Report

Site Investigation Report
Airport Development District
Francis S. Gabreski Airport
Westhampton, New York

Rebuild Now - NY
Empire State Development

January 2004



O'BRIEN & GERE
ENGINEERS, INC.

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James R. Heckathorne, P.E.
Vice President

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1. Introduction

1.1. Overview and objectives

This report provides a summary of the investigations completed at the Airport Development District (ADD) property located at the Francis S. Gabreski Airport in Westhampton, New York. The ADD property is currently owned by Suffolk County Department of Public Works. The County took title to the property in 1970 from the US Air Force. Suffolk County Department of Health Services (SCDHS) has been providing environmental services on the property on behalf of Suffolk County.

The investigation was completed as part of the Rebuild NOW-NY program, which is a joint venture between Empire State Development (ESD) and the New York State Department of Environmental Conservation (NYSDEC). A Work Plan entitled Site Investigation Airport Development District, Francis S. Gabreski Airport, Westhampton, New York dated February 2002, which was approved by the New York State Department of Environmental Conservation (NYSDEC), was prepared by O'Brien & Gere Engineers, Inc. That work plan outlined the proposed investigations. The field work was completed by Environmental Resources Management (ERM) under contract with NYSDEC. A Sampling and Analysis Plan (SAMP) was developed for the purposes of providing procedures and protocols for the implementation of the field efforts. The SAMP followed the format approved by the United States Environmental Protection Agency (USEPA) for previous ReBuild NOW-NY project in Buffalo, New York.

Consistent with the Rebuild NOW-NY program objectives, work efforts necessary to address areas of concern identified by the investigations prior to, or as part of, redevelopment will be defined in a Remedial Action Work Plan (RAWP).

1.2. Facility description and history

1.2.1. Facility description

The ADD encompasses 58.6 acres of the Francis S. Gabreski Airport on the southern shore of Long Island (Figure 1). The Site is located on County Route 31 (Old Riverhead Road) in the Town of Southampton, New York and is owned by Suffolk County Department of Public Works. The ADD, as defined in this project, is bounded to the north by the Airport service road, on the south by Cook Street, on the west by County

Road 31, and on the east by Sheldon Avenue. Boundaries of the ADD are illustrated on Figure 2.

The Site is bordered to the south by the New York Air National Guard, which occupies approximately 70 acres of runways, hangers, and maintenance and service facilities on the southwest section of the Francis S. Gabreski Airport. The northern side of the Site is bordered by undeveloped "Pine Barrens." The airport runways are adjacent to the eastern side of the ADD site. The Quogue Wildlife Refuge is located to the east of the runways and is separated from the airport area by a small wooded buffer strip. To the west of the Site are several light industrial and commercial properties that are located along County Route 31.

The Site contains several small buildings and roadways. A number of buildings have been demolished. The Site is serviced by public water, sewer, electric, and natural gas. According to the Commercial Real Estate Transaction Screen Questionnaire completed by Dvirka and Bartilucci in August 2000, light industrial activities occur in nine of the 22 buildings currently located at the Site, as outlined on Table 1.

Table 1. *Current Site occupants*

Building Number	Business
AHRC	Association to Help Retarded Children – preparation of commercial packaging such as construction of boxes and holiday kits.
11A	Black Sheep TV – repair of TVs
115	Holey Moses – baker of cheesecake
140	A&M Electronics – repair and installation of electronic equipment and parts
145	Pero Tag – construction of airport sign banners using fabric.
152	DPW Aviation – maintenance and storage of equipment.
155	Wilson – restoration of automobiles
157	Hampton Interiors – reupholsterer
167	Relay Matic – assembly of electric switches

Source: Dvirka and Bartilucci Consulting Engineers

1.2.2. Facility history

The Francis S. Gabreski Airport consists of about 11,550 acres. In 1943, the Federal government built the airport for use as an Air Force base during World War II. After the war, it was returned to Suffolk County until it was reclaimed for the Korean War National Emergency in 1951. In 1960, it was leased by the US Air Force for an Air Defense Command Base, deactivated in 1969, and then released back to Suffolk County in 1970. In 1991, the airport was renamed in honor of Col. Francis S. Gabreski, a former base commander and World War II air ace. The airport is currently utilized by corporations, businesses, private aviation and air taxi services. Two fixed based operators, Malloy Air East and Long Island Jet Center, provide aviation services to the airport users.

The ADD portion of the airport was used primarily for base personnel. This area included several types of housing and dormitories for personnel and their families. In addition, training and support services were

located in the central portion of the site. These services included a photographic lab, wash racks, and vehicle repair areas in addition to a flight simulator and armament and electronics storage facility. A theater, church, and Base Exchange (BX) were also located on the site. Table 2 provides a summary of the buildings identified at the Site with uses of potential concern. The locations of these buildings or areas are illustrated on Figures 3 and 4.

Table 2. *Building and general usage*

Building Number	Former Use	Other Comments
140 (32)*	Vehicle repair	• vehicle lifts and bays • sealed floor drain • drums of oil formerly present in bldg. • buried petroleum tanks removed from south and north of building in 1995
144 (40)	Vehicle maintenance	• pesticides formerly stored in building • transformers formerly stored in building (non-PCB) removed in 1999
146 (41)	Photo Tech	• Photographic supplies and materials used • Floor drains connected to septic system/cesspools
148 (42)	Armament and Electronics Hangar	• solvents may have been used during repair activities
157	Plumbing repair	• cutting oil drums stored in building
General		• pesticides reportedly used to de-ice roadways

Note: *-Numbers in parenthesis represent older map ID numbers.

Source: Dvirka and Bartilucci Consulting Engineers

Several storage tanks were located on the Site. The following list was identified from maps of the Site provided by Suffolk County Health Department (SCHD) or conversations with SCHD personnel:

- Small, 200 to 500-gallon, above ground heating oil tanks were located next to various buildings. These tanks have been removed or are undergoing removal by SCHD.
- 1,000-gallon waste oil tank – north of building #140 (32)
- 6,000-gallon fuel oil - south of Building #140 (32)
- 5,000-gallon fuel oil reclamation tank - southeast of Building #140 (32). This tank was also reportedly used for temporary storage of JP-4 (jet fuel) during repairs (UNC, 1988).
- 1,000-gallon diesel tank – southeast of Building #144
- 1,500-gallon and 2,000-gallon MOgas (petroleum, automotive fuel) tanks – north of Building #144
- two 2,500-gallon fuel oil tanks - north of current Association to Help Retarded Children (AHRC) building

With the exception of the heating oil tanks, the 6,000-gallon fuel oil tank south of Building #140, and the two 2,500-gallon fuel oil tanks north of the ARC building, it is believed that the above-listed tanks were underground storage tanks (USTs). It is not known whether the three fuel oil tanks were above or below grade. Approximate locations of the

larger tanks are provided on Figure 4. The locations of the other heating oil tanks were not obtained, however it is reasonable to assume that they were adjacent to each of the buildings.

