duplicate MW-18-020304RD within this SDG exhibited a RPD for arsenic, copper, and potassium of 32.4%, 129.7%, and 26.7%, respectively, when compared to native sample MW-18-020304R, which exceeded the QC limit of 20% for aqueous samples. The detected concentrations of arsenic and copper were qualified and flagged "J" as detected and estimated in quantity. Non detected concentrations were qualified and flagged "UJ". The following samples and corresponding analytes were qualified and flagged:

- MW-18-020304R, MW-18-020304RD
  - arsenic (J)
  - copper (J)

Attachment 1
QA/QC Data Tables

TABLE 1-2
Continuing Calibration RRFs and %Ds—SDGs W028, W517, W304,
Site Investigation – Air National Guard - Hancock

Analyte	CCV	
	RRF	%D
2-hexanone (W028 K37306)	--	27.4%
4-methyl-2-pentanone (W028 K37350)	--	26.6%
2-hexanone (W028 K37350)	--	28.1%
2,4-dinitrophenol (W517 S9376)	--	-29.0%
pyrene (W517 S9336)	--	-28.8%
benzo(g, h, i)perylene (W517 S9336)	--	-27.5%
2,4-dinitrophenol (W304 U14220)	--	-53.6%
4,6-dinitro-2-methylphenol (W304 U14220)	--	-38.3%

-- value was acceptable

TABLE 2-1
MS/MSD Percent Recoveries— SDGs W517, W028, W304
Site Investigation – Air National Guard - Hancock

Analyte	Batch (15457)		Batch (15423)		Batch (15435)	
	MS	MSD	MS	MSD	MS	MSD
antimony	38.5%	--	46.9%	--	55.7%	--
calcium	1731.5%	--	--	--	--	--
lead	74%	--	--	--	--	--
magnesium	174.3%	--	43.8%	--	--	--
potassium	63.9%	--	--	--	68.4%	--
chromium	--	--	--	--	54.9%	--
selenium	--	--	--	--	--	200%

-- value was acceptable

Appendix E

Air National Guard - Hancock Field Syracuse, NY
Volatile Organic Compounds - Soil February 2004

Sample ID	[redacted]	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	1,2-Dichloropropane	2-Butanone	2-Hexanone	4-Methyl-2-Pentanone	Acetone	Benzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Ethylbenzene	Methylene Chloride	Styrene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Vinyl Chloride	Xylene (Total)
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Soil Borings	*Standard	800	600		400				200		1000	200	60				2700	600	1700	1900	300					5500	100		1400	1500	300		700	200	1200
SB-B1(0.5)010504R		5.3U	1U	3.2U	5.3U	2.1U	2.1U	1U	5.3R	5.3UJ	5.3U	88J	1U	1U	4.2U	5.3U	5.3U	2.1U	5.3U	5.3U	5.3U	5.3U	5.3U	5.3U	5.3U	1.0 J	1.4 UB	5.3U	1U	1.0 J	5.3U	5.3U	1.0 J	5.3U	6
SB-B1(3)010504R		5.5UJ	1.1UJ	3.3UJ	5.5UJ	2.2UJ	2.2UJ	1.1UJ	5.5R	5.5UJ	5.5UJ	67J	1.1UJ	1.1UJ	4.4UJ	5.5UJ	5.5UJ	2.2UJ	5.5UJ	5.5UJ	5.5UJ	5.5UJ	5.5UJ	5.5UJ	5.5UJ	5.5UJ	4.4UJ	5.2 UB	5.5UJ	1.1UJ	5.5UJ	5.5UJ	5.5UJ	1.2 J	5.5UJ	3.1 J
SB-B1(9)010504R		5.9U	1.2U	3.6U	5.9U	2.4U	2.4U	1.2U	5.9R	5.9UJ	5.9U	28 J	1.2U	1.2U	4.7U	5.9U	5.9U	2.4U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	0.5 J	3.6U	5.9U	1.2U	1.3 J	5.9U	5.9U	1.9	5.9U	2.3 J
SB-B2(0.5)010604R		5.8U	1.2U	3.5U	5.8U	2.3U	2.3U	1.2U	5.8R	5.8UJ	5.8U	140 J	1.2U	1.2U	4.6U	5.8U	5.8U	2.3U	5.8U	5.8U	5.8U	5.8U	5.8U	5.8U	5.8U	0.8 J	1.7 UB	5.8U	1.2U	1.5 J	5.8U	5.8U	1.5	5.8U	3.8 J
SB-B2(3)010604R		5.4U	1.1U	3.2U	5.4U	2.1U	2.1U	1.1	5.4R	5.4U	5.4U	20 J	1.1U	1.1U	4.3U	5.4U	5.4U	2.1U	5.4U	5.4U	5.4U	5.4U	5.4U	5.4U	5.4U	0.4 J	4.8 UB	5.4U	1.1U	1.6 J	5.4U	5.4U	1.2	5.4U	2.2 J
SB-B2(5)010604R		5.8U	1.2U	3.4U	5.8U	2.3U	2.3U	1.2U	5.8R	5.8UJ	5.8U	24 J	1.2U	1.2U	4.6U	5.8U	5.8U	2.3U	5.8U	5.8U	5.8U	5.8U	5.8U	5.8U	5.8U	0.4 J	2.8 UB	5.8U	1.2U	1.7J	5.8U	5.8U	1.7	5.8U	2.2 J
SB-B3(0.5)010604R		5.8U	1.2U	3.5U	5.8U	2.3U	2.3U	1.2U	5.8R	5.8UJ	5.8U	64 J	1.2U	1.2U	4.6U	5.8U	5.8U	2.3U	5.8U	5.8U	5.8U	5.8U	5.8U	5.8U	5.8U	0.5 J	3.5U	5.8U	1.2U	1.9 J	5.8U	5.8U	1.4	5.8U	1.9 J
SB-B3(3)010604R		5.9U	1.2U	3.6U	5.9U	2.4U	2.4U	1.2U	5.9R	5.9UJ	5.9U	38J	1.2U	1.2U	4.8U	5.9U	5.9U	2.4U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	0.7 J	3.4 UB	5.9U	1.2U	1.8 J	5.9U	5.9U	2.2	5.9U	3.0 J
SB-B3(5)010604R		6.3U	1.2U	3.8U	6.3U	2.5U	2.5U	1.2U	6.3R	6.3UJ	6.3U	29J	1.2U	1.2U	5U	6.3U	6.3U	2.5U	6.3U	6.3U	6.3U	6.3U	6.3U	6.3U	6.3U	0.6 J	2.8 UB	6.3U	1.2U	2.0 J	6.3U	6.3U	2.1	6.3U	2.9 J
SB-B4(0.5)010604R		6U	1.2U	3.6U	6U	2.4U	2.4U	1.2U	6.0 R	6UJ	6U	27 J	1.2U	1.2U	4.8U	6U	6U	2.4U	6U	6U	6U	6U	6U	6U	6U	4.8U	3.6U	6U	1.2U	2.1 J	6U	6U	1.4	6U	6U
SB-B4(0.5)010604D		5.7U	1.1U	3.4U	5.7U	2.3U	2.3U	1.1U	5.7R	5.7UJ	5.7UJ	45J	1.1U	1.1U	4.5U	5.7U	5.7U	2.3U	5.7U	5.7U	5.7U	5.7U	5.7U	5.7U	5.7U	4.5U	3.4U	5.7U	1.1U	5.7U	5.7U	5.7U	1.1U	5.7U	5.7U
SB-B4(3)010604R		5.9U	1.2U	3.5U	5.9U	2.3U	2.3U	1.2U	5.9R	5.9UJ	5.9U	20J	1.2U	1.2U	4.7U	5.9U	5.9U	2.3U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	4.7U	8.2UB	5.9U	1.2U	2.0 J	5.9U	5.9U	1.5	5.9U	5.9U
SB-B4(7)010604R		5.3U	1.1U	3.2U	5.3U	2.1U	2.1U	1.1U	5.3R	5.3UJ	5.3U	45J	1.1U	1.1U	2.0 J	5.3U	5.3U	2.1U	5.3U	5.3U	5.3U	5.3U	5.3U	5.3U	5.3U	0.6 J	2.7 UB	5.3U	1.1U	2.1 J	5.3U	5.3U	1.6	5.3U	2.7 J
SB-B5(0.5)010604R		6.1U	1.2U	3.6U	6.1U	2.4U	2.4U	1.2U	6.1R	6.1UJ	6.1U	31J	1.2U	1.2U	4.8U	6.1U	6.1U	2.4U	6.1U	6.1U	6.1U	6.1U	6.1U	6.1U	6.1U	4.8U	2.0 UB	6.1U	1.2U	6.1U	6.1U	6.1U	1.1 J	6.1U	6.1U
SB-B5(3)010604R		6U	1.2U	3.6U	6U	2.4U	2.4U	1.2U	6R	6UJ	6U	40J	1.2U	1.2U	4.8U	6U	6U	2.4U	6U	6U	6U	6U	6U	6U	6U	0.5 J	1.8 UB	6U	1.2U	2.1 J	6U	6U	2.1	6U	3.0 J
SB-B5(5)010604R		6.2U	1.2U	3.7U	6.2U	2.5U	2.5U	1.2U	6.2R	6.2UJ	6.2U	43J	1.2U	1.2U	5U	6.2U	6.2U	2.5U	6.2U	6.2U	6.2U	6.2U	6.2U	6.2U	6.2U	0.5 J	5.0 UB	6.2U	1.2U	2.3 J	6.2U	6.2U	2.2	6.2U	3.1 J
SB-1A(0.5)010804R		7U	1.4U	4.2U	7U	2.8U	2.8U	1.4U	7R	7U	7U	7R	1.4U	1.4U	5.6U	7U	7U	2.8U	7U	7U	7U	7U	7U	7U	7U	5.6U	4.2U	7U	1.4U	7U	7U	7U	1.4U	7U	7U
SB-1A(4)010904R		6.3U	1.3U	3.8U	6.3U	2.5U	2.5U	1.3U	19J	6.3U	6.3U	6.3U	1.3U	1.3U	5.1U	6.3U	6.3U	2.5U	6.3U	6.3U	6.3U	6.3U	6.3U	6.3U	6.3U	5.1U	1.6 UB	6.3U	1.3U	6.3U	6.3U	6.3U	1.3U	6.3U	6.3U
SB-1B(0.5)010804R		7.2UJ	1.4UJ	4.3UJ	7.2UJ	2.9UJ	2.9UJ	1.4UJ	7.2R	7.2UJ	7.2UJ	74J	1.4UJ	1.4UJ	5.7UJ	7.2UJ	7.2UJ	2.9UJ	7.2UJ	7.2UJ	7.2UJ	7.2UJ	7.2UJ	7.2UJ	7.2UJ	5.7UJ	4.3UJ	7.2UJ	1.4UJ	7.2UJ	7.2UJ	7.2UJ	1.4UJ	7.2UJ	7.2UJ
SB-1B(4)010904R		6.5U	1.3U	3.9U	6.5U	2.6U	2.6U	1.3U	6.5R	6.5U	6.5U	64	1.3U	1.3U	5.2U	6.5U	6.5U	2.6U	6.5U	6.5U	6.5U	6.5U	6.5U	6.5U	6.5U	5.2U	1.8 UB	6.5U	1.3U	6.5U	6.5U	6.5U	1.3U	6.5U	6.5U
SB-1C(0.5)010804R		6.7U	1.3U	4U	6.7U	2.7U	2.7U	1.3U	6.7R	6.7U	6.7U	74	1.3U	1.3U	5.4U	6.7U	6.7U	2.7U	6.7U	6.7U	6.7U	6.7U	6.7U	6.7U	6.7U	5.4U	4U	6.7U	1.3U	6.7U	6.7U	6.7U	1.3U	6.7U	6.7U
SB-1C(2)010904R		6.2U	1.2U	3.7U	6.2U	2.5U	2.5U	1.2U	14J	6.2U	6.2U	150	1.2U	1.2U	4.9U	6.2U	6.2U	2.5U	6.2U	6.2U	6.2U	6.2U	6.2U	6.2U	6.2U	4.9U	2.2 UB	6.2U	1.2U	6.2U	6.2U	6.2U	1.2U	6.2U	6.2U
SB-1C(5)010904R		5.9UJ	1.2UJ	3.5UJ	5.9UJ	2.3UJ	2.3UJ	1.2UJ	5.9R	5.9UJ	5.9UJ	87J	1.2UJ	1.2UJ	4.7UJ	5.9UJ	5.9UJ	2.3UJ	5.9UJ	5.9UJ	5.9JU	5.9UJ	5.9UJ	5.9UJ	5.9UJ	4.7UJ	3.5UJ	5.9UJ	1.2UJ	5.9UJ	5.9UJ	5.9UJ	1.2UJ	5.9UJ	5.9UJ
SB-4A(0.5)010804R		5.5UJ	1.1UJ	3.3UJ	5.5UJ	2.2UJ	2.2UJ	1.1UJ	5.5R	5.5UJ	5.5UJ	22J	1.1UJ	1.1UJ	4.4UJ	5.5UJ	5.5UJ	2.2UJ	5.5UJ	5.5UJ	5.5UJ	5.5UJ	5.5UJ	5.5UJ	5.5UJ	4.4UJ	0.6 UB	5.5UJ	1.1UJ	5.5UJ	5.5UJ	5.5UJ	1.1UJ	5.5UJ	5.5UJ
SB-4B(0.5)010804R		6.6UJ	1.3UJ	4UJ	6.6UJ	2.6UJ	2.6UJ	1.3UJ	6.6R	6.6UJ	6.6UJ	140J	1.3UJ	1.3UJ	5.3UJ	6.6UJ	6.6UJ	2.6UJ	6.6UJ	6.6UJ	6.6UJ	6.6UJ	6.6UJ	6.6UJ	6.6UJ	5.3UJ	4UJ	6.6UJ	1.3UJ	6.6UJ	6.6UJ	6.6UJ	1.3UJ	6.6UJ	6.6UJ
SB-4B(3)010804R		6.2U	1.2U	3.7U	6.2U	2.5U	2.5U	1.2U	6.2R	6.2U	6.2U	33J	1.2U	1.2U	5U	6.2U	6.2U	2.5U	6.2U	6.2U	6.2U	6.2U	6.2U	6.2U	6.2U	5U	3.7U	6.2U	1.2U	6.2U	6.2U	6.2U	1.2U	6.2U	6.2U
SB-4B(5)010804R		5.9U	1.2U	3.5U	5.9U	2.4U	2.4U	1.2U	5.9R	5.9U	5.9U	26	1.2U	1.2U	4.7U	5.9U	5.9U	2.4U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	4.7U	0.9 UB	5.9U	1.2U	5.9U	5.9U	5.9U	1.2U	5.9U	5.9U
SB-4C(0.5)010804R		6.6UJ	1.3UJ	4UJ	6.6UJ	2.6UJ	2.6UJ	1.3UJ	6.6R	6.6UJ	6.6UJ	36J	1.3UJ	1.3UJ	5.3UJ	6.6UJ	6.6UJ	2.6UJ	6.6UJ	6.6UJ	6.6UJ	6.6UJ	6.6UJ	6.6UJ	6.6UJ	5.3UJ	4UJ	6.6UJ	1.3UJ	6.6UJ	6.6UJ	6.6UJ	1.3UJ	6.6UJ	6.6UJ
SB-4C(3)010804R		5.7U	1.1U	3.4U	5.7U	2.3U	2.3U	1.1U	5.7R	5.7U	5.7U	18J	1.1U	1.1U	4.5U	5.7U	5.7U	2.3U	5.7U	5.7U	5.7U	5.7U	5.7U	5.7U	5.7U	4.5U	3.4U	5.7U	1.1U	5.7U	5.7U	5.7U	1.1U	5.7U	5.7U
SB-4C(5)010804R		5.9UJ	1.2UJ	3.5UJ	5.9UJ	2.4UJ	2.4UJ	1.2UJ	5.9R	5.9UJ	5.9UJ	32J	1.2UJ	1.2UJ	4.7UJ	5.9UJ	5.9UJ	2.4UJ	5.9UJ	5.9UJ	5.9UJ	5.9UJ	5.9UJ	5.9UJ	5.9UJ	4.7UJ	3.5UJ	5.9UJ	1.2UJ	5.9UJ	5.9UJ	5.9UJ	1.2UJ	5.9UJ	5.9UJ
SB-4D(0.5)010704R		6U	1.2U	3.6U	6U	2.4U	2.4U	1.2U	6R	6U	6U	6R	1.2U	1.2U	4.8U	6U	6U	2.4U	6U	6U	6U	6U	6U	6U	6U	4.8U	3.6U	6U	1.2U	6U	6U	6U	1.2U	6U	6U
SB-4D(3)010704R		6.2UJ	1.2UJ	3.8UJ	6.2UJ	2.5UJ	2.5UJ	1.2UJ	6.2R	6.2UJ	6.2UJ	34J	1.2UJ	1.2UJ	5UJ	6.2UJ	6.2UJ	2.5UJ	6.2UJ	6.2UJ	6.2UJ	6.2UJ	6.2UJ	6.2UJ	6.2UJ	5UJ	1.0 UB	6.2UJ	1.2UJ	1.4 J	6.2UJ	6.2UJ	1.2UJ	6.2UJ	6.2UJ
SB-4D(7)010704R		5.9U	1.2U	3.5U	5.9U	2.3U	2.3U	1.2U	5.9R	5.9U	5.9U	19J	1.2U	1.2U	4.7U	5.9U	5.9U	2.3U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	4.7U	3.5U	5.9U	1.2U	1.1 J	5.9U	5.9U	1.2U	5.9U	5.9U
Monitoring Well Borings																																			
MW-1A(0.5)010804R		6.3U	1.3U	3.8U	6.3U	2.5U	2.5U	1.3U	6.3R	6.3U	6.3U	22J	1.3U	1.3U	5U	6.3U	6.3U	2.5U	6.3U	6.3U	6.3U	6.3U	6.3U	6.3U	6.3U	5U	3.8U	6.3U	1.3U	6.3U	6.3U	6.3U	1.3U	6.3U	6.3U
MW-1A(0.5)010804RD		6.4U	1.3U	3.8U	6.4U	2.5U	2.5U	1.3U	6.4R	6.4U	6.4U	84	1.3U	1.3U	5.1U	6.4U	6.4U	2.5U	6.4U	6.4U	6.4U	6.4U	6.4U	6.4U	6.4U	5.1U	3.8U	6.4U	1.3U	6.4U	6.4U	6.4U	1.3U	6.4U	6.4U
MW-1A(3)010904R		5.8U	1.2U	3.5U	5.8U	2.3U	2.3U	1.2U	14J	5.8U	5.8U	65	1.3	1.2U	4.6U	5.8U	5.8U	2.3U	5.8U	5.8U	5.8U	5.8U	1.0 J	5.8U	5.8U	4.6U	0.6 UB	5.8U	1.2U	1.2 J	5.8U	5.8U	1.2U	5.8U	5.8U
MW-1A(8)010904R		6.1U	1.2U	3.7U	6.1U	2.4U	2.4U	1.2U	11J	6.1U	6.1U	6.1U	1.2U	1.2U	4.9U	6.1U	6.1U	2.4U	6.1U	6.1U	6.1U	6.1U	6.1U	6.1U	6.1U	4.9U	1.7 UB	6.1U	1.2U	6.1U	6.1U	6.1U	1.2U	6.1U	6.1U
MW-4A(0.5)010804R		5.7UJ	1.1UJ	3.4UJ	5.7UJ	2.3UJ	2.3UJ	1.1UJ	5.7R	5.7UJ	5.7UJ	52J	1.1UJ	1.1UJ	4.6UJ	5.7UJ	5.7UJ	2.3UJ	5.7UJ	5.7UJ	5.7UJ	5.7UJ	5.7UJ	5.7UJ	5.7UJ	4.6UJ	3.4UJ	5.7UJ	1.1UJ	1.1 J	5.7UJ	5.7UJ	1.1UJ	5.7UJ	5.7UJ
MW-4A(3)010804R		6.3U	1.3U	3.8U	6.3U	2.5U	2.5U	1.3U	6.3R	6.3U	6.3U	24J	1.3U	1.3U	5U	6.3U	6.3U	2.5U	6.3U	6.3U	6.3U	6.3U	6.3U	6.3U	6.3U	5U	1.4 UB	6.3U	1.3U	6.3U	6.3U	6.3U	1.3U	6.3U	6.3U
MW-4A(11)010804R		5.9UJ	1.2UJ	3.6UJ	5.9UJ	2.4UJ	2.4UJ	1.2UJ	5.9R	5.9UJ	5.9UJ	29J	1.2UJ	1.2UJ	4.7UJ	5.9UJ	5.9UJ	2.4UJ	5.9UJ	5.9UJ	5.9UJ	5.9UJ	5.9UJ	5.9UJ	5.9UJ	4.7UJ	3.6UJ	5.9UJ	1.2UJ	5.9UJ	5.9UJ	5.9UJ	1.2UJ	5.9UJ	5.9UJ
MW-4B(0.5)010704R		6.8UJ	1.4UJ	4UJ	6.8UJ	2.7UJ	2.7UJ	1.4UJ	6.8 R	6.8UJ	6.8UJ	60J	1.4UJ	1.4UJ	5.4UJ	6.8UJ	6.8UJ	2.7UJ	6.8UJ	6.8UJ	6.8UJ	6.8UJ	6.8UJ	6.8UJ	6.8UJ	5.4UJ	4UJ	6.8UJ	1.4UJ	1.9 J	6.8UJ	6.8UJ	1.4UJ	6.8UJ	6.8UJ
MW-4B(3)010704R		5.7U	1.1U	3.4U	5.7U	2.3U	2.3U	1.1U	5.7R	5.7U	5.7U	21J	1.1U	1.1U	4.6U	5.7U	5.7U	2.3U	5.7U	5.7U	5.7U	5.7U	5.7U	5.7U	5.7U	4.6U	0.7 UB	5.7U	1.1U	5.7U	5.7U	5.7U	1.1U	5.7U	5.7U
MW-4B(6)010704R		5.9UJ	1.2UJ	3.6UJ	5.9UJ	2.4UJ	2.4UJ	1.2UJ	5.9R	5.9UJ	5.9UJ	23J	1.2UJ	1.2UJ	4.7UJ	5.9UJ	5.9UJ	2.4UJ	5.9UJ	5.9UJ	5.9UJ	5.9UJ	5.9UJ	5.9UJ	5.9UJ	4.7UJ	2.5 UB	5.9UJ	1.2UJ	5.9UJ	5.9UJ	5.9UJ	1.2UJ	5.9UJ	5.9UJ

Air National Guard - Hancock Field Syracuse, NY
Volatile Organic Compounds - Soil February 2004

Sample ID		1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	1,2-Dichloropropane	2-Butanone	2-Hexanone	4-Methyl-2-Pentanone	Acetone	Benzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Ethylbenzene	Methylene Chloride	Styrene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Vinyl Chloride	Xylene (Total)
	Units	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Soil Borings	*Standard	800	600		400				200		1000	200	60				2700	600	1700	1900	300					5500	100		1400	1500	300		700	200	1200
Test Pit Samples																																			
TP-4A(A4)011204R		6.4U	1.3U	3.9U	6.4U	2.6U	2.6U	1.3U	6.4R	6.4U	6.4U	6.4U	1.3U	1.3U	5.2U	6.4U	6.4U	2.6U	6.4U	6.4U	6.4U	6.4U	6.4U	6.4U	6.4U	5.2U	3.9U	6.4U	1.3U	6.4U	6.4U	6.4U	1.3U	6.4U	6.4U
TP-4A(A4)011204D		6.1U	1.2U	3.6U	6.1U	2.4U	2.4U	1.2U	6.1R	6.1U	6.1U	46	1.2U	1.2U	4.9U	6.1U	6.1U	2.4U	6.1U	6.1U	6.1U	6.1U	6.1U	6.1U	6.1U	4.9U	12	6.1U	1.2U	6.1U	6.1U	6.1U	1.2U	6.1U	6.1U
TP-4A(B4)011204R		5.6U	1.1U	3.4U	5.6U	2.2U	2.2U	1.1U	5.6R	5.6U	5.6U	22	1.1U	1.1U	4.5U	5.6U	5.6U	2.2U	5.6U	5.6U	5.6U	5.6U	5.6U	5.6U	5.6U	4.5U	8	5.6U	0.6 J	5.6U	5.6U	5.6U	1.1U	5.6U	5.6U
TP-4A(C4)011204R		6.4U	1.3U	3.8U	6.4U	2.5U	2.5U	1.3U	6.4R	6.4U	6.4U	45	1.3U	1.3U	5.1U	6.4U	6.4U	2.5U	6.4U	6.4U	6.4U	6.4U	6.4U	6.4U	6.4U	5.1U	8.9	6.4U	1.3U	6.4U	6.4U	6.4U	1.3U	6.4U	6.4U
TP-4B(A4.5)11204R		5.7U	1.1U	3.4U	5.7U	2.3U	2.3U	1.1U	5.7R	5.7U	5.7U	23	1.1U	1.1U	4.5U	5.7U	5.7U	2.3U	5.7U	5.7U	5.7U	5.7U	5.7U	5.7U	5.7U	4.5U	12	5.7U	1.1U	5.7U	5.7U	5.7U	1.1U	5.7U	5.7U
TP-4B(B4.5)11204R		5.6U	1.1U	3.3U	5.6U	2.2U	2.2U	1.1U	5.6R	5.6U	5.6U	37	1.1U	1.1U	4.4U	5.6U	5.6U	2.2U	5.6U	5.6U	5.6U	5.6U	5.6U	5.6U	5.6U	4.4U	18	5.6U	1.1U	5.6U	5.6U	5.6U	1.1U	5.6U	5.6U
TP-4B(C5)011204R		5.6U	1.1U	3.4U	5.6U	2.2U	2.2U	1.1U	5.6R	5.6U	5.6U	39	1.1U	1.1U	4.5U	5.6U	5.6U	2.2U	5.6U	5.6U	5.6U	5.6U	5.6U	5.6U	5.6U	4.5U	12	5.6U	1.1U	5.6U	5.6U	5.6U	1.1U	5.6U	5.6U
TP-4C(A3)011204R		5.9U	1.2U	3.6U	5.9U	2.4U	2.4U	1.2U	5.9R	5.9U	5.9U	34	1.2U	1.2U	4.7U	5.9U	5.9U	2.4U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	4.7U	9.4	5.9U	1.2U	5.9U	5.9U	5.9U	1.2U	5.9U	5.9U
TP-4C(B4)011204R		6.2U	1.2U	3.7U	6.2U	2.5U	2.5U	1.2U	6.2R	6.2U	6.2U	73	1.2U	1.2U	4.9U	6.2U	6.2U	2.5U	6.2U	6.2U	6.2U	6.2U	6.2U	6.2U	6.2U	4.9U	16	6.2U	210	6.2U	6.2U	6.2U	1.2U	6.2U	6.2U
TP-4C(C5)011204R		6U	1.2U	3.6U	6U	2.4U	2.4U	1.2U	6R	6U	6U	41	1.2U	1.2U	4.8U	6U	6U	2.4U	6U	6U	6U	6U	6U	6U	6U	4.8U	20	6U	1.2U	6U	6U	6U	1.2U	6U	6U
Sediment																																			
SD-01(0.5)011304R		8.6U	1.7U	5.2U	8.6U	3.4U	3.4U	1.7U	8.6R	8.6U	8.6U	92	1.7U	1.7U	6.9U	8.6U	8.6U	3.4U	8.6U	8.6U	8.6U	8.6U	8.6U	8.6U	8.6U	6.9U	1.2 UB	8.6U	1.7U	8.6U	8.6U	8.6U	1.7U	8.6U	8.6U
SD-02(0.5)011304R		7.9U	1.6U	4.7U	7.9U	3.1U	3.1U	1.6U	23J	7.9U	7.9U	110	1.6U	1.6U	6.3U	7.9U	7.3 J	3.1U	7.9U	7.9U	7.9U	7.9U	7.9U	7.9U	7.9U	6.3U	4.7 UB	7.9U	0.7 J	7.9U	7.9U	7.9U	1.6U	7.9U	7.9U
QA/QC																																			
FB-010504R (ug/L)		5U	1U	3U	5U	2U	2U	1U	5U	5U	5U	5U	1U	1U	4U	5U	5U	2U	5U	5U	5U	5U	5U	5U	5U	4U	3U	5U	1U	5U	5U	5U	1U	5U	5U
TB-010604R (ug/L)		5U	1U	3U	5U	2U	2U	1U	5U	5U	5U	5U	1U	1U	4U	5U	5U	2U	5U	5U	5U	5U	5U	5U	5U	4U	3U	5U	1U	5U	5U	5U	1U	5U	5U
TB-010904R (ug/L)		5U	1U	3U	5U	2U	2U	1U	5U	5U	5U	5U	1U	1U	4U	5U	5U	2U	5U	5U	5U	5U	5U	5U	5U	4U	3U	5U	1U	5U	5U	5U	1U	5U	5U
TB-010804R (ug/L)		5U	1U	3U	5U	2U	2U	1U	5U	5U	5U	5U	1U	1U	4U	5U	5U	2U	5U	5U	5U	5U	5U	5U	5U	4U	3U	5U	1U	5U	5U	5U	1U	5U	5U
TB-011304R (ug/L)		5U	1U	3U	5U	2U	2U	1U	5U	5U	5U	5U	1U	1U	4U	5U	5U	2U	5U	5U	5U	5U	5U	5U	5U	4U	3U	5U	1U	5U	5U	5U	1U	5U	5U