Historically, the primary method for disposal of sanitary wastewater, stormwater, and industrial wastewater was through the use of on-site septic tanks and cesspools. Locations of these features are approximated on Figure 3. Figure 4 provides an enlargement of features on the southern portion of the Site. It should be noted that the septic tank and cesspool information was transferred to these figures from several different sources, which were provided by SCHD. The maps provided did not cover the entire ADD property. In addition, some of these maps did not contain legends or scales. Therefore, the existence and location of these features has been estimated. Furthermore, one of the maps indicated that several of the cesspool systems were scheduled for abandonment. The current status of many of the cesspool and septic systems is unknown at this time.

The Site has been divided into four areas for the purpose of assessing potential impacts from historical operations. These areas, selected based on the historical operations, are as follows. The areas are also outlined on Figure 2.

Northern area (north of Wallen Street) – This area contained the officers' quarters, administration building as well as a church, theater, and PX. Other than the above-grade heating oil tanks, there are no suspected sources of contamination in this area.

South-central area (south of Wallen Street and between Smith and Avenue B) – Most of the services for the base personnel were located in this portion of the Site. Historical operations included a photographic lab, wash racks, and a vehicle repair area in addition to a flight simulator, and munitions, armament, and electronics storage facilities. According to an October 3, 1988 letter report prepared by UNC Geotech on behalf of United States Air Force (USAF), up until 1969 the 5,000-gallon tank located along Cook Ave in the vicinity of Building 140 was used to hold jet fuel while truck tankers underwent maintenance. Following completion of repairs, the jet fuel was reportedly returned to the tanker. Subsequent to closure of the air base, some of the buildings in this area were leased to outside commercial businesses. One of the buildings was used as a bus garage that included repair and fueling operations. The bus company stored diesel fuel and gasoline in two 550-gallon above-ground storage tanks (ASTs). These tanks were removed prior to 1988. An underground storage tank (UST) was located north of Building 140 which was connected to an underground floor drain running from Building 140. The floor drain was ordered closed by SCHD in 1985. The tank was inspected in September 1986 and reported dry and out of use. Another tank on the south side of Building 140 was used for fuel oil but did not appear to have been tested. (UNC Geotech, 1988) As discussed in Section 1.2.4, a petroleum plume is located in this section of the Site.

Southwest area (west of Smith and east of County Route 31) – Air force personnel dormitories were located in this area. Two of the larger petroleum tanks were located in this area (north of the AHRC) building.

Southeast area (east of Avenue B) – This area contained base housing units for military personnel and their families.

1.3. Previous investigations

Several environmental investigations have been performed at ADD. Following is a chronological summary of the significant site investigations and the results or recommendations of each:

- In 1988, UNC Geotech was hired by the USAF to verify Suffolk County's contention that free product found on the southern portion of their property contained jet fuel and, therefore, was the responsibility of USAF. The findings of their investigation were provided in the document entitled *Letter Report. Independent Verification of Alleged JP-4 at Suffolk County Airport LI, NY* dated October 3, 1988. A copy of this report is provided in Exhibit 1.

- According to the UNC Geotech document referenced above, Suffolk County conducted investigations in the vicinity of the southern part of the ADD parcel (between Smith and Avenue B) in connection with discovery of a plume containing a light non-aqueous phase liquid (LNAPL). These investigations began in October 1984 when a 2,000-gallon tank failed a Petrotite® leak-detection test. Subsequent removal of the tank revealed the presence of petroleum-stained soil. At that time a second 2,500-gallon tank was removed and a third tank was abandoned in placed by filling it with sand. A groundwater monitoring program was subsequently initiated by Suffolk County to define the extent of impacted groundwater.

- Free product was observed to be present on the groundwater table in several wells installed in the area between February and September 1986. A total of 47 monitoring wells were installed in the area during this program to define the extent of the plume. The approximate location of this plume is illustrated in Figures 4 and 5. Two recovery wells were subsequently installed at the leading edge of the plume and an air-stripping tower was constructed. The groundwater extraction and treatment system reportedly operated for several years and little LNAPL was recovered (UNC Geotech, 1988).

- A soil gas survey was conducted in 1988 under direction of the USAF (UNC Geotech, 1988). In addition, samples of the LNAPL contained in on-site tanks and observed on the groundwater table were collected for analysis. The results of the analysis indicated that the LNAPL present on the groundwater table consisted predominantly of jet fuel with a smaller fraction of diesel and possible small amounts of other petroleum products.

- Water level and LNAPL thickness measurements have been collected bi-weekly by the Suffolk County Health Department since at least January 1997. LNAPL has also been removed using a bailer if there was a measurable thickness present during the monitoring event. Copies of monitoring reports for 2001 and 2002 are included in Exhibit 1 for reference. Table 3 summarizes the product recovery information. As illustrated, product was recovered each month in 1997, one month in 1998, three months in 1999, seven months in 2000, five months in 2001, and six of eight months in 2002. The maximum monthly volume recovered was 1.2 gallons in February 2001. Between February 1998 and September 1999 no product was observed. The maximum annual product volume of 2.99 gallons was recovered over the eight month period in 2002. Based on review of the information a total of 9 gallons of product was removed from the wells between January 1997 and August 2002.

- Peer Environmental recently completed a Remedial Investigation at the adjacent Air National Guard (ANG), 106th Rescue Wing facility. This facility occupies the property adjacent and to the south of the ADD property. A Draft-Final version of the Remedial Investigation report dated May 2002 was provided for review in preparation of this report. As the ANG property is located adjacent to, downgradient of the property, selected information was used to further evaluate downgradient conditions and provide additional information pertaining to the subsurface characteristics of the area. Pertinent sections of this document are included as Exhibit 2.

- The ANG remedial investigation was completed at 12 areas or sites within the ANG property. The closest to the ADD property is Site 11, which is located south of Cook Street. A copy of a map of the ANG property illustrating the areas is included in Exhibit 2. A composite map showing the ANG property and the ADD property with selected sample locations is also included in this exhibit as Figure E-1.

  Site 11 is a former trench drain sump located beneath the northeast corner of Building 230. The building is used for Motor Pool maintenance of heavy equipment. During renovations at the Motor Pool building, a vertical cylindrical structure, later identified as a former trench drain sump, was discovered under the floor that appeared to contain either used oil, water, or both. The cylindrical sump structure was estimated as approximately 2 ft in diameter and 18 ft deep, with an internal volume of about 200 gal. The former trench drain sump is constructed of steel pipe and is connected to the former trench drain system, which has been decommissioned. The vessel has reportedly been emptied and steam cleaned by the 106th Rescue Wing, with no evidence of leakage observed. Recently, the sump contained about ½ inch of water (Lt Col Webb, 106th Rescue Wing EM, personal communication, 2000). In previous investigations, arsenic, chromium, and lead were detected in subsurface soils exceeding NYSDEC Action Levels, in the vicinity

of the site. Chromium was also detected exceeding action limits in groundwater (ABB-ES 1997). The site was not addressed in the Phase I records search (Dames & Moore 1986). The site was added to the IRP in 1992, after completion of the Phase I Assessment (ABB-ES 1997) (Peer, 2002).

Results of the RI, indicate that stains and odors were observed from subsurface fill soils, but no elevated PID readings were recorded. PAHs exceeded action levels in the shallow fill soil interval at S11-DP03. Lead and chromium exceeded the ULBCs in the shallow soil interval at S11-DP03. (Peer, 2002). It should be noted that the lead and chromium, as well as arsenic that was previously observed, are not considered to be related to conditions at the ADD

- Background groundwater information provided in the Peer report included a groundwater quality data collected from wells MW-002, MW-003 and SW-01 which are located across Cook Street from the Building 140 area as shown on Figure 6. The groundwater quality data presented was reportedly collected by Stearns & Wheler in 1998. The results of the analyses indicted the presence of VOCs at each of the locations as follows:

Table 4. *Selected ANG groundwater quality data*

VOCs (ppb)	SW-01 (Rnd 1)	SW-01 (Rnd 2)	MW-002 (Rnd 2)	MW-003 (Rnd 1)	MW-003 (Rnd 2)
Ethylbenzene	140	5	10	72	440
Total xylenes	50	37	44	570	2100
Toluene	ND	ND	13	230	970
1,1,1-Trichloroethane	ND	ND	ND	14	ND
SVOCs					
Naphthalene	ND	ND	ND	28	110

Source: Peer, 2002 (Revised Draft Remedial Investigation, Sites 4, 5, 8, and 9, S&W 1999, Volume II, Appendix C).
Note: ND – Not Detected

As indicated above, wells MW-002, MW-003 and SW-01 contained petroleum-related VOCs and SVOCs in 1998. These wells were not resampled as part of the Peer investigation. The data suggests that the petroleum plume had migrated from the southern end of the ADD property onto the ANG property.

- A site-wide groundwater monitoring program was also completed by Peer in 2001 as part of the RI at the ANG. ANG upgradient monitoring wells SDW-019 and SDW-020 are located downgradient of the ADD property as illustrated on Figure 6. Specifically, these wells are located downgradient of the southeastern and southwestern portions of the property. A sample was also collected from well SW-001 during the RI. Groundwater samples collected from these wells were analyzed for: volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), benzene, toluene, ethylbenzene, and xylene (BTEX), total petroleum hydrocarbons (TPH), tris(o-cresyl)phosphate (TCP), and target analyte list (TAL) metals (Peer, 2002).

No volatile or semivolatile organic compounds were detected above the NYSDEC Action Levels at the background groundwater location, and no BTEX compounds, TPH, or TCP were detected in any of the samples (Peer, 2002).

Chromium was detected at a concentration of 75 µg/L in SW-01, which is above the NYSDEC Action Level of 50 µg/L, but below the MCL of 100 µg/L. No other TAL metals were detected above the NYSDEC Action Levels (Peer, 2002). It should be noted that, chromium was not detected in the groundwater above action levels on the ADD property.

- Site 8 includes the Old Base Septic System, which consisted of a series of cesspools and dry wells. Site 8 was divided into 5 cells for the evaluation based on location within the ANG property. Cell 2 (also called Site 8B) is the area located immediately south of Site 11 and the ADD property as illustrated in the figure included in Exhibit 2. Sludges from the septic systems initially characterized by ABB-ES and Hazardous Waste Remedial Actions Program (HAZWRAP) personnel in 1991. A Site Investigation was subsequently conducted by ABB-ES between 1994 and 1997 to assess whether constituents detected has migrated to soil and/or groundwater. Additional soil and groundwater samples were collected from Site 8B as part of a Remedial Investigation completed by Stearns & Wheler in 1998. (Peer, 2002)

  Results of the investigations at Site 8B indicated that petroleum-related compounds were present in the groundwater. Specifically, xylenes, ethylbenzene and naphthalene were identified at concentrations generally less than 100 µg/L. According to the Peer report (Peer, 2002), the conclusions of the investigations suggested that these constituents were from two separate sources, one of which was the plume that originates on the southern end of the ADD property.

- Site 2 is the former Hazardous Waste Storage Area, which was used to store solvent wastes and recovered fuel oils in drums. This area is located approximately 500 ft south of Site 8B. Investigation results reveal that petroleum-related compounds were not present in the groundwater at this location.

2. Site investigation

The site investigation was completed in two phases. The initial phase was completed between June and July 2002 as described in the Work Plan (OBG, 2002) and the SAMP (NYSDEC, 2002). The work efforts for the second phase were completed to fill data gaps identified by the initial work efforts. This phase of the work was completed in September 2002.

The investigation included the following activities:

- Completion of a geophysical survey to locate underground structures (piping, cesspools, leach fields, etc.) and to verify that there were no underground features present beneath the proposed well and boring locations.

- Installation of thirty-three soil borings to a depth of approximately 40 feet (ft) below ground surface (bgs) or to the groundwater and collection of surface and subsurface soil samples for analysis. Based on the goals of the investigation, the general rationale for the analysis of soil samples were as follows:

Table 5. *Surface soil locations and sampling scheme*

Location	No. of Samples	Rationale	Analysis
Northern Area	4	To assess potential exposures	3 Inorganics and 4 pesticides
South-Central Area	7	To assess potential exposures	4 Inorganics and 7 pesticides
Southwest Area	1	To assess potential exposures	1 Inorganics and 1 pesticides
Southeast Area	1	To assess potential exposures	1 Inorganics and 1 pesticides

Source: O'Brien & Gere Engineers, Inc.

Table 6. *Subsurface soil boring locations and sampling scheme*

Location Soil Borings	No. of Samples	Rationale	Analysis
Northern Area	3	General conditions	3 Inorganics, 2 SVOCs, 3 Pesticides, 3 VOCs
South-central Area	20	General conditions	20 VOCs (each location) 13 SVOCs, 4 Pesticides, 8 Inorganics
Southwest Area	2	General conditions	3 SVOCs, 1 Pesticide, 3 Inorganic, 3 VOCs
Southeast Area	3	General conditions	2 SVOCs, 3 VOCs, 2 Inorganics

Source: O'Brien & Gere Engineers, Inc.

- Installation of seven monitoring wells and collection of groundwater samples from each of the seven new monitoring wells and selected existing piezometers using low-flow sampling technologies. Soil at each well was geologically characterized by sample collection.

- Completion of a site survey to prepare a base map of the Site and to document the locations of soil borings, monitoring wells, and other pertinent or permanent structures.

- Completion of test pits within areas where cesspools or geophysical anomalies were located to visually inspect the soils. Soil samples were collected if visually-impacted material was identified.