J - Estimated value
U - Compound not detected, reporting limit shown
UJ - Undetected due and biased low due to QA/QC deficiencies, reporting limit shown
R - Result rejected due to serious deficiencies in analysis. The presence of absence of the analyte cannot be verified.

* - NYSDEC Recommended Soil Cleanup Objective (ppb)
Background Borings - SB-B series
Site 1 Borings - SB-1 series
Site 1 Wells - MW-1 series
Site 4 Borings - SB-4 series
Site 4 Wells - MW-4 series
Site 4 Test Pits - TP-4 series

Air National Guard - Hancock Field Syracuse, NY
Semi-Volatile Organic Compounds - Soil February 2004

	2,4-Dimethylphenol	2-Methylnaphthalene	2-Methylphenol	3-Nitroaniline	4-Bromophenyl-phenylether	4-Chlorophenyl-phenylether	4-Methylphenol	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	bis(2-Ethylhexyl)phthalate	Butylbenzylphthalate	Carbazole	Chrysene	Dibenz(a,h)anthracene	Dibenzofuran	Dimethylphthalate	Di-n-butylphthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorocyclopentadiene	Indeno(1,2,3-cd)pyrene	Isophorone	Naphthalene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
Units	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
***Standard**		36400	100 or MDL				900	50000	41000	50000	224 or MDL	61 or MDL	1100	50000	1100	50000	50000		400	14 or MDL	6200	2000	8100	50000	50000	410		3200	4400	13000	1000 or MDL	50000	30 or MDL	50000
SB-B1(0.5)010504R	11 J	140 J	400U	810U	400U	400U	35 J	290 J	120 J	1100	2400	2200	1700	990	2300	94 J	400U	620	2600	330	330 J	400U	400U	5600	400 J	40U	400R	1100	400U	120 J	1600R	5300	400U	4600
SB-B1(3)010504R	390U	390U	390U	780U	390U	390U	390U	390U	390U	390U	39U	39U	8.2 J	390U	12 J	390U	390U	390U	390U	39U	390U	390U	390U	390U	390U	39U	390R	39U	390U	390U	1600R	390U	390U	390U
SB-B1(9)010504R	400U	400U	400U	810U	400U	400U	400U	400U	400U	400U	40U	40U	40U	400U	40U	120 J	400U	400U	400U	40U	400U	400U	400U	400U	400U	40U	400R	40U	400U	400U	1600R	400U	400U	400U
SB-B2(0.5)010604R	390U	390U	390U	770U	390U	390U	390U	23 J	20 J	70 J	230	220	140	120 J	220	390U	390U	33 J	260 J	89	10 J	390U	390U	480	20 J	39U	390R	120	390U	390U	1500R	300 J	390U	420
SB-B2(3)010604R	380U	380U	380U	760U	380U	380U	380U	380U	380U	380U	38U	38U	38U	380U	38U	120 J	380U	380U	380U	38U	380U	380U	380U	380U	380U	38U	380R	38U	380U	380U	1500R	380U	380U	380U
SB-B2(5)010604R	400U	400U	400U	810U	400U	400U	400U	400U	400U	400U	40U	40U	40U	400U	40U	400U	400U	400U	400U	40U	400U	400U	400U	400U	400U	40U	400R	40U	400U	400U	1600R	400U	400U	400U
SB-B3(0.5)010604R	410U	410U	410U	810U	410U	410U	410U	10 J	30 J	44 J	180	180	130	84 J	190	410U	410U	22 J	190 J	41U	8.2 J	410U	410U	360 J	410U	41U	410R	85	410U	410U	1600R	170 J	410U	310 J
SB-B3(3)010604R	400U	400U	400U	790U	400U	400U	400U	400U	400U	400U	40U	40U	40U	400U	40U	400U	400U	400U	400U	40U	400U	400U	400U	400U	400U	40U	400R	40U	400U	400U	1600R	400U	400U	400U
SB-B3(5)010604R	430U	430U	430U	860U	430U	430U	430U	430U	430U	430U	43U	43U	43U	430U	43U	430U	430U	430U	430U	43U	430U	430U	430U	430U	430U	43U	430R	43U	430U	430U	1700R	430U	430U	430U
SB-B4(0.5)010604R	400U	400U	400U	800U	400U	400U	400U	400U	400U	18 J	81	89	78	42 J	100	400U	400U	400U	110 J	40U	400U	400U	400U	190 J	400U	40U	400R	49	400U	400U	1600R	74 J	400U	160 J
SB-B4(0.5)010604D	400U	400U	400U	800U	400U	400U	400U	9.0J	18J	36J	190	170	140	100J	210	140J	400U	19J	220J	26J	400U	400U	400U	400J	400U	40U	400R	99	400U	400U	1600R	160J	400U	330J
SB-B4(3)010604R	410U	410U	410U	810U	410U	410U	410U	410U	410	410U	24 J	41U	41U	410U	41U	410U	410U	410U	33 J	41U	410U	410U	410U	410U	410U	41U	410R	41U	410U	410U	1600R	18 J	410U	48 J
SB-B4(7)010604R	370U	370U	370U	750U	370U	370U	370U	370U	370U	370U	37U	37U	37U	370	37U	100 J	370U	370U	370U	37U	370U	370U	370U	370U	370U	37U	370R	37U	370U	370U	1500R	370U	370U	370U
SB-B5(0.5)010604R	400U	400U	400U	810U	400U	400U	20 J	400U	16 J	45 J	160	210	170	97 J	210	400U	400U	30 J	220 J	40U	400U	400U	400U	360 J	400U	40U	400R	96	400U	400U	1600R	170 J	400U	320 J
SB-B5(3)010604R	400U	400U	400U	810U	400U	400U	400U	400U	400U	400U	40U	40U	40U	400U	40U	400U	400U	400U	400U	40U	400U	400U	400U	400U	400U	40U	400R	40U	400U	400U	1600R	400U	400U	400U
SB-B5(5)010604R	440U	440U	440U	880U	440U	440U	440U	440U	440U	440U	44U	44U	44U	440	44U	440U	440U	440U	440U	44U	440U	440U	440U	440U	440U	44U	440R	44U	440U	440U	1800R	440U	440U	440U
SB-1A(0.5)010804RRE	490U	16 J	490U	970U	490U	490	17 J	12 J	35 J	84 J	250	240	230	200 J	310	850	490U	56 J	310 J	43 J	13 J	490U	490U	520	14 J	49U	490UJ	180	34 J	17 J	1900U	260 J	490U	420 J
SB-1A(4)010904R	430U	430U	430U	870U	430U	430U	430U	430U	430U	430U	43U	43U	43U	430U	43U	430U	430U	430U	430U	43U	430U	430U	430U	15 J	430U	43U	430U	43U	430U	430U	1700U	11 J	430U	12 J
SB-1B(0.5)010804RRE	500U	27 J	500U	1000U	500U	500U	20 J	46 J	60 J	260 J	850	740	680	430 J	850	180 J	500U	190 J	910	110	47 J	500U	500U	1700	56 J	50U	500UJ	430	500U	22 J	2000U	1100	500U	1400
SB-1B(4)010904R	430U	1700U	430U	1700U	1700U	1700U	430U	1700U	1700U	1700U	1700U	1700U	1700U	1700U	1700U	1700U	1700U	1700U	1700U	1700U	1700U	1700U	1700U	1700U	1700U	1700U	1700U	1700U	1700U	1700U	1700U	430U	1700U
SB-1C(0.5)010804R	460U	14 J	460U	920U	460U	460U	31 J	18 J	42 J	110 J	420	470	500	410 J	500	460U	460U	68 J	540	67	20 J	460U	460U	880	460U	46U	460UJ	380	460U	460U	1800U	450 J	460U	840
SB-1C(2)010904R	420U	420U	420U	840U	420	420U	420U	420U	420U	420U	13 J	16 J	14 J	420U	18 J	420U	420U	420U	17 J	42U	420U	420U	420U	30 J	420U	42U	420U	42U	420U	8.9 J	1700U	14 J	420U	28 J
SB-1C(5)010904R	390UJ	15 J	390UJ	780UJ	390UJ	390UJ	58 J	390UJ	17 J	25 J	9.6 J	39UJ	39UJ	390UJ	39UJ	150 J	390UJ	390UJ	390UJ	39UJ	390UJ	390UJ	240 J	20 J	390UJ	39UJ	390UJ	39UJ	390UJ	390UJ	1600UJ	21 J	120 J	26 J
SB-4A(0.5)010804R	380U	38 J	380U	760U	380U	380U	11 J	170 J	140 J	700	2500	2800	2400	3300	2700	380U	380 J	310 J	3400	920	110 J	380U	380U	5000	220 J	38U	380UJ	2800	380U	38 J	1500U	2700	380U	6300
SB-4B(0.5)010804R	24 J	150 J	940U	1900U	940U	940U	42 J	360J	180 J	1300	2700	2600	1800	2100	2300	940U	940U	640 J	2800	580	670 J	940U	940U	5100	770 J	94U	940UJ	2000	940U	120 J	3800U	5800	940U	6100
SB-4B(3)010804RRE	420U	420U	420U	830U	420U	420U	420U	420U	420U	420U	9.5 J	42U	42U	420U	42U	420U	420U	420U	420U	42U	420U	420U	420U	17 J	420U	42U	420UJ	42U	420U	420U	1700U	420U	420U	15 J
SB-4B(5)010804R	420U	420U	420U	840U	420U	420U	420U	420U	420U	420U	42U	42U	42U	420U	42U	420U	420U	420U	420U	42U	420U	420U	420U	15 J	420U	42U	420UJ	42U	420U	420U	1700U	420U	420U	13 J
SB-4C(0.5)010804R	4400U	3000 J	4400U	8900U	4400U	4400U	4400U	3200 J	570 J	9100	11000	8200	6500	4400 J	7900	4400U	4400U	2800 J	9800	1600	5000	4400U	4400U	25000	7600	440U	4400UJ	4700	4400U	3100 J	18000U	34000	6500	23000
SB-4C(3)010804R	390U	390U	390U	780U	390U	390U	390U	390U	390U	390U	39U	39U	39U	390U	39U	390U	390U	390U	390U	39U	390U	390U	390U	390U	390U	39U	390UJ	39U	390U	390U	1600U	390U	390U	390U
SB-4C(5)010804R	400U	400U	400U	790U	400U	400U	400U	400U	400U	400U	40U	40U	40U	400U	40U	400U	400U	400U	400U	40U	400U	400U	400U	400U	400U	40U	400UJ	40U	400U	400U	1600U	400U	400U	400U
SB-4D(0.5)010704R	2000U	410 J	2000U	4100U	2000U	2000U	2000U	1000 J	360 J	3700	7800	6700	5000	5500	5500	2000U	2000U	1200 J	7400	1900	880 J	2000U	2000U	12000	1700 J	200U	2000UJ	5200	2000U	440 J	8200U	12000	2000U	16000
SB-4D(3)010704R	440U	29 J	440U	880U	440U	440U	440U	180 J	110 J	620	1600	1600	1200	1300	1400	190 J	440U	200 J	1800	360	96 J	440U	440U	3100	220 J	44U	440UJ	1200	440U	37 J	1800U	2200	440U	3800
SB-4D(7)010704R	410U	410U	410U	810U	410U	410U	410U	410U	410U	410U	41U	41U	41U	410U	41U	410U	410U	410U	410U	41U	410U	410U	410U	410U	410U	41U	410UJ	41U	410U	410U	1600U	410U	410U	410U
Monitoring Well Borings																																		
MW-1A(0.5)010804R	440U	24 J	440U	880U	440U	440U	440U	52 J	91 J	370 J	1100	1100	810	920	1000	440U	440U	130 J	1200	210	46 J	440U	440U	2000	84 J	44U	440UJ	830	440U	27 J	1800U	1300	440U	2200
MW-1A(0.5)010804RD	13 J	50 J	430U	870U	430U	430U	41 J	110 J	180 J	660	1800	1500	1100	830	1700	120 J	430U	240 J	1800	270	88 J	430U	120 J	3000	180 J	43U	430UJ	860	430U	45 J	1700U	2000	430U	2700
MW-1A(3)010904R	400U	400U	400U	790U	400U	400U	26 J	400U	34 J	20 J	66	69	64	48 J	87	400U	400U	19 J	100 J	40U	400U	400U	400U	180 J	13 J	40U	400U	47	400U	400U	1600U	130 J	400U	160 J
MW-1A(8)010904R	420U	420U	420U	840U	420U	420U	420U	420U	420U	420U	42U	42U	42U	420U	42U	420U	420U	420U	420U	42U	420U	420U	100 J	420U	420U	42U	420U	42U	420U	420U	1700U	420U	420U	420U
MW-4A(0.5)010804R	400U	400U	400U	810U	400U	400U	400U	400U	400U	18 J	40 J	39 J	31 J	23 J	40 J	400U	400U	400U	48 J	40U	400U	400U	400U	96 J	400U	40U	400UJ	21 J	400U	400U	1600U	68 J	400U	74 J
MW-4A(3)010804R	420U	22 J	420U	840	420U	420U	27 J	19 J	34 J	120 J	2800	3100	280	260 J	330	420U	420U	77 J	340 J	55	24 J	420U	420U	590	26 J	42U	420UJ	230	420U	20 J	1700U	410 J	420U	540
MW-4A(11)010804R	420U	420U	420U	840U	420U	420U	420U	420U	420U	420U	42U	42U	42U	420U	42U	420U	420U	420U	420U	42U	420U	420U	420U	420U	420U	42U	420U	42U	420U	420U	1700U	420U	420U	420U
MW-4B(0.5)010704R	450U	450U	450U	900U	450U	450U	450U	450U	450U	450U	31 J	38 J	36 J	450U	45 J	100 J	450U	450U	56 J	45U	450U	450U	450U	85 J	450U	45U	450UJ	25 J	450U	450U	1800U	50 J	450U	85 J
MW-4B(3)010704R	400U	400U	400U	800U	400U	400U	400U	400U	400U	400U	40U	40U	40U	400U	40U	400U	400U	400U	400U	40U	400U	400U	400U	400U	400U	40U	400UJ	40U	400U	400U	1600U	400U	400U	400U
MW-4B(6)010704R	410U	410U	410U	820U	410U	410U	410U	410U	410U	410U	41U	41U	41U	410U	41U	410U	410U	410U	410U	41U	410U	410U	410U	410U	410U	41U	410UJ	41U	410U	410U	1600U	410U	410U	410U