2.1. Soil sampling

2.1.1. Soil boring investigation

Thirty-three (33) soil borings were advanced using direct push technology to a depth of approximately five ft into the groundwater table (about 40 ft). The boring locations were estimated in the Work Plan while the actual locations were determined in the field by the NYSDEC Project Manager and ERM. Soil boring locations are shown on Figure 6. An ERM geologist logged all soil borings using the Unified Soil Classification System. The logs include a description of the soil color, texture, moisture content, odor, absence/presence of staining, and PID headspace data. Soil boring logs are presented in Appendix A.

As specified in the Work Plan, selected samples collected during the soil boring program were sent for laboratory analysis. Surface soil samples were collected at selected locations from just below the vegetative cover to 6 to 10 inches bgs. Subsurface soil samples were collected continuously starting at approximately 0.5 ft bgs to the groundwater table. Selection of samples for laboratory analysis was based on the presence of staining, PID measurements, or chemical odor. In the absence of such indicators, the sample was collected from the interval of one foot above the groundwater table.

Upon retrieval, a portion of each macro-core sample was immediately placed in a pre-cleaned sampling jar and sealed for subsequent screening with a photoionization detector (PID) while the remainder of the sample was placed in a pre-cleaned sampling jar supplied by the laboratory for analysis of VOCs. Samples were submitted to MITKEM Laboratories for analysis in accordance with the SAMP.

An inventory of samples collected and respective analyses is provided in Table 7.

2.2. Groundwater monitoring wells

As part of the investigation, seven new monitoring wells were installed at the Site (ERM-01 through ERM-07). The wells were developed and sampled in accordance with the SAMP. Figure 6 provides locations of the monitoring wells.

2.2.1. Well installation

Seven monitoring well/borings were installed using 41/4-inch hollow stem augers (HSA). The Work Plan specified continuous split-spoon sampling was to be conducted from ground surface to the water table, and this process was initiated at ERM-02. However, due to the excessive amount of time required to conduct continuous split spoon sampling at ERM-02, the Work Plan was modified by ERM and approved by O'Brien & Gere and the NYSDEC. The Work Plan modification specified that continuous split-spoon samples be collected from the surface to approximately 10 ft bgs and then again from approximately 10 ft above the water table (estimated to be at 30 to 40 ft bgs) to the water table interface. Split-spoons were logged by an ERM geologist. Soil boring logs are included as Appendix A.

Monitoring wells were constructed in the boreholes once the augers had reached the target depth. A minimum of fifteen ft of well screen was installed, with the bottom of the screen set approximately ten ft below the water table. The wells were constructed of two-inch diameter PVC with 0.020-inch slotted screen and solid riser casing. Following the screen and riser installation, a sandpack consisting of #1 Morie sand was installed to a maximum level of two ft above the top of the screen. A one-foot layer of bentonite slurry was installed above the sandpack. The remainder of the annulus to the land surface was filled with a Portland cement grout.

Once installed, the tops of the well risers were marked for subsequent surveying and water level measurements. The wells were then completed with a steel protective casing. The protective casings were installed flush with grade and were equipped with three-bolt manhole covers. Adequate space was left above the top of the well riser and below the steel protective cover to allow for fitting of an expandable cap. All Site wells were fitted with keyed-alike locks to maintain well integrity.

The maximum depth of the newly installed wells is between 41 and 53 ft bgs. Groundwater was encountered between 32 and 38 ft below grade. The locations of the monitoring wells are shown on Figure 6. Monitoring well construction logs are presented in Appendix B.

2.2.2. Well development and sampling

The seven new monitoring wells were developed by surging and evacuation (pumping) prior to water level measurement or sampling activities. Temperature, pH, specific conductivity, and turbidity were measured at a minimum frequency of once per well volume of water evacuated during well development. Development continued until these parameters had stabilized and the turbidity level was consistently below 50 Nephelometric Turbidity Units (NTU). If the 50 NTU target was not reached development was continued until no change in the turbidity

measurement was observed. Well development data is presented in Appendix C.

Groundwater samples were collected from all seven monitoring wells installed by ERM in the ADD and submitted for analysis. Table 7 is a sampling and analysis summary. The sampling was performed after allowing at least one week for equilibration following well development. Groundwater was monitored in the field for the presence of LNAPL, pH, temperature, conductivity, dissolved oxygen, turbidity, dissolved iron, and oxidation-reduction potential (ORP). A summary of the water level elevation measurements collected is presented in Table 8. Groundwater sampling logs are presented in Appendix D. Groundwater sample analytical data is provided in Tables 9 through 20.

2.3. Test Pits

Ten test pits were completed to further define the nature and extent of subsurface materials/structures encountered during the soil boring program and the geophysical subsurface evaluation. Seven areas of concern were targeted to address possible stained soils, surface and subsurface structures, or suspicious fill material. The test pits were advanced using a rubber tire, extended reach Case 590 Super L backhoe. Material removed from the test pits was placed adjacent to the excavation and back-filled following test pit completion.

The length and depth of the test pits were dependent on the features being investigated. Test pit materials were visually described, as well as photographed for future reference. The locations of these test pits are presented on Figure 6. Logs of the test pits were generated and are provided in Appendix F.

Visual field inspection of the test pits did not exhibit any stained soil or hydrocarbon odors. TP-4 was conducted to address the possible underground storage tank (UST) located in the parking lot of A&M Electronics. However, a test pit at this location identified a six inch steel pipe buried approximately three ft below grade and no evidence of a UST.

As a result of field observations of oily material, a soil/sediment sample was collected from the bottom of manhole MH-1 in the area of TP-1 conducted at the northern area of the site and submitted for TCL VOCs, TCL SVOCs, and TAL metals analyses. This was the only area in which potentially impacted soil was observed during completion of the test pits.

2.4. Investigation summary

The following provides a summary of the investigation activities completed within each of the four areas of the Site as defined in Section 1.2. Table 7 is a sampling and analysis summary. Sampling locations are presented on Figure 6.

Northern Area

The northern area is located north of Wallen Street and east of County Route 31. This area contained the officers' quarters, administration building as well as a church, theater, and PX. Other than the above-grade heating oil tanks, there were no suspected sources of contamination in this area. Seven soil borings were installed in this area. Three surface soil samples were collected from SS-05, SS-06, and SS-07. Five subsurface samples were collected from borings SB-02, SB-05, SB-06, SB-07, and SB-08. No monitoring wells were installed in this area. Tables 9 through 14 provide the analytical soil sampling results.

Three individual surface soil samples were collected from the northern area at soil borings SB-05, SB-06 and SB-07. The samples were analyzed for TCL pesticides and TAL inorganics. A composite surface soil sample, SS-01, was collected from around the area of SB-06 and SB-07 during phase II of the program. This sample was analyzed for pesticides to assess the potential extent of pesticides identified in at SB-06 and SB-07. A summary of surface soil analytical results is presented on Tables 9 and 10.

Three subsurface soil samples were collected from the northern area at soil borings SB-02, SB-07 and SB-08. SB-02 was analyzed for TCL VOCs, and SB-07 and SB-08 were analyzed for TCL VOCs and SVOCs, and TAL inorganics. A summary of subsurface soil analytical results is presented on Tables 11 through 14.

No monitoring wells were installed within the northern area. However, wells ERM-01 and ERM-02 were installed downgradient to monitor groundwater quality from this area.

South-Central Area

The south-central area is located south of Wallen Street and between Smith and Avenue B. Most of the services for the base personnel were located in this portion of the Site. Historical operations included a photographic lab, wash racks, and a vehicle repair area in addition to a flight simulator, and munitions, armament, and electronics storage facilities. Subsequent to closure of the air base, some of the buildings in this area were leased to commercial businesses. One of the buildings was used as a bus garage that included repair and fueling operations. The petroleum plume discussed in Section 1.3 is located in this section of the Site. Twenty soil borings were installed in this area with several surface and subsurface samples collected. Four monitoring wells were also installed in this area. Tables 9 through 14 provide a summary of the analytical soil sampling results.

A total of four surface soil samples were collected from the south-central area of the Site. These samples were collected from SB-16, SB-17, SB-31 and SB-33. Each was analyzed for TCL Pesticides and TAL Inorganics. The following surface soil composites were collected from this area during phase II to further assess the presence of pesticides identified during the phase I program: SS-02 was collected around SB-

16; SS-03 was collected around SB-30; and SS-03 was collected around SB-31. These samples were analyzed for pesticides.

A total of twenty soil borings (SB-14 through SB-33) were completed within the south-central area. Twenty subsurface soil samples and two duplicate samples were collected within the south-central area. Each sample was analyzed for TCL VOCs. Thirteen subsurface soil samples and one duplicate sample collected within the south-central area were analyzed for TCL SVOCs. Four soil samples and one duplicate soil sample were analyzed for TCL Pesticides. Eight subsurface soil samples and one duplicate soil sample were analyzed for TAL Inorganics.

In addition, soil samples collected during the installation of monitoring well ERM-07 were sent for laboratory analysis at the request of the NYSDEC Project Manager due to the presence of LNAPL or free product. Samples were analyzed for full TCL and TAL parameters.. Soil sample ERM-07 (31-32 ft) was collected from the one-foot interval above the water table and soil sample ERM-07 (32-34 ft) was collected from the saturated interval below the groundwater table.

Three wells were installed within the south-central area. Well ERM-01 was installed upgradient. Wells ERM-06 and ERM-07 were installed downgradient of this area. ERM-07 was specifically installed within the plume area.

Southwest Area
The southwest area is located south of Wallen Street and between Smith Street and County Route 31. Air Force personnel dormitories were located in this area. Two of the larger petroleum tanks were also located in this area north of the AHRC building. Two soil borings were completed in this area. One surface and two subsurface samples collected. One monitoring well was installed in this area. Tables 9 through 14 provide a summary of the soil analytical results.

One surface soil sample from the southwest area was collected at SB-10 and analyzed for TCL Pesticides and TAL Inorganics. Two subsurface soil samples were collected from the southwest area at soil borings SB-09 and SB-10 and analyzed for TCL VOCs, SVOCs, and TAL Inorganics.

One well, ERM-05, was installed downgradient of this area to assess groundwater quality.

Southeast Area
The southeast area is located south of Wallen Street and between Avenue B and Rust Ave. This area contained base housing units for military personnel and their families. Three soil borings were installed in this area with surface and subsurface samples collected. Two monitoring wells were installed in this area. Tables 9 through 14 provide a summary of the soil analytical results.

One surface soil sample was collected from the southeast area at SB-11 and analyzed for TCL Pesticides and TAL Inorganics. Three subsurface soil samples were collected in the southeast area at SB-11, SB-12, and SB-13. Both SB-11 and SB-12 were analyzed for TCL VOCs, SVOCs, and TAL Inorganics and SB-13 was analyzed for TCL VOCs.

Two wells were installed within this area. ERM-02 was installed on the north side to monitor upgradient conditions and ERM-04 was installed on the downgradient side of this area.

2.5. Disposal of investigation derived waste

Investigation derived waste (IDW) generated from the installation and development of monitoring wells was handled in accordance with NYSDEC TAGM No. 4032. Drill cuttings were disposed within the borehole provided that the borehole was not to be used for the installation of a monitoring well. Purge water generated during the development of the monitoring wells that did not contain LNAPL or exhibit strong odors was subsequently discharged to the land surface in the vicinity of the well.

Subcontractors were responsible for decontaminating their equipment and providing the equipment and materials necessary for the proper handling and storage of the IDW from the decontamination activities.

2.6. Site survey

American Engineering Services, a New York State-licensed surveying firm, was contracted to develop a base map. The base map was prepared using conventional survey methods and supplemented with historical data and maps. The map shows the Site topography with two-foot elevation contours, and includes the locations of existing monitoring wells, foundations, structures, sumps, property lines, and other significant features. At the completion of the site investigation activities, surveying was conducted to locate each of the soil borings and monitoring well locations. The elevations of all monitoring well casings were established to an accuracy of plus or minus 0.01 ft based on the NAD 83 datum. A notch was etched in the interior casings to provide a reference point for future groundwater elevation measurements. The base map is presented as Figure 6.

3. Investigation results

3.1. Geologic and hydrogeologic conditions

The Site is located at elevations between 50 and 60 ft above mean sea level (MSL). The topography of the area generally dips southward towards the Atlantic Ocean. The head of Aspatuck Creek lies approximately one mile southeast of the Site.

3.1.1. Geology

The area in which the Site is located is underlain by thick deposits of unconsolidated deposits consisting of sand and gravel with intermittent clay deposits. Bedrock was reportedly encountered at 1,600 ft below grade at a well located 18 miles west of the ADD property (Peer, 2002). A geologic column is provided as Figure 7.

Glacial deposits

These upper Pleistocene sediments are composed of glacial outwash deposits; lacustrine and marine deposits; and terminal, ground, and ablation-moraine till deposits. The sediments below the airport are mostly outwash deposits consisting of stratified fine to coarse sand and gravel of light-to dark-brown, tan, and yellowish-brown color. Approximately 100 to 120 ft of these sediments are found below the airport and above the underlying Gardiners clay. Till deposits known as the Ronkonkoma Terminal Moraine are expressed as hills approximately 2 miles north of the airport. Lacustrine and marine deposits are usually thin and discontinuous and are found locally throughout Long Island (Peer, 2002).