Air National Guard - Hancock Field Syracuse, NY
Semi-Volatile Organic Compounds - Soil February 2004

	2,4-Dimethylphenol	2-Methylnaphthalene	2-Methylphenol	3-Nitroaniline	4-Bromophenyl-phenylether	4-Chlorophenyl-phenylether	4-Methylphenol	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	bis(2-Ethylhexyl)phthalate	Butylbenzylphthalate	Carbazole	Chrysene	Dibenz(a,h)anthracene	Dibenzofuran	Dimethylphthalate	Di-n-butylphthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorocyclopentadiene	Indeno(1,2,3-cd)pyrene	Isophorone	Naphthalene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
Units	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
*Standard		36400	100 or MDL				900	50000	41000	50000	224 or MDL	61 or MDL	1100	50000	1100	50000	50000		400	14 or MDL	6200	2000	8100	50000	50000	410		3200	4400	13000	1000 or MDL	50000	30 or MDL	50000
Test Pit Samples																																		
TP-4A(A4)011204R	440U	110 J	440U	870U	440U	440U	440U	300 J	110 J	1000	2000	1900	1400	1600J	1800	100 J	440U	300 J	2100	480	280 J	440U	440U	3600	540	44U	440U	1500	440U	110 J	24 J	3400	440U	5300J
TP-4A(A4)011204D	420U	51 J	420U	840U	420U	420U	420U	180 J	99 J	670	1700	1500	1000	1100J	1400	390 J	420U	250 J	1700	360	160 J	420U	420U	2700	300 J	42U	420U	1100	420U	56 J	1700U	2700	420U	4100J
TP-4A(B4)011204R	3800U	3800U	3800U	7600U	3800U	3800U	3800U	3500 J	660 J	13000	22000	18000	14000	14000J	18000	3800U	3800U	3800U	21000	4500	3800U	3800U	3800U	47000	6500	380U	3800U	13000	3800U	1400 J	15000U	41000	3800U	53000J
TP-4A(C4)011204R	850U	94 J	850U	1700U	850U	850U	850U	430 J	460 J	2000	4600	5100	4000	2900J	4300	850U	850U	470 J	5100	1200	450 J	850U	850U	7100	910	85U	850U	3100	850U	84 J	920 J	6400	850U	9800J
TP-4B(A4.5)11204R	390U	46 J	390U	780U	390U	390U	390U	200 J	100 J	790	2200	2000	1600	1500J	2000	88 J	390U	290 J	2300	520	160 J	390U	390U	4300	330 J	39U	390U	1400	390U	65 J	1600U	3000	390U	4700J
TP-4B(B4.5)11204R	3800U	900 J	3800U	7700U	3800U	3800U	3800U	2300 J	1700 J	10000	18000	18000	14000	12000J	15000	3800U	3800U	2600 J	19000	5000	2200 J	3800U	3800U	37000	4200	380	3800U	11000	3800U	1300 J	15000U	30000	3800U	43000J
TP-4B(C5)011204R	760U	150 J	760U	1500U	760U	760U	19 J	690 J	340 J	2500	2500	5300	3800	3500J	5000	760U	760U	750 J	5900	1800	550 J	760U	760U	9100	990	76U	760U	3700	760U	180 J	3000U	8700	760U	12000J
TP-4C(A3)011204R	790U	220 J	790U	1600U	790U	790U	790U	790 J	230 J	2100	4700	4500	3500	2800J	3800	280 J	790U	740 J	5400	1100	540 J	790U	790U	8100	880	79U	790U	2700	790U	180 J	3200U	8100	790U	8700J
TP-4C(B4)011204R	4200U	400J	4200U	8400U	4200U	4200U	4200U	2800J	470J	9900	23000	22000	19000	15000J	21000	4200U	4200U	3700J	24000	5300	1600J	4200U	4200U	49000	3600J	420U	4200U	18000	4200U	560J	17000U	31000	4200U	52000J
TP-4C(C5)011204R	410U	59 J	410U	810U	410U	410U	13 J	270 J	190 J	1200	3200	3000	2500	2800J	2500	100 J	410U	310 J	3500	970	210 J	410U	410U	5600	440	41U	410U	2500	410U	56 J	490 J	4100	410U	7200J
Sediment																																		
SD-01(0.5)011304R	600U	600U	600U	1200U	600U	600U	600U	600U	600U	600U	60U	14 J	15 J	600UJ	17 J	600U	600U	600U	600U	60U	600U	600U	600U	33 J	600U	60U	600U	60U	600U	600U	2400U	600U	600U	31 J
SD-02(0.5)011304R	560U	560U	560U	1100U	560U	560U	560U	560U	560U	560U	56U	56U	56U	560UJ	56U	560U	560U	560U	560U	56U	560U	560U	560U	560U	560U	56U	560U	56U	560U	560U	2200U	560U	560U	560UJ
QA/QC																																		
FB-010504 (ug/l)	11U	11U	11U	22U	11U	11U	11U	11U	11U	11U	1.1U	1.1U	1.1U	11U	1.1U	11U	11U	11U	11U	1.1U	11U	11U	11U	11U	11U	1.1U	11U	1.1U	11U	11U	43U	11U	11U	11U

J - Estimated value
U - Compound not detected, reporting limit shown
UJ - Undetected due and biased low due to QA/QC deficiencies, reporting limit shown
R - Result rejected due to serious deficiencies in analysis. The presence of absence of the analyte cannot be verified.

* - NYSDEC Recommended Soil Cleanup Objective (ppb)
Background Borings - SB-B series
Site 1 Borings - SB-1 series
Site 1 Wells - MW-1 series
Site 4 Borings - SB-4 series
Site 4 Wells - MW-4 series
Site 4 Test Pits - TP-4 series