Gardiners clay

The Gardiners Clay unit underlies the glacial deposits. This unit is approximately 40 ft thick and found at about 100 ft below MSL at the airport. This unit extends southward where it overlaps the Monmouth Greensand. The Gardiners Clay pinches out just north of the airport, but equivalent clay bodies can be found locally at various locations on Long Island. This unit is made up of green and gray clay, silt, and clayey and silty sand including some interbedded clayey and silty gravel. This layer as a whole has low hydraulic conductivity and tends to confine water in the underlying aquifer (Peer, 2002).

Monmouth greensand

The Monmouth Greensand underlies the Gardiners Clay in many areas of Long Island. This unit does not underlie ADD but is present 3,000 ft to the south. This unit extends southward and forms a wedge-like layer,

which thickens towards the south. It is approximately 50 ft thick beneath the barrier beach. The Monmouth Greensand consists of interbedded marine deposits of dark-gray, olive-green, dark-greenish-gray, and greenish-black glauconitic and lignitic clay, silt, and clayey and silty sand. This layer has a low hydraulic conductivity and tends to confine the water of the underlying aquifer (Peer, 2002).

Magothy formation
The Magothy Formation is a thick body of continental deposits composed of lenses of sand, sandy clay, clay, and some gravel. It rests on the Raritan formation and is in turn unconformably overlain by upper Pleistocene deposits. The greatest thickness revealed by drilling is about 1000 ft. The present upper surface of the Magothy on Long Island is an erosional surface, and the original thickness is not known (Peer, 2002).

The Magothy Formation underlies most of Long Island except for some western areas where it was removed by erosion. It may extend beneath Long Island Sound, but is probably truncated by erosion and overlain by Pleistocene deposits. To the south, the Magothy Formation, like the Raritan, extends out under the sea, where it also probably changes from a terrestrial to a marine deposit (Peer, 2002).

The Magothy is composed of beds of poorly sorted quartzose sand mixed with and interbedded with silt and clay, and locally it contains pebbles or small lenses of gravel. Sandy clay and clayey sand make up most of the fine beds, but there are also several thick beds of clay. The basal 100 to 150 ft of the Magothy contains a greater proportion of coarse-grained material. This consists partly of coarse sand and gravel that contains pebbles as much as 2 or 3 inches in diameter. Voids are largely filled with silt and soft clay. The coarse-grained beds are separated by beds of sandy clay. A zone immediately overlying the clay member of the Raritan contains relatively coarse-grained permeable material (Peer, 2002).

Raritan formation
The Raritan Formation rests directly on highly to slightly weathered bedrock. The formation is probably entirely continental and was laid down as a coastal-plain deposit by streams flowing off the mainland. On Long Island, the formation has two fairly distinct members: the Lloyd Sand member below, and a clay member above. The formation probably occurs beneath all central Suffolk County. Northward, the Lloyd Sand thins and probably pinches out beneath Long Island Sound, and the clay member may do likewise. Southward, the formation extends a considerable distance offshore, possibly as far as the continental shelf (about 100 miles) (Peer, 2002).

Regional bedrock
The bedrock that underlies the unconsolidated deposits includes hard, dense schist, gneiss, and granite similar in character to that which underlies much of the mainland in nearby parts of New York and Connecticut. Elevation of the bedrock is approximately 1,600 ft below MSL. These rocks are either metamorphosed Precambrian or early

Paleozoic Age sediments. Two deep borings penetrated bedrock at a depth of approximately 1,600 ft at locations 18 miles west of the airport. The bedrock was hard, banded, granite gneiss. Bedrock dips southward at an average gradient of 1% (Peer, 2002).

3.1.2. Hydrogeology

Regional hydrogeology

Three aquifers and two aquitards are present in the region around the Francis S. Gabreski Airport. Figure 7 illustrates the relationship of these aquifers to the geologic units discussed in Section 3.1.1 above.

The upper glacial aquifer is the surficial aquifer. This unit consists of sand and gravel and is unconfined. The Gardiners clay underlies the surficial aquifer beneath and south of the airport. This unit is an aquitard that separates the surficial aquifer from underlying aquifers. The Magothy aquifer, a water-bearing unit which correlates to the Magothy Formation, underlies the Gardiners clay unit. The Magothy Formation is underlain by the upper clay member of the Raritan Formation which, in turn, is underlain by the Lloyd Aquifer. The Lloyd Aquifer correlates to the Lloyd Sand member of the Raritan Formation. The bedrock aquifer underlies the Lloyd sand. (Peer, 2002).

Upper glacial aquifer

This aquifer correlates to the saturated interval of the glacial outwash deposits of the Wisconsin Glaciation. This water-bearing unit is an unconfined aquifer present directly below the airport. Groundwater elevations are approximately 15 to 19 ft above the National Geodetic Vertical Datum, but may be less or more due to seasonal variations (Peer, 2002).

The clean, coarse sand and gravel is very porous and highly permeable. In general, the high permeability coupled with the generally flat topography of the area results in infiltration of a high proportion of precipitation. Surface runoff is limited. The glacial deposits store large quantities of water and, due to their high porosity and permeability. As a result, the glacial deposits are the source of nearly all the groundwater pumped in central Suffolk County. There are no effective barriers to the movement of water anywhere within the unit, but there may be substantial variation in permeability over short distances (Peer, 2002).

It has been suggested that minor variations in water-bearing characteristics might become significant in connection with possible movement of a contaminant. As the moraine outwash and deposits were developed by water flowing generally from north to south, individual lenses of sand and gravel may be elongated in this direction. Thus, there may be threads of material with relatively higher permeably along which, water might move a little more rapidly under proper hydraulic conditions. Hydraulic conductivity tests of wells installed within the upper portion of the glacial aquifer indicate that the hydraulic conductivity is between 1.6 x 10^{-2} cm/sec and 5.2x10^{-2} cm/sec. (Peer,

2002). This range of values is consistent with a clean sand (Freeze & Cherry, 1979)

Groundwater is the only water supply source for Suffolk County. Most of the water in the Francis S. Gabreski Airport area is obtained from the upper glacial aquifer; the rest is obtained from the Magothy and Lloyd Aquifers. At present, Suffolk County Water Authority supplies the majority of the water in the area; the rest is supplied by several smaller companies. Suffolk County Water Authority operates 18 wells in 4 well fields within a 4-mile radius of the Site, and their nearest public supply well field, the Meetinghouse Road Wellfield, is located 0.61 miles southeast of Francis S. Gabreski Airport as illustrated on Figure 1 (Peer, 2002). The following screen interval information was provided in the Peer report (Peer, 2002) pertaining to wells within this wellfield:

Well # 20	55 to 75 ft bgl
Well #22	74 to 104 ft bgl
Well #15A	31 to 51 ft bgl

Based on the screened intervals, wells within the Meetinghouse Road Well Field draw water from the surficial aquifer. These wells, therefore, draw water from the same shallow aquifer that underlies the Site.