Air National Guard - Hancock Field Syracuse, NY
Metals - Soil February 2004

	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
***Standard**	10600	N/A	5.3	67.6	N/A	N/A	51900	14.4	N/A	22.6	17900	44.9	15400	640	N/A	17.5	N/A	N/A	N/A	N/A	N/A	19.8	49.2
****Standard**	33,000	N/A	3 - 12	15 - 600	0 - 1.75	0.1 - 1	130 - 35,000	1.5 - 40	2.5 - 60	1 - 50	2,000 - 550,000		100 - 5,000	50 - 5,000	0.001 - 0.2	0.5 - 25	8,500 - 43,000	0.1 - 3.9	N/A	6,000 - 8,000	N/A	1 - 300	9 - 50
*****Standard**	SB	SB	7.5 or SB	300 or SB	0.16 or SB	1 or SB	SB	10 or SB	30 or SB	25 or SB	2000 or SB	SB	SB	SB	0.1	13 or SB	SB	2 or SB	SB	SB	SB	150 or SB	20 or SB
SB-B1(0.5)010504R	8920J	1.4UJ	4.1	61.1	0.46 B	0.21 B	22500	12.8	6.7 B	15.5	16000J	44.9	4160J	640	0.02UJ	12.2	604 B	1U	0.34U	95.6U	1.1U	16.9	49.2
SB-B1(3)010504R	6760J	1.4UJ	2.6	24.4 B	0.21B	0.094U	1090 B	6.8	4.9 B	4.5 B	9820J	4.9	1170J	369	0.02UJ	7.9 B	290 B	0.99U	0.33U	93.1U	1.1U	11.4	28.7
SB-B1(9)010504R	3980J	1.4UJ	2.8	12.3 B	0.24 B	0.097U	754 B	5.6	4.5 B	19.9	10000J	3.6	1210J	277	0.02UJ	6.8 B	435 B	1U	0.34U	95.8U	1.1U	9.0 B	17.8
SB-B2(0.5)010604R	5570J	1.3UJ	5.3	53	0.28 B	0.093U	35800	7.3	5.8 B	22	14500J	8.9	7690J	619	0.019UJ	9.5	496 B	0.97U	0.32U	111 B	1.1U	11.5 B	33.9
SB-B2(3)010604R	3860J	1.3UJ	4.4	23.7 B	0.22 B	0.091U	47300	6.7	5.1 B	22.6	11900J	3.6	11100J	397	0.019UJ	9.5	490 B	0.95U	0.32U	89.8U	1.1U	8.2 B	24.2
SB-B2(5)010604R	2600J	1.4UJ	1.7	12.2 B	0.13 B	0.097U	26500	4.2	3.1 B	9.3	7050J	2.7	7360J	240	0.02UJ	6.1 B	397 B	1U	0.34U	95.8U	1.1U	6.1 B	15.1
SB-B3(0.5)010604R	7550J	1.4UJ	4.3	41.7 B	0.32 B	0.097U	4990	9.6	4.9 B	12.4	12400J	12.4	2810J	278	0.05J	10.7	552 B	1U	0.34U	96.3U	1.1U	14.4	35.4
SB-B3(3)010604R	10600J	1.4UJ	3.6	59.7	0.54	0.095U	1570	14.1	7.0 B	17.6	17900J	5..6	2990J	344	0.02UJ	15.7	736 B	1U	0.33U	94.3U	1.1U	19.8	32.3
SB-B3(5)010604R	6250J	1.5UJ	3.4	31.4 B	0.30 B	0.1U	13200	9.4	6.4 B	13.8	14400J	5.2	5830J	419	0.022UJ	13.1	588 B	1.1U	0.36U	120 B	1.2U	14.7	32.5
SB-B4(0.5)010604R	5600J	1.4UJ	2.9	29.1 B	0.28 B	0.096U	28300	7.5	4.4 B	12.2	10600J	10.6	5730J	273	0.02UJ	9.1 B	415 B	1U	0.34U	262 B	1.1U	11.8 B	31.2
SB-B4(0.5)010604D	5640J	1.4UJ	2.6	30.8 B	0.23 B	0.096U	13800	7.7	4.1 B	11.1	10700J	10.5	4720J	256	0.02UJ	8.9 B	423 B	1U	0.34U	95.2U	1.1U	12.3	33.6
SB-B4(3)010604R	4560J	1.4UJ	2.2	28.0 B	0.18 B	0.097U	5930	6.5	3.2 B	7.1	9820J	9	2530J	188	0.02UJ	6.5 B	334 B	1U	0.34U	96.3U	1.1U	11.4 B	18.4
SB-B4(7)010604R	3890J	1.3UJ	3.4	39.7 B	0.17 B	0.09U	51900	6.4	6.4 B	18.7	11400J	3.8	15400J	411	0.019UJ	11.5	762 B	0.94U	0.31U	111 B	1.1U	8.4 B	22.2
SB-B5(0.5)010604R	4200J	1.4UJ	2.7	23.2 B	0.13 B	0.12 B	21100	5.6	2.2 B	9.7	6940J	14.6	2440J	137	0.02UJ	5.3 B	388 B	1U	0.34U	96.1U	1.1U	8.9 B	30.5
SB-B5(3)010604R	3780J	1.4UJ	1.5	10.0 B	0.13 B	0.097U	360 B	3.5	2.4 B	5.0 B	4740J	2.1	938 J	58.9	0.02UJ	4.6 B	204 B	1U	0.34U	95.6U	1.1U	5.1 B	11.6
SB-B5(5)010604R	9890J	1.5UJ	2.6	67.6	0.45 B	0.11U	6280	14.4	7.1 B	17.7	16900J	5.9	3860J	339	0.022UJ	17.5	922 B	1.1U	0.37U	123 B	1.2U	18.4	36.1
SB-1A(0.5)010804R	6890J	1.1UJ	3.6UB	29.7	0.29 UB	1.5UB	18200	16.2	5.3 B	29.2UB	12800	7.1	5050	529	0.024U	10.1 B	794 UB	1.1U	0.2U	105U	1.3U	14.2 B	78.1
SB-1A(4)010904R	18700	1UJ	5.2 UB	49.9	0.92UB	0.1U	6830	25.8	12.4 J	23.4	28700	11.8	5580	547	0.03 J	27.4	1350J	1U	0.18U	93.9U	1.1U	51.1	66.6
SB-1B(0.5)010804R	6830J	1.2UJ	3.5UB	29.1	0.33 UB	0.76 UB	18200	12.9	5.6B	21.1UB	15900	36.6	4080	459	0.025U	10.8 B	728 UB	1.2U	0.21U	110U	1.3U	15.3	85.9
SB-1B(4)010904R	17500	1UJ	2.1 UB	29.1	0.65UB	0.1U	2990	22.6	7.9 J	18.4UB	18300	9.7UB	4060	189	0.03 J	21.2	1100 J	1U	0.18U	93.8U	1.1U	28.8	35.2
SB-1C(0.5)010804R	5390J	1.1UJ	2.8UB	37.2	0.26 UB	0.33 UB	28100	10.3	5.3 B	17.2UB	13100	26.8	12500	419	0.023U	11.3	741 UB	1.1U	0.19U	100U	1.2U	12.1 B	48.3
SB-1C(2)010904R	12700	0.98UJ	6.0UB	97.6	0.69UB	0.1U	6390	19.1	9.4 J	19.7UB	24700	7.9UB	4110	562	0.03 J	21.6	798 J	0.98U	0.18U	90.7U	1.1U	26.5	43.2
SB-1C(5)010904R	2880	0.92UJ	3.9 UB	21.9 J	0.18 UB	0.094U	34200	4.1	5.4 J	16.6UB	8490	6.3UB	5710	274	0.02U	8.5 J	574 UB	0.92U	0.16U	84.9U	1U	5.3 J	19.3
SB-4A(0.5)010804R	2310J	0.89UJ	3.4UB	23.1 B	0.11 UB	1.1 UB	201100	5.7	2.6 B	14.4UB	6070	24.8	10000	193	0.019U	7.8 B	353 UB	0.89U	0.16U	82.5U	1U	6.9 B	37
SB-4B(0.5)010804R	5490J	1.1UJ	3.5UB	44.9 B	0.27 UB	0.17 UB	79600	8.3	4.5 B	14.4UB	11300	19.2	8540	366	0.023U	9.9 B	542 UB	1.1U	0.2U	102U	1.2U	12.7 B	42.3
SB-4B(3)010804R	6010J	0.97UJ	3UB	51.6	0.31 UB	0.1U	1920	10.2	5.5 B	12.7UB	13600	4.1UB	2230	468	0.021U	12.5	542 UB	0.97U	0.17U	90U	1.1U	15.5	23.3
SB-4B(5)010804R	10300J	0.98UJ	4.1UB	86.8	0.55UB	0.1U	2470	16.3	6.5 B	19.8UB	22200	6.9UB	3480	284	0.021U	23.1	755 UB	0.98U	0.18U	90.5U	1.1U	21.9	39
SB-4C(0.5)010804R	5760J	1UJ	3.5UB	41.4 B	0.21 UB	0.41 UB	7910	7.3	3.3 B	10.8UB	8270	29.7	1730	158	0.03 UB	8.0 B	295 UB	1U	0.19U	96U	1.2U	11.8 B	128
SB-4C(3)010804R	3510J	0.91UJ	4.6UB	30.6 B	0.21 UB	0.094U	2560	6.3	3.4 B	9.4UB	8150	3.4UB	1860	226	0.019U	7.4 B	345 UB	0.91U	0.16U	84.4U	1U	10.3 B	15.4
SB-4C(5)010804R	6290J	0.93UJ	6.2UB	84.8	0.31 UB	0.095U	36300	10.7	6.7 B	16UB	14800	5.3UB	15600	534	0.02U	15.7	821 UB	0.93U	0.17U	85.7U	1U	15	31.8
SB-4D(0.5)010704R	6000J	0.96UJ	3.7 UB	48.8	0.26 UB	0.37 UB	19200	9.9	4.6 B	14.9UB	11000	40.1	4070	305	0.05UB	10.4	577 UB	0.96U	0.17U	89U	1.1U	14.2	72.7
SB-4D(3)010704R	6970J	1UJ	3.8 UB	50.4 B	0.30UB	0.28 UB	18500	9	4.1 B	12.7UB	9790	36	3540	228	0.05UB	9.9 B	414 UB	1U	0.19U	95.5U	1.2U	13.8	47.4
SB-4D(7)010704R	6180J	0.95UJ	2.7UB	51	0.32 UB	0.098U	44500	10.5	6.0 B	17.8UB	13900	6.0UB	16000	337	0.02U	14.1	798 UB	0.95U	0.17U	91.1	1.1U	14.6	29.5
Monitoring Well Borings																							
MW-1A(0.5)010804R	6910J	1UJ	2.9UB	77.9	0.33 UB	0.39 UB	24000	10.8J	5.7 B	16.8UB	14100	28	7820	468	0.022U	12.5	713 UB	1UJ	0.19U	95.9U	1.2U	15.3	50.3
MW-1A(0.5)010804RD	7490J	1UJ	3.1UB	70.5	0.34 UB	0.33 UB	24100	10.5J	5.5 B	14.4UB	13400	22.1	6440	516	0.03 UB	11.6	661 UB	1UJ	0.18U	93.9U	1.1U	15.5	41.7
MW-1A(3)010904R	6190	0.93UJ	5.0 UB	29.5 J	0.26 UB	0.095U	14600	6.9	4.9 J	17.5UB	12900	5.2UB	2940	353	0.04 J	8.8 J	554 UB	0.93U	0.17U	86U	1U	11.0 J	24.8
MW-1A(8)010904R	6150	0.98UJ	2.5 UB	27.1 J	0.30 UB	0.1U	2100	10.2	4.9 J	13UB	11400	5.4UB	2200	118	0.021U	13.5	442UB	0.98U	0.18U	90.5U	1.1U	13.4	30.2
MW-4A(0.5)010804R	5750J	0.95UJ	2.3UB	28.4 B	0.15 UB	0.097U	1370	4	2.2 B	2.9 UB	7510	3.6UB	750 B	35.2	0.02U	4.2 B	165 UB	0.95U	0.17U	87.6U	1.1U	9.6 B	8.3
MW-4A(3)010804R	6790J	0.98UJ	5.1UB	98.5	0.37 UB	0.1U	29300	11.5	6.7 B	20.1UB	16900	6.9UB	12200	386	0.021U	16	791 UB	0.98U	0.18U	91.2U	1.1U	18.7	33.8
MW-4A(11)010804R	5140J	0.98UJ	1.9UB	59.8	0.25 UB	0.1U	59000	8.8	5.0 B	11UB	12500	5UB	23100	415	0.021U	12.2	813 UB	0.98U	0.18U	97.9 B	1.1U	11.7 B	28.1
MW-4B(0.5)010704R	4100J	1.1UJ	1.5 UB	23.2 B	0.07 UB	0.11U	3960	2.3 B	0.95U	3.5 UB	2450	9.3UB	466 B	45.4	0.04 UB	2.0 B	68.6 UB	1.1U	0.19U	97.8U	1.2U	4.3 B	8.3
MW-4B(3)010704R	5810J	0.94UJ	6.4UB	140	0.35 UB	0.096U	6110	9.6	6.1 B	13.2UB	15900	4.8UB	3920	239	0.02U	12	593 UB	0.94U	0.17U	86.9U	1.1U	15.3	21.9
MW-4B(6)010704R	7260J	0.96UJ	3.5 UB	169	0.37 UB	0.099U	58700	12.9	6.4 B	14.5UB	16300	5.8UB	16400	398	0.021U	15	1090 UB	0.96U	0.17U	86.4 B	1.1U	17.4	31.9
Sediment																							
SD-01(0.5)011304R	3810J	2.1UJ	14.1	763	0.23 B	0.59 B	7300J	5.5	6.3 B	17.2	11400	12.9J	1660 J	402	0.09	8.6 B	218 J	1.5U	0.5U	214 UB	1.7U	7.2 UB	85.7
SD-02(0.5)011304R	5780J	1.9UJ	19.2	40.2 B	0.25 B	0.13U	37400J	8	5.2 B	21.7	17400	7.3J	9130J	258	0.028U	16.2	293 J	1.4U	0.47U	213 UB	1.6U	9.7 UB	124

Air National Guard - Hancock Field Syracuse, NY
Metals - Soil February 2004

	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
***Standard**	10600	N/A	5.3	67.6	N/A	N/A	51900	14.4	N/A	22.6	17900	44.9	15400	640	N/A	17.5	N/A	N/A	N/A	N/A	N/A	19.8	49.2
****Standard**	33,000	N/A	3 - 12	15 - 600	0 - 1.75	0.1 - 1	130 - 35,000	1.5 - 40	2.5 - 60	1 - 50	2,000 - 550,000		100 - 5,000	50 - 5,000	0.001 - 0.2	0.5 - 25	8,500 - 43,000	0.1 - 3.9	N/A	6,000 - 8,000	N/A	1 - 300	9 - 50
*****Standard**	SB	SB	7.5 or SB	300 or SB	0.16 or SB	1 or SB	SB	10 or SB	30 or SB	25 or SB	2000 or SB	SB	SB	SB	0.1	13 or SB	SB	2 or SB	SB	SB	SB	150 or SB	20 or SB
Test Pit																							
TP-4A(A4)011204	6110J	1.5UJ	3.6	47.3 B	0.29 B	14	9640J	11	5.4 B	70.9	13000	54.9J	2850J	355	0.11J	15.3	371 J	1.1U	0.37U	133 J	1.2U	12.3 UB	1140
TP-4A(A4)011204D	6030J	1.5UJ	2.6	45.8 B	0.28 B	1.2 B	15100J	10.3	4.7 B	59.3	11100	50J	2900J	288	0.1	15.5	343 J	1.1U	0.35U	153 UB	1.2U	12.1 UB	960
TP-4A(B4)011204R	10200J	1.3UJ	4.7	74.3	0.54	0.092U	36200J	15	8.4 B	16	9200	10J	6360J	457	0.019U	8.2	585 J	0.96U	0.32U	180 UB	1.1U	23.6	39.1
TP-4A(C4)011204R	7070J	1.5UJ	3.4	54.1	0.36 B	0.56 B	17700J	12.1	5.3 B	20.4	13200	50J	3610J	316	0.05	12.5	430 J	1.1U	0.36U	132 UB	1.2U	14.6	80
TP-4B(4.5)11204R	5620J	1.4UJ	2.8	44.4	0.26 B	0.21 B	37100J	9.4	4.9 B	17.1	10700	26.1J	4950J	301	0.02U	10.1	376 J	0.99U	0.33U	148 UB	1.1U	12.6	48.7
TP-4B(B4.5)11204R	5460J	1.3UJ	3.5	39.2 B	0.25 B	0.17 B	43000J	8.8	5.2 B	14.3	10700	29.2J	6350J	360	0.03	11.1	380 J	0.97U	0.32U	160 UB	1.1U	13.5	58.3
TP-4B(C5)011204R	6540J	1.3UJ	3.6	44.2	0.31 B	0.12 B	22000J	11.3	5.7 B	17.1	14600	35.4J	5700J	354	0.03	11.7	414 J	0.95U	0.32U	183 UB	1.1U	13.5	69.1
TP-4C(A3)011204R	4660J	1.4UJ	2.8	46.0 B	0.28 B	1.7	101000J	8.9	4.2 B	12.3	9600	91J	7500J	315	0.02U	11.2	400 J	1U	0.33U	219 UB	1.1U	16.8	142
TP-4C(B4)011204R	5890J	1.5UJ	3.4	46.0 B	0.30 B	0.79 B	35000J	10.1	4.8 B	16.4	11200	41.6J	5030J	338	0.05	10.3	405 J	1.1U	0.35U	200 UB	1.2U	13.3	82.1
TP-4C(C5)011204R	6540J	1.4UJ	3.5	91.1	0.31 B	0.71 B	31600J	11.7	5.5 B	132	13200	55.6J	10400J	412	0.07	11.4	416 J	1U	0.34U	158 UB	1.1U	14.5	155
QA/QC																							
FB-010504 (ug/l)	62.6U	5.8U	3.2U	1.7U	0.3U	0.4U	99.6 B	1.6U	1.7U	4.9 B	39.2U	2.3U	41.6U	1.2U	0.1U	1.6U	315U	4.2U	1.4U	396U	4.7U	1.8U	5.8U

J - Estimated value
U - Compound not detected, reporting limit shown
UJ - Undetected due and biased low due to QA/QC deficiencies, reporting limit shown
R - Result rejected due to serious deficiencies in analysis. The presence of absence of the analyte cannot be verified.