Gardiners clay
This clay is of low permeability and constitutes a confining layer between the surficial aquifer and the underlying Magothy aquifer. Occasional sand lenses within the Gardiners may yield small quantities of water. Water can pass through the Gardiners clay, although at a slow rate, in small amounts and probably at most places only by circuitous routes. Below the airport, the beds of clay and sand within the Gardiners clay are considered to be an effective barrier to the movement of groundwater into lower aquifers. The combination of low permeability with the generally upward movement of water within the Magothy aquifer would tend to keep near surface contamination from migrating into the lower aquifer (Peer, 2002).

Magothy aquifer
Although it consists in part of beds of dense clay and layers or coarse sand and gravel, by far the greater part of the Magothy aquifer is made up of sandy clay and clayey sand. The formation as a whole, because of this thickness, can transmit and store large amounts of groundwater. There are no effective barriers to the movement of water through the formation except locally. Wells that are constructed and developed carefully yield large quantities of water from all but the most clayey parts of the formation. The Magothy is important as an alternate aquifer in the event that the water in the overlying upper Pleistocene deposits becomes contaminated (Peer, 2002).

The highly productive beds of the Magothy aquifer are not confined to the basal gravely zone. However, there is no other zone in which a reliable supply can be predicted. A well at Brookhaven National Laboratory penetrated considerable material within the Magothy. This

well had only 20 ft of screen, no gravel pack, and little development but still yielded water at a specific capacity of 15 gpm/ft of drawdown (Peer, 2002).

Hydraulic conductivity of the Magothy below the airport was estimated to be 380 gpd/ft^2 (1.8 x 10^{-2} cm/s), and transmissivity was at least 300 gpd/ft (4.5 x 10^{-1} cm^2/ft) with a saturated thickness of approximately 930 ft. In 1982, 1.0 mgd was removed from this aquifer in east Central Long Island.

Below the airport, the top of the Magothy aquifer is about 150 ft below MSL. The potentiometric surface of this aquifer is approximately 15 ft above MSL as compared to an approximate groundwater elevation in the surficial aquifer of 13 to 17 ft MSL. Data collected during the Peer investigation indicate that there is an upward flow potential between the Magothy and the surficial aquifers. (Peer, 2002).

Raritan clay

The Raritan Clay member of the Raritan Formation is considered an aquitard separating the underlying Lloyd Aquifer from the overlying Magothy Aquifer. Thickness below the airport is approximately 200 ft. The hydraulic conductivity of a clay similar to the Raritan was determined to be 0.2 gpd/ft^2 (9.4 x 10^{-6}) cm/s, which is several orders or magnitude less than either the Lloyd or Magothy Aquifers indicating that mixing of waters is quite small (Peer, 2002).

Lloyd aquifer

The Lloyd Sand is one of the most important aquifers on Long Island largely because it yields adequate supplies of good water in areas, generally beneath the margins of Long Island, where supplies from overlying formations are inadequate or are contaminated by or readily subject to contamination by sea water. The Lloyd can supply water under these circumstances because it is overlain by the relatively impermeable and virtually continuous blanket of the clay member (Peer, 2002).

In the western part of the island, many wells tapping the Lloyd Sand member yield 10 to 20 gpm/ft of drawdown. A well at Brookhaven National Laboratory was finished with 25 ft of screen and had a yield of about 2 gpm/ft of drawdown (Peer, 2002).

The hydraulic conductivity of the Lloyd around the airport was estimated to be 300 gpd/ft^2 (1.4 x 10^{-2} cm/s), and transmissivity was estimated as 75 gpd/ft (1.1 x 10^{-1} cm^2/s) (Peer, 2002).

As of 1974, the Lloyd Aquifer was not used as a water source at or near the Suffolk County Airport. In 1982, 0.19 million gallons per day (MGD) was withdrawn from the Lloyd in the east central area of Long Island (Peer, 2002).

Site-specific hydrogeology
The maximum depth of the monitoring wells was on the order of 40 ft below grade. Therefore, the data collected by this investigation was limited to the upper glacial or surficial aquifer at the Site.

Groundwater elevation data were collected in July and September 2002. Based on static water levels groundwater occurs at depths ranging from 32 to 38 ft bgs. Groundwater elevations generally ranged from 14 to 15 ft MSL. Based on elevation data collected by SCHD as part of the biweekly product thickness monitoring efforts, groundwater levels have dropped approximately 3 ft over the past several years.

Groundwater flow maps were developed using the elevation data collected in July and September 2002 and are included as Figures 8 and 9. As illustrated on the figures, during the both the July and September sampling events, the groundwater flow direction was to the southeast under a relatively flat gradient of 0.001 ft/ft.

3.2. Geophysical survey

The geophysical survey was conducted over an area of approximately 10 acres, bounded by Wallen Street to the north, Cook Street to the south, Smith Avenue to the west, and Avenue B to the east. As stated in Section 2, the purpose of the geophysical survey was to identify the locations of subsurface features such as septic tanks, leach fields and cesspools, sumps, stormwater and sanitary sewer piping, drains, and dry wells. In addition, the survey was used to identify buried utility lines in the vicinity of proposed soil boring locations. This information was used to reposition the borings and wells, as needed.

The geophysical survey was completed by Advanced Geological Services (AGS) using electromagnetic and ground penetrating radar (GPR) geophysical methods.

The geophysical survey identified the following subsurface features:

- 29 potential cesspools
- Five potential dry wells
- Seven sanitary manholes; and
- One 4-foot by 6-foot magnetic anomaly located in the south-central portion of the Site.

The AGS Geophysical Survey map is included as Appendix E.

3.3. Soils

Data generated during the soil investigative efforts described in Section 2 are summarized below. Table 7 provides an inventory of the samples collected and analyses performed.

To evaluate potential concerns associated with constituents identified in the soil samples, analytical data for soil samples were compared to NYSDEC's guidelines for soil clean up as outlined in Technical Administrative Guidance Memorandum #4046 (TAGM 4046). In addition, inorganic data were also compared to representative background concentrations for soils in the eastern United (McGovern). Tables 9 through 14 summarize the analytical results for soil samples.

3.4. Surface soil

A total of 13 surface soil samples were collected during the investigation. Nine of the surface soil samples were collected during advancement of the soil borings in June 2002, and their identifications correspond to the soil boring identifications (SB-05, SB-06, SB-07, SB-10, SB-11, SB-16, SB-17, SB-31, and SB-33). Four surface soil samples were collected in September 2002 as composite surface soil samples locations only. These are identified as SS-01 through SS-04.

During the initial site investigation, elevated pesticide levels were detected in SB-06, SB-07, SB-16, SB-30, and SB-31. To further evaluate the presence of pesticides in these areas, four sets of composite samples were collected from the surface soil in the vicinity of these borings. Composite sample SS-01 consists of 4 samples from the northern area around SB-06 and SB-07. Composite samples SS-02, SS-03, and SS-04 consist of 4 samples each from the south-central area around SB-16, SB-30, and SB-31, respectively. Each sample location was collected from immediately below the vegetative cover to a depth ranging to approximately 10 inches bgs.