* - Concentration of Background Soil Samples Collected in January 2004
** - Eastern USA Background Soil Standard
*** - NYSDEC Recommended Soil Cleanup Objectives
Background Borings - SB-B series
Site 1 Borings - SB-1 series
Site 1 Wells - MW-1 series
Site 4 Borings - SB-4 series
Site 4 Wells - MW-4 series
Site 4 Test Pits - TP-4 series

Air National Guard - Hancock Field Syracuse, NY
Volatile Organic Compounds -Groundwater and Surface Water February 2004

	Units	Standard*	MW-1A-020204R	MW-4A-020304R	MW-4B-020304R	MW-09-020204R	MW-09-020204D	MW-11-020204R	MW-12-020204R	MW-13-020204R	MW-16-020304R	MW-17-020304R	MW-18-020304R	TB-020204R	TB-020304R	FB-020304R	SW-01-011304R	SW-02-011304R
1,1,1-Trichloroethane	ug/L	5	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
1,1,2,2-Tetrachloroethane	ug/L	5	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,1,2-Trichloroethane	ug/L		3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
1,1-Dichloroethane	ug/L	5	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
1,1-Dichloroethene	ug/L		2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,2-Dichloroethane	ug/L	5	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,2-Dichloropropane	ug/L		1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
2-Butanone	ug/L	50	5R	5UJ	5UJ	5R	5R	5R	5R	5R	5UJ	5UJ	5UJ	5U	5U	5U	5R	5R
2-Hexanone	ug/L		5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
4-Methyl-2-Pentanone	ug/L	50	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
Acetone	ug/L	50	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
Benzene	ug/L	0.7	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Bromodichloromethane	ug/L		1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Bromoform	ug/L		4U	4U	4U	4U	4U	4U	4U	4U	4U	4U	4U	4U	4U	4U	4U	4U
Bromomethane	ug/L		5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
Carbon Disulfide	ug/L	50	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
Carbon Tetrachloride	ug/L	5	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Chlorobenzene	ug/L	5	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
Chloroethane	ug/L	50	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
Chloroform	ug/L	7	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
Chloromethane	ug/L		5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
cis-1,2-Dichloroethene	ug/L		9.5	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
cis-1,3-Dichloropropene	ug/L	5	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
Dibromochloromethane	ug/L	50	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
Ethylbenzene	ug/L	5	4U	4U	4U	4U	4U	4U	4U	4U	4U	4U	4U	4U	4U	4U	4U	4U
Methylene Chloride	ug/L	5	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	2.6 J	3U	3U
Styrene	ug/L		5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
Tetrachloroethene	ug/L	5	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Toluene	ug/L	5	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
trans-1,2-Dichloroethene	ug/L	5	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
trans-1,3-Dichloropropene	ug/L		5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
Trichloroethene	ug/L	5	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Vinyl Chloride	ug/L	2	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
Xylene (Total)	ug/L	5	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U

J - Estimated value
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R - Result rejected due to serious deficiencies in analysis. The presence or absence of the analyte cannot be verified.
* - NYSDEC Drinking Water Quality Standard (DWQS) ppb

Air National Guard - Hancock Field Syracuse, NY
Semi-Volatile Organic Compounds - Groundwater and Surface Water February 2004

	Units	Standard*	MW-1A-020204R	MW-4A-020304R	MW-4B-020304R	MW-09-020204R	MW-09-020204D	MW-11-020204R	MW-12-020204R	MW-13-020204R	MW-16-020304R	MW-17-020304R	MW-18-020304R	FB-020304R	SW-01-011304R	SW-02-011304R
1,2,4-Trichlorobenzene	ug/L		1.1U	1.1U	1U	1.1U	1U	1U	1U	1.2U	1UJ	1.1U	1U	1U	1.3U	1.4U
1,2-Dichlorobenzene	ug/L		11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	10U	10U	13U	14U
1,3-Dichlorobenzene	ug/L		11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	10U	10U	13U	14U
1,4-Dichlorobenzene	ug/L		11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	10U	10U	13U	14U
2,4,5-Trichlorophenol	ug/L	1	11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	10U	10U	13U	14U
2,4,6-Trichlorophenol	ug/L		11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	10U	10U	13U	14U
2,4-Dichlorophenol	ug/L	1	11U	11U	10U	11U	10U	10U	10U	24U	10UJ	11U	10U	10U	13U	14U
2,4-Dimethylphenol	ug/L		11U	11U	10U	11U	10U	10U	10U	1.2U	10UJ	11U	10U	10U	13U	14U
2,4-Dinitrophenol	ug/L	5	43U	42U	40U	44U	41U	41U	42U	12U	42UJ	46U	41U	42U	53UJ	55UJ
2,4-Dinitrotoluene	ug/L		2.2U	2.1U	2U	2.2U	2.1U	2.1U	2.1U	12U	2.1UJ	2.3U	2.1U	2.1U	2.6U	2.7U
2,6-Dinitrotoluene	ug/L	5	2.2U	2.1U	2U	2.2U	2.1U	2.1U	2.1U	12U	2.1UJ	2.3U	2.1U	2.1U	2.6U	2.7U
2-Chloronaphthalene	ug/L		11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	10U	10U	13U	14U
2-Chlorophenol	ug/L	50	11U	11U	10U	11U	10U	10U	10U	48U	10UJ	11U	10U	10U	13U	14U
2-Methylnaphthalene	ug/L	50	11U	11U	10U	11U	10U	10U	10U	2.4U	10UJ	11U	10U	10U	13U	14U
2-Methylphenol	ug/L	5	11U	11U	10U	11U	10U	10U	10U	2.4U	10UJ	11U	10U	10U	13U	14U
2-Nitroaniline	ug/L	5	22U	21U	20U	22U	21U	21U	21U	12U	21UJ	23U	21U	21U	26U	27U
2-Nitrophenol	ug/L	5	11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	10U	10U	13U	14U
3,3'-Dichlorobenzidine	ug/L	N/A	22U	21U	20U	22U	21U	21U	21U	12U	21UJ	23U	21U	21U	26U	27U
3-Nitroaniline	ug/L	5	22U	21U	20U	22U	21U	21U	21U	12U	21UJ	23U	21U	21U	26U	27U
4,6-Dinitro-2-methylphenol	ug/L		43U	42U	40U	44U	41U	41U	42U	24U	42UJ	46U	41U	42U	53U	55U
4-Bromophenyl-phenylether	ug/L		11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	10U	10U	13U	14U
4-Chloro-3-methylphenol	ug/L	5	11U	11U	10U	11U	10U	10U	10U	24U	10UJ	11U	10U	10U	13U	14U
4-Chloroaniline	ug/L	5	11U	11U	10U	11U	10U	10U	10U	24U	10UJ	11U	10U	10U	13U	14U
4-Chlorophenyl-phenylether	ug/L		11U	11U	10U	11U	10U	10U	10U	48U	10UJ	11U	10U	10U	13U	14U
4-Methylphenol	ug/L	50	11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	10U	10U	13U	14U
4-Nitroaniline	ug/L		22U	21U	20U	22U	21U	21U	21U	12U	21UJ	23U	21U	21U	26U	27U
4-Nitrophenol	ug/L	5	43U	42U	40U	44U	41U	41U	42U	12U	42UJ	46U	41U	42U	53U	55U
Acenaphthene	ug/L	20	11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	1.4 J	10U	13U	14U
Acenaphthylene	ug/L	20	11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	10U	10U	13U	14U
Anthracene	ug/L	50	11U	11U	10U	11U	10U	10U	10U	24U	10UJ	11U	10U	10U	13U	14U
Benzo(a)anthracene	ug/L	0.002	1.1U	1.1U	1U	1.1U	1U	1U	1U	48U	1UJ	1.1U	1U	1U	1.3U	1.4U
Benzo(a)pyrene	ug/L	0.002 (ND)	1.1U	1.1U	1U	1.1U	1U	1U	1U	12U	1UJ	1.1U	1U	1U	1.3U	1.4U
Benzo(b)fluoranthene	ug/L	0.002	1.1U	1.1U	1U	1.1U	1U	1U	1U	12U	1UJ	1.1U	1U	1U	1.3U	1.4U
Benzo(g,h,i)perylene	ug/L	5	11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	10U	10U	13UJ	14UJ
Benzo(k)fluoranthene	ug/L	0.002	1.1U	1.1U	1U	1.1U	1U	1U	1U	12U	1UJ	1.1U	1U	1U	1.3U	1.4U
bis(2-Chloroethoxy)methane	ug/L		11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	10U	10U	13U	14U
bis(2-Chloroethyl)ether	ug/L		1.1U	1.1U	1U	1.1U	1U	1U	1U	12U	1UJ	1.1U	1U	1U	1.3U	1.4U
bis(2-chloroisopropyl)ether	ug/L		11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	10U	10U	13U	14U
bis(2-Ethylhexyl)phthalate	ug/L	50	2.7 J	11U	10U	11U	10U	10U	10U	48U	10UJ	11U	10U	10U	13U	14U
Butylbenzylphthalate	ug/L	50	11U	11U	10U	11U	10U	10U	10U	1.2U	10UJ	11U	10U	10U	13U	14U
Carbazole	ug/L		11U	11U	10U	11U	10U	10U	10U	1.2U	10UJ	11U	10U	10U	13U	14U
Chrysene	ug/L	0.002	11U	11U	10U	11U	10U	10U	10U	1.2U	10UJ	11U	10U	10U	13U	14U
Dibenz(a,h)anthracene	ug/L	50	1.1U	1.1U	1U	1.1U	1U	1U	1U	12U	1UJ	1.1U	1U	1U	1.3U	1.4U
Dibenzofuran	ug/L	5	11U	11U	10U	11U	10U	10U	10U	1.2U	10UJ	11U	10U	10U	13U	14U
Diethylphthalate	ug/L	50	11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	10U	10U	13U	14U
Dimethylphthalate	ug/L	50	11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	10U	10U	13U	14U
Di-n-butylphthalate	ug/L	50	11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	10U	10U	13U	14U
Di-n-octylphthalate	ug/L	50	11U	11U	10U	11U	10U	10U	10U	1.2U	10UJ	11U	10U	10U	13U	14U
Fluoranthene	ug/L	50	11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	10U	10U	13U	14U
Fluorene	ug/L	50	11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	0.4 J	10U	13U	14U
Hexachlorobenzene	ug/L	0.35	1.1U	1.1U	1U	1.1U	1U	1U	1U	12U	1UJ	1.1U	1U	1U	1.3U	1.4U
Hexachlorobutadiene	ug/L		2.2U	2.1U	2U	2.2U	2.1U	2.1U	2.1U	12U	2.1UJ	2.3U	2.1U	2.1U	2.6U	2.7U
Hexachlorocyclopentadiene	ug/L		11U	11U	10U	11U	10U	10U	10U	24U	10UJ	11U	10U	10U	13U	14U
Hexachloroethane	ug/L		1.1U	1.1U	1U	1.1U	1U	1U	1U	12U	1UJ	1.1U	1U	1U	1.3U	1.4U
Indeno(1,2,3-cd)pyrene	ug/L	0.002	1.1U	1.1U	1U	1.1U	1U	1U	1U	12U	1UJ	1.1U	1U	1U	1.3U	1.4U
Isophorone	ug/L	50	11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	10U	10U	13U	14U

Air National Guard - Hancock Field Syracuse, NY
Semi-Volatile Organic Compounds - Groundwater and Surface Water February 2004

	Units	Standard*	MW-1A-020204R	MW-4A-020304R	MW-4B-020304R	MW-09-020204R	MW-09-020204D	MW-11-020204R	MW-12-020204R	MW-13-020204R	MW-16-020304R	MW-17-020304R	MW-18-020304R	FB-020304R	SW-01-011304R	SW-02-011304R
Naphthalene	ug/L	10	11U	11U	10U	11U	10U	10U	10U	1.2U	10UJ	11U	10U	10U	13U	14U
Nitrobenzene	ug/L	5	1.1U	1.1U	1U	1.1U	1U	1U	1U	12U	1UJ	1.1U	1U	1U	1.3U	1.4U
N-Nitroso-di-n-propylamine	ug/L		1.1U	1.1U	1U	1.1U	1U	1U	1U	12U	1UJ	1.1U	1U	1U	1.3U	1.4U
N-Nitrosodiphenylamine	ug/L		11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	10U	10U	13U	14U
Pentachlorophenol	ug/L	1	43U	42U	40U	44U	41U	41U	42U	12U	42UJ	46U	41U	42U	53U	55U
Phenanthrene	ug/L	50	11U	11U	10U	11U	10U	10U	10U	12U	0.7J	11U	10U	10U	13U	14U
Phenol	ug/L	1	11U	11U	10U	11U	10U	10U	10U	12U	10UJ	11U	10U	10U	13U	14U
Pyrene	ug/L	50	11U	11U	10U	11U	10U	10U	10U	12U	0.3J	11U	10U	10U	13UJ	14UJ

J - Estimated value
U - Compound not detected, reporting limit shown
* - NYSDEC Drinking Water Quality Standard (DWQS) ppb

Air National Guard - Hancock Field Syracuse, NY
Total Metals - Groundwater and Surface Water February 2004

	Units	*Standard	MW-1A-020204R	MW-4A-020304R	MW-4B-020304R	MW-09-020204R	MW-09-020204D	MW-11-020204R	MW-12-020204R	MW-13-020204R	MW-16-020304R	MW-17-020304R	MW-18-020304R	FB-020304R	SW-01-011304R	SW-02-011304R
Aluminum	ug/L	100	18100	401	32400	183 B	171 B	55800	59300	20900	1110	6790	1050	77.4U	2480	393
Antimony	ug/L	3	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U	6.3 B	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U
Arsenic	ug/L	50	6	3.4U	16.4	3.4U	3.4U	35.7	52.1	14.2	5.1	142	16.4	3.4U	21.9	3.4U
Barium	ug/L	1000	203	223	706	31.2 B	33.3 B	284	314	180 B	332	374	83.0 B	1.3U	204	72.4
Beryllium	ug/L	11	0.77 UB	0.1U	1.4 B	0.1U	0.1U	2.7	2.9	0.89 UB	0.1U	0.62 B	0.1U	0.1U	0.1U	0.1UJ
Cadmium	ug/L	5	0.4U	0.4U	0.4U	0.4U	0.4U	0.92 UB	1.1 UB	0.4U	0.4U	0.4U	0.4U	0.4U	0.63 UB	0.4U
Calcium	ug/L	N/A	270000	53800	2E+05	151000	157000	532000	570000	320000	41300	86400	1E+05	74.5U	121000	116000
Chromium	ug/L	50	28.8	4.6 B	42.1	2.8U	2.8U	95.7	99.3	21200	7.6 B	8.0 B	6.7 B	2.8U	2.8U	2.8U
Cobalt	ug/L	50	14.9 B	3.5U	21.0 B	3.5U	3.5U	42.4 B	44.8 B	137	3.5U	3.5U	3.5U	3.5U	9.3 B	3.5U
Copper	ug/L	200	41.8	29.6	64	2.1U	2.1U	146	173	277	7.7 B	26.1	5.8 B	2.1U	13.7 UB	5.2 UB
Iron	ug/L	300	30600	462	49100	2680	2900	107000	142000	113000	1350	30200	11200	39.7U	13900	1140
Lead	ug/L	50	13.6	3	22.7	2.2U	2.2U	57.8	45.6	18.1	2.9 B	12	2.2U	2.2U	7.6	2.2U
Magnesium	ug/L	35000	101000	16200	82800	26700	27700	203000	205000	116000	11500	26400	19100	70U	46600	48600
Manganese	ug/L	300	2430	72.8	1440	235	241	4380	4450	1880	92.2	904	1960	2.9U	4830	554
Mercury	ug/L	0.7	0.1U	0.1U	0.1U	0.1U	0.1U	0.12 B	0.12 B	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.2UB
Nickel	ug/L	100	39.8 B	3.9U	53.8UB	4.1 B	3.9U	117	129	2200	5.9UB	8.7U B	7.1 UB	3.9U	6.3 B	3.9U
Potassium	ug/L	N/A	4030 B	721	7400	387 B	411 B	7030	7010	3780 B	776 B	1530 B	568UB	124 B	2230	760
Selenium	ug/L	10	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U
Silver	ug/L	50	0.7U	0.7U	0.7U	0.7U	1.1 B	0.7U	0.7U	0.98 B	0.75 UB	0.7U	0.7U	0.7U	0.7U	0.7U
Sodium	ug/L	20000	10900	3690 B	5480	4990	5160	5730	37000	54500	4810 B	5210	2590 B	361U	14600	19300
Thallium	ug/L	N/A	4.4U	4.4U	4.4U	4.4U	4.4U	4.4U	4.4U	4.4U	4.4U	4.4U	4.4U	4.4U	4.4U	4.4U
Vanadium	ug/L	N/A	32.3 B	1.5U	49.1 B	1.5U	1.5U	97	105	107	1.5U	9.1 B	2.3 B	1.5U	4.7 B	1.5U
Zinc	ug/L	N/A	89.3	23.7 B	133	7.9 B	9.0 B	285	297	273	11.2 B	33.8	10.0 B	5.8U	74.2UB	19.4 UB

B - Compound detected in associated field blank
U - Compound not detected, reporting limit shown
UB - Undetected due to blank contamination
* - NYSDEC Drinking Water Quality Standard (DWQS) ppb

Air National Guard - Hancock Field Syracuse, NY
Dissolved Metals - Groundwater February 2004

	Units	*Standard	MW-1A-020204RD	MW-4A-020304RD	MW-4B-020304RD	MW-09-020204RD	MW-09-020204DD	MW-11-020204RD	MW-12-020204RD	MW-13-020204RD	MW-16-020304RD	MW-17-020304RD	MW-18-020304RD	FB-020304RD
Aluminum	ug/L	100	427	77.4U	192 B	77.4U	77.4U	77.4U	77.4U	77.4U	77.4U	77.4U	77.4UJ	77.4U
Antimony	ug/L	3	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U	3.9UJ	3.9U
Arsenic	ug/L	50	3.4U	3.4U	3.4U	3.4U	3.4U	3.4U	3.4U	3.4U	3.4U	3.4U	4.7 J	3.4U
Barium	ug/L	1000	118 B	222	271	31.8 B	31.2 B	33.8 B	36.4 B	25.5 B	314	147 B	74.8 J	1.3U
Beryllium	ug/L	11	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U
Cadmium	ug/L	5	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4UJ	0.4U
Calcium	ug/L	N/A	130000	56200	39700	154000	157000	133000	158000	141000	39000	53000	133000J	116 B
Chromium	ug/L	50	2.8U	2.8U	2.8U	2.8U	2.8U	2.8U	2.8U	2.8U	2.8U	2.8U	2.8UJ	2.8U
Cobalt	ug/L	50	3.5U	3.5U	3.5U	3.5U	3.5U	3.5U	3.5U	16.2 B	3.5U	3.5U	3.5UJ	3.5U
Copper	ug/L	200	4.1 UB	3.0 B	24.6 B	2.1U	2.1U	2.1U	2.1U	2.1U	5.0 B	2.1U	3.9 J	2.1U
Iron	ug/L	300	625	46.9 B	273	982	970	39.7U	39.7U	39.7U	39.7U	57.5 B	7360J	39.7U
Lead	ug/L	50	2.2U	2.2U	3.3	2.2U	2.2U	2.2U	2.2U	2.2U	2.2U	2.2U	2.2UJ	2.2U
Magnesium	ug/L	35000	43900	16900	9880	27300	27600	29200	41600	42600	10900	13800	18800J	70U
Manganese	ug/L	300	1420	65.7	36.7	233	237	2.9U	407	148	2.9U	208	2090J	2.9U
Mercury	ug/L	0.7	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U
Nickel	ug/L	100	5.5 B	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U	652	3.9U	3.9U	5.1 UB	3.9U
Potassium	ug/L	N/A	1240 B	633 UB	727 UB	415 B	325 B	724 B	607 B	428 B	591UB	512 UB	458 UB	133 B
Selenium	ug/L	10	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U	3.9U	3.9UJ	3.9U
Silver	ug/L	50	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7UJ	0.7U
Sodium	ug/L	20000	11100	3720 B	4080 B	5130	5290	3960 B	37000	53300	4740 B	5150	3110 J	361U
Thallium	ug/L	N/A	4.4U	4.4U	4.4U	4.4U	4.4U	4.4U	4.4U	4.4U	4.4U	4.4U	4.4UJ	4.4U
Vanadium	ug/L	N/A	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5UJ	1.5U
Zinc	ug/L	N/A	17.1 B	9.9 B	30.3	9.8 B	8.5 B	7.4 B	6.7 B	7.0 B	5.8U	6.7 B	133J	5.8U

B - Compound detected in associated field blank
J - Estimated value
U - Compound not detected, reporting limit shown
UB - Undetected due to blank contamination
* - NYSDEC Drinking Water Quality Standard (DWQS) ppb

Appendix F

February 17, 2004

Mr. Nicholas A. Fiscina
CH2M Hill
151 Lafayette Drive
Suite 110
Oak Ridge, Tennessee 37830

Re: L-04003
Subcontract No. 74494-National Guard Bureau
Geotechnical Analytical Laboratory Services
Contract No. DAHA-92-01-D0009,
Delivery Order No. 0015

Dear Mr. Fiscina:

Enclosed are the results of laboratory testing performed at your request on two shelby tube soil samples delivered to our laboratory on January 9, 2004 for the above referenced project. Results include:

1.	Sieve Analysis ASTM D422 & D1140 Laboratory I.D. #17392, 17393	2 each
2.	Hydrometer Analysis ASTM D422 Laboratory I.D. #17392, 17393	2 each
3.	Atterberg Limits ASTM D4318 Laboratory I.D. #17392, 17393	2 each
4.	Unified Soil Classification ASTM D2487 Laboratory I.D. #17392, 17393	2 each
5.	Hydraulic Conductivity - Flexible Wall ASTM D5084 Laboratory I.D. #17392, 17393	2 each
6.	Bulk (Natural) Soil Density Corps of Engineers EM-1110-2-1906 Appendix II, Displacement Method Laboratory I.D. #17392, 17393	2 each

February 17, 2004
CH2M Hill
Oak Ridge, Tennessee 37830

Re: L-04003
Subcontract No. 74494-National Guard Bureau
Geotechnical Analytical Laboratory Services
Contract No. DAHA-92-01-D0009,
Delivery Order No. 0015

7.	Specific Gravity ASTM D854 Laboratory I.D. #17392, 17393	2 each
8.	Porosity Corps of Engineers EM-1110-2-1906 Apendix II Laboratory I.D. #17392, 17393	2 each
9.	Cation Exhange - Method SW846-9081 Laboratory I.D. #17392, 17393	2 each

The Cation Exchange testing was performed by Lancaster Laboratories at the request of PW Laboratories, Inc.

All requested tests have been completed on the previously received sample(s) for the above project. All sample remains are scheduled to be disposed of on March 17, 2004. Please notify PW Laboratories, Inc. by letter or telephone prior to March 17, 2004 if you would prefer to pick up the sample(s) or that the sample(s) be retained by PW Laboratories, Inc. for an additional period of time.

Additional reports will be forwarded to you as they are completed.

Thank you for this opportunity to work with you.

Very truly yours,

PW LABORATORIES, INC.

Virginia J. Thoma
Manager - Laboratory Services
VJT/bap
encs:

SIEVE ANALYSIS OF SOIL / AGGREGATE

PROJECT TITLE Laboratory Testing
Subcontract No. 74494-National Guard Bureau
Geotechnical Analytical Laboratory Services
Contract No. DAHA-92-01-D0009,
Delivery Order No. 0015

PROJECT # L-04003
TEST METHOD ASTM D422 & D1140

REPORT # 1
REPORT DATE: February 17, 2004

			Sieve Size - Percent Passing Sieve															
Lab I.D. #	Sample	Depth (feet)	#100	#200														
17392	MW-1A	8.0 - 10.0	100	99.6														
17393	MW-4A	4.0 - 6.0	100	99.9														

Sample mass, as received, meets minimum requirements of test method: Yes X No

Prewashed: Yes X No

Remarks:

Performed By: AM

Checked By: V.J. Thoma

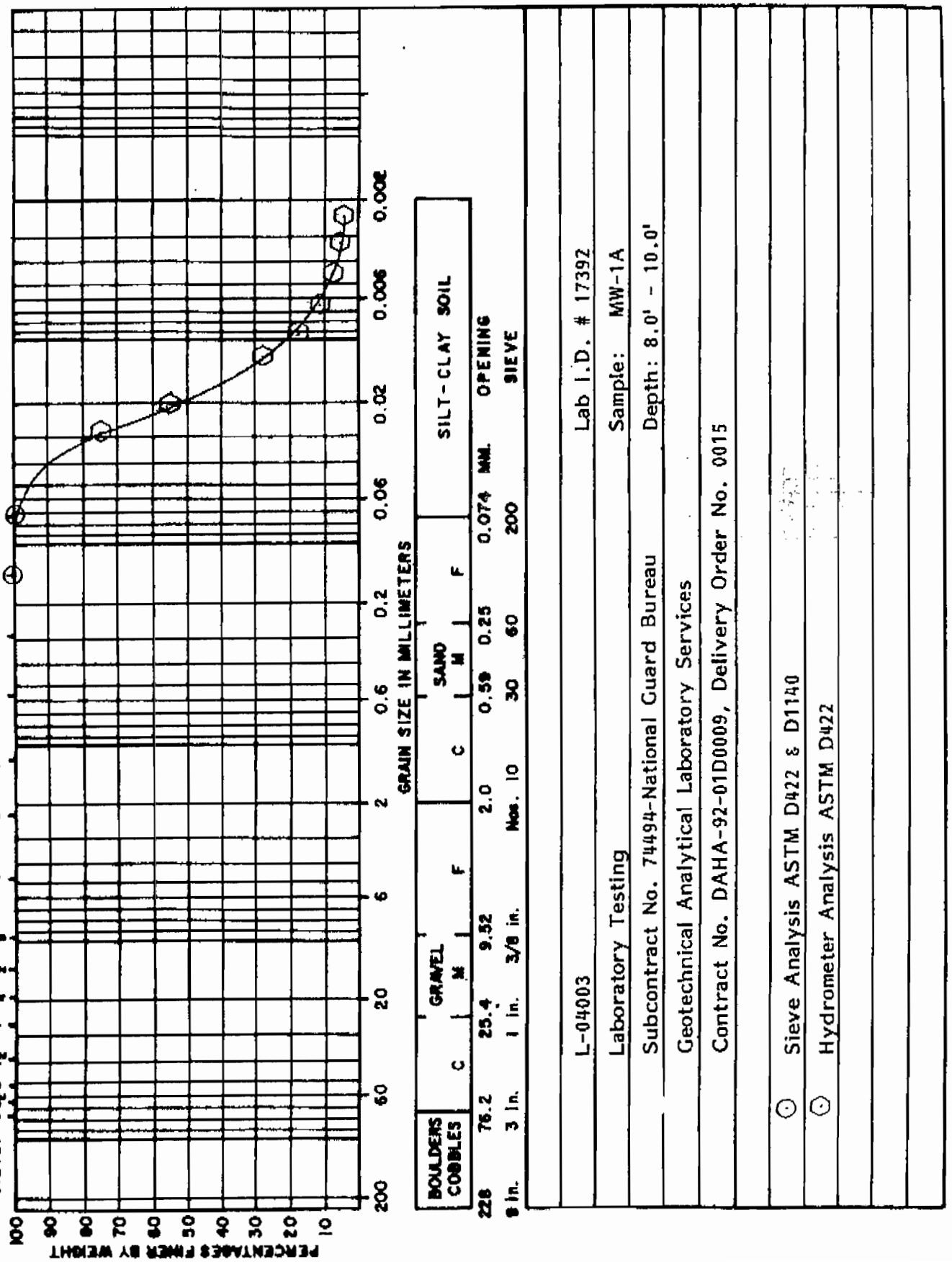
PW LABORATORIES INC.
P.O. BOX 56, 5879 FISHER ROAD, EAST SYRACUSE, NY 13057
315-437-1420 • (888) 7PW-LABS • FAX 315-437-1752

Job No.: L-04003

Report No: 1

February 17, 2004

GRAIN SIZE ANALYSIS



L-04003

Lab I.D. # 17392

Laboratory Testing

Sample: MW-1A

Subcontract No. 74494-National Guard Bureau

Depth: 8.0' - 10.0'

Geotechnical Analytical Laboratory Services

Contract No. DAHA-92-01D0009, Delivery Order No. 0015

⊙ Sieve Analysis ASTM D422 & D1140

⊙ Hydrometer Analysis ASTM D422

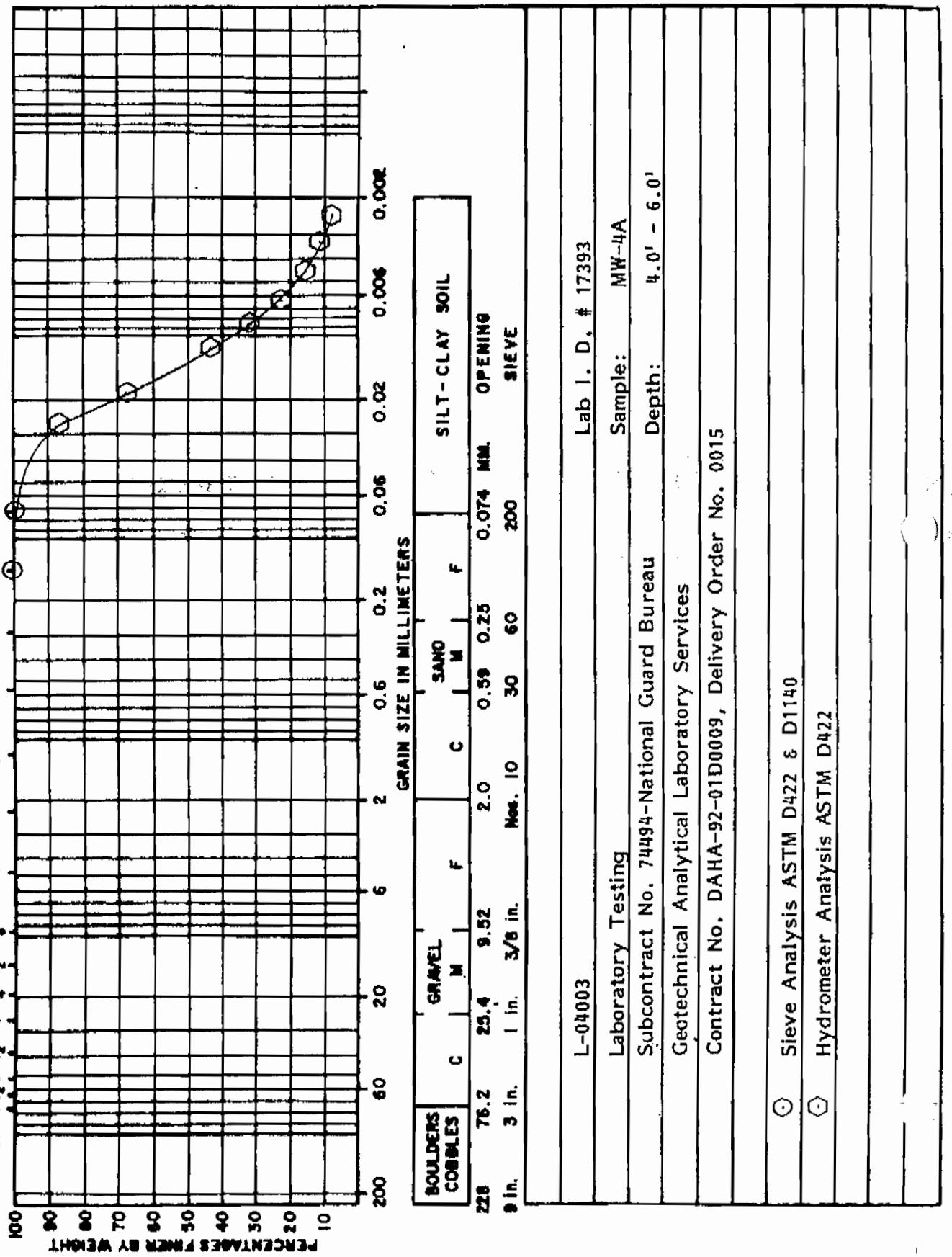
PW LABORATORIES INC.
P.O. BOX 56, 5879 FISHER ROAD, EAST SYRACUSE, NY 13057
315-437-1420 • (866) 7PW-LABS • FAX 315-437-1752

Job No.: L-04003

Report No: 2

February 17, 2004

GRAIN SIZE ANALYSIS



L-04003 Lab I. D. # 17393

Laboratory Testing Sample: MW-4A

Subcontract No. 74494-National Guard Bureau Depth: 4.0' - 6.0'

Geotechnical Analytical Laboratory Services

Contract No. DAHA-92-01D0009, Delivery Order No. 0015

⊙ Sieve Analysis ASTM D422 & D1140

⬡ Hydrometer Analysis ASTM D422

February 17, 2004

L-04003
Laboratory Testing
Subcontract No. 74494-National Guard Bureau
Geotechnical Analytical Laboratory Services
Contract No. DAHA-92-01-D0009,
Delivery Order No. 0015

ATTERBERG LIMITS ASTM D4318 and
UNIFIED SOIL CLASSIFICATION ASTM D2487

Lab ID#	Sample #.	Depth (feet)	Plastic Limit	Liquid Limit	Plasticity Index	Classification
17392	MW-1A	8.0 – 10.0	Non-Plastic	--	--	ML
17393	MW-4A	4.0 – 6.0	18	26	8	CL

REPORT DATE: February 17, 2004

Test Start Date 1/20/04

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter ASTM D5084

Project No.: L-04003 / Project Title: Laboratory Testing - Subcontract No. 74494-National Guard Bureau Geotechnical Analytical laboratoryServices. Contrct No. DAHA-92-01-D0009 Delivery Order No. 0015

ST. No: -- / Lab ID#: 17392 / Test Sample Location: MW-1A

Depth/Lift/Elev.: 8.0' - 10.0' / Type of Sample: Undisturbed X Remolded --

Method of Compaction: -- / Percent Compaction: --

Dry Unit Weight (PCF) Maximum: -- Initial: 107.1 / Moisture Content (% of Dry Weight): Optimum: -- Initial: 26.3

Initial Height (cm): 11.85 / Initial Diameter (cm): 7.15 / Initial Gradient: 23.7

Initial Degree of Saturation (B Value) (%): -- / Permeant Liquid Used: Deaired Deionized H_2O

Confining Pressure (PSI): 71.0 / Test (head) Pressure (PSI): 68.0 / Tail (back) Pressure (PSI): 64.0

Final Degree of Saturation (B Value) (%): 96 / Final Dry Unit Weight (PCF): 108.0 / Final Gradient: 24.3

Final Height (cm): 11.59 / Final Diameter (cm): 7.20 / Final Moisture Content (% of Dry Weight): 23.0

Final Four Determinations k (cm/sec)

$2.07X10^{-6}$	$2.03X10^{-6}$	$2.00X10^{-6}$	$1.97X10^{-6}$

Mean Value of Final Four Consecutive Determinations:

Coefficient of Permeability k (cm/sec): $2.02X10^{-6}$

Project Specifications: --

Notes:

REPORT

DATE: February 17, 2004

Test Start Date 1/20/04

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter ASTM D5084

Project No.: L-04003 / Project Title: Laboratory Testing - Subcontract No. 74494-National Guard Bureau Geotechnical Analytical laboratoryServices. Contrct No. DAHA-92-01-D0009 Delivery Order No. 0015

ST. No: -- / Lab ID#: 17393 / Test Sample Location: MW-4A

Depth/Lift/Elev.: 4.0' - 6.0' / Type of Sample: Undisturbed X Remolded --

Method of Compaction: -- / Percent Compaction: --

Dry Unit Weight (PCF) Maximum: -- Initial: 103.6 / Moisture Content (% of Dry Weight): Optimum: -- Initial: 23.4

Initial Height (cm): 13.56 / Initial Diameter (cm): 7.25 / Initial Gradient: 20.8

Initial Degree of Saturation (B Value) (%): -- / Permeant Liquid Used: Deaired Deionized H_2O

Confining Pressure (PSI): 71.0 / Test (head) Pressure (PSI): 68.0 / Tail (back) Pressure (PSI): 64.0

Final Degree of Saturation (B Value) (%): 96 / Final Dry Unit Weight (PCF): 104.1 / Final Gradient: 20.8

Final Height (cm): 13.50 / Final Diameter (cm): 7.25 / Final Moisture Content (% of Dry Weight): 24.9

Final Four Determinations k (cm/sec)

$2.48X10^{-7}$	$2.36X10^{-7}$	$2.44X10^{-7}$	$2.45X10^{-7}$

Mean Value of Final Four Consecutive Determinations:

Coefficient of Permeability k (cm/sec): $2.43X10^{-7}$

Project Specifications: --

Notes:

February 17, 2004

L-04003
Laboratory Testing
Subcontract No. 74494-National Guard Bureau
Geotechnical Analytical Laboratory Services
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BULK (NATURAL) SOIL DENSITY
CORPS OF ENGINEERS EM-1110-2-1906
APPENDIX II, DISPLACEMENT METHOD

Lab I.D. #	Sample I.D.	Depth (feet)	Bulk (Natural) Soil Density (PCF) Dry Density	Moist Density
17392	MW-1A	8.0 – 10.0	99.9	125.2
17393	MW-4A	4.0 – 6.0	100.6	125.8

February 17, 2004

L-04003
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SPECIFIC GRAVITY OF SOILS ASTM D854

Lab I.D. #	Sample	Depth (feet)	Minus No. 4 Fraction Specific Gravity of Solids (G)
17392	MW-1A	8.0 - 10.0	2.70
17393	MW-4A	4.0 - 6.0	2.72

February 17, 2004

L-04003
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POROSITY
Corps of Engineers
EM-1110-2-1906 Appendix II

Lab I.D. #	Sample	Depth (feet)	Porosity (%)
17392	MW-1A	8.0 – 10.0	40.7
17393	MW-4A	4.0 – 6.0	40.7

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 4201672

MW-1A (8'-10') #17392 Solid Sample
Project #L-04003
Air National Guard - Syracuse, NY
Collected:01/09/2004 00:00

Account Number: 01907

Submitted: 01/21/2004 08:55
Reported: 02/12/2004 at 12:35
Discard: 02/20/2004

PW Laboratories
5879 Fisher Rd
PO Box 56
East Syracuse NY 13057

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Units	Dilution Factor
02595	Cation Exchange Capacity of So	n.a.	27.9	0.10	mequiv/100g	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilut Fact
02595	Cation Exchange Capacity of So	Method 9081	1	02/06/2004 07:30	Ginelle L Haines	1

MEMBER ACIL
Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 4201673

MW-4A (4'-6') #17393 Solid Sample
Project #L-04003
Air National Guard - Syracuse, NY
Collected:01/08/2004 00:00

Account Number: 01907

Submitted: 01/21/2004 08:55
Reported: 02/12/2004 at 12:35
Discard: 02/20/2004

PW Laboratories
5879 Fisher Rd
PO Box 56
East Syracuse NY 13057

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Units	Dilution Factor
02595	Cation Exchange Capacity of So	n.a.	7.8	0.10	mequiv/100g	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilut Fact
02595	Cation Exchange Capacity of So	Method 9081	1	02/06/2004 07:30	Ginelle L Haines	1

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