Pesticides
The pesticide analytical data for the surface soil samples are presented on Table 9. A total of 13 surface soil samples were analyzed for pesticides. Each surface soil sample contained detectable concentrations of at least one pesticide constituent, with the exception of SB-17. At each location the pesticide detected was at a concentration below the TAGM 4046 Recommended Soil Cleanup guidance level. Three of the detected pesticides, alpha-Chlordane, Endrin Aldehyde, and Endrin Ketone, do not have TAGM 4046 values assigned.

Inorganics
Inorganic analytical data for the surface soil samples are presented on Table 10. A total of 9 surface soil samples were analyzed for inorganics. Twenty-four inorganic constituents are included in the analyses. Twenty of the twenty-four constituents were detected. The inorganics detected at concentrations above TAGM 4046 values were iron, mercury, beryllium, and zinc.

Iron exceeded TAGM 4046 values at 7 of the 9 sample locations at concentrations ranging from 2,130 ppm to 11,000 ppm. The Eastern US

background concentration for iron is 14,000 ppm, which suggests that the concentrations observed on site may be naturally occurring.

Mercury concentrations exceeded the TAGM 4046 value of 0.1 ppm at four locations. Mercury was detected at concentrations ranging from 0.12 to 0.22 ppm. The mercury Eastern US background concentration is 0.81 ppm. Therefore, the mercury concentrations found in the surface soil may be representative of natural conditions.

Beryllium exceeded the TAGM 4046 level of 0.16 ppm in the SB-06 sample at a concentration of 0.26 ppm. These values are below the Eastern U.S. background soil concentration of 0.6 ppm for beryllium.

Zinc was detected in four samples above the TAGM 4046 level of 20 ppm. The sample from SB-07 also exceeded the average Eastern US background concentration of 40 ppm for zinc with a concentration of 92.8 ppm. This boring is located in the northern portion of the site.

Concentrations of lead ranged from 6 to 81.2 ppm. Lead concentrations exceeded Eastern US background concentrations of 14 ppm at four soil boring locations Two of the locations were in the northern portion of the Site while the other two were located in the south-central area. Lead does not have a TAGM 4046 level associated with it.

3.5. Subsurface soil

VOCs

A total of 30 soil samples collected from 29 of the 33 soil borings were analyzed for VOCs. One sample was collected from each boring, with the exception of ERM-07, where two samples were collected. VOC analytical data are presented on Table 11. Samples from seven borings contained detectable concentrations of VOCs. Total detectable VOC concentrations ranged from 0.001 ppm at borings SB-21, SB-25, and SB-26 to 0.774 ppm at boring ERM-07 (32 to 34 ft bgs sample interval). None of the data exceeded their respective TAGM 4046 values.

As previously discussed, two soil samples from ERM-07 were analyzed for VOCs. One of the samples was collected from 31 to32 ft bgs, which was immediately located just above the groundwater table. The second sample was collected from just below the water table at the interval of 32 to 34 ft bgs. No VOCs were detected in the sample from above the groundwater table while lower concentrations of VOCs were noted below the groundwater table. This suggests that the VOCs observed in the soils at this location are associated with those present within or on the groundwater rather than vertical migration from a shallow source.

SVOCs

Twenty-one soil samples were analyzed for SVOC parameters. SVOC compounds were detected in three samples from the subsurface soils.

The ERM-07 (31-32 ft) sample contained detectable concentrations of polynuclear aromatic hydrocarbon (PAH) compounds 1,1-biphenyl, 2-methylnaphthalene, dibenzofuran, fluorene, and phenanthrene. Each concentration was below the respective TAGM 4046 concentration for that compound. The presence of SVOCs above the water table suggests that they may be residuals from historic creation of a smear zone due to fluctuating water levels. Additionally, soil borings SB-08 and SB-24 contained detectable concentrations of one compound each. SVOC analytical data are located on Table 12.

Pesticides
Pesticide compounds were not detected in the subsurface soil samples. The analytical results for pesticides compounds are located on Table 13.

Inorganics
Inorganic constituents were detected in each of the subsurface soil samples. Fourteen of the twenty-four inorganics were detected. Each was below its respective TAGM 4046 level. A summary of the analytical data for inorganic compounds is located on Table 14.3.6. Subsurface structure sample (MH-1)

VOCs
TP-1 was completed in the vicinity of MH-1. Visual inspection of the material within this manhole suggested the presence of residual organic matter. Therefore, a sample was collected for analysis. A summary of the analytical results is provided on Table 11. Two VOCs were detected. Acetone and methyl acetate were detected at concentrations of 0.031 and 0.008 ppm, respectively. The acetone concentration was below the TAGM 4046 of 0.2 ppm. A TAGM 4046 level does not exist for methyl acetate. Acetone and methyl acetate are often laboratory contaminants.

SVOCs
Fifteen SVOCs were detected in the MH-1 sediment sample. Six of the detected compounds exceeded their respective TAGM levels. These included the following polynuclear aromatic hydrocarbons (PAHs): benzo(a)anthracene (5.7 ppm), benzo(a)pyrene (5.6 ppm), benzo(b)fluoranthene (6.9 ppm), benzo(k)fluoranthene (2.9 ppm), chrysene (5.7 ppm), and dibenzo(a,h)anthracene (0.65 ppm). The total SVOC concentration in this sample is 65.7 ppm. SVOC data is summarized on Table 12.

Pesticides
The sample collected from MH-1 was not analyzed for pesticides.

Inorganics
Nineteen inorganic constituents were detected in the MH-1 sample. Inorganics data are provided on Table 14. Nine constituents were detected at concentrations above their respective TAGM 4046 values. These included: arsenic, cadmium, chromium, copper, iron, mercury, nickel, selenium and zinc. The concentrations exceeded both TAGM 4046 values and the average eastern US background concentrations. In addition, lead exceeded the average eastern US background

concentration. A TAGM 4046 level for lead does not exist.. The concentration of lead observed in this sample was 46.8 ppm.

3.7. Groundwater

Several issues were addressed as part of the groundwater investigation. In addition to groundwater quality across the site, the investigations also included an evaluation of the presence or absence of LNAPL and the status of natural attenuation. These latter evaluations were focused in the south-central portion of the Site where LNAPL was known to be present.

Analytical data from the groundwater samples are provided on Tables 15 through 20.

LNAPL Plume
As discussed briefly in Section 1.3 investigations were completed to assess a suspected LNAPL plume. These investigations began in October 1984 when a 2,000-gallon tank failed a Petrotite® leak-detection test. Subsequent removal of the tank revealed the presence of petroleum-stained soil. At that time a second 2,500-gallon tank was removed and a third tank was abandoned in placed by filling it with sand. A ground-water monitoring program was then initiated. The NYSDEC Spill Report for Spill Number 8502966 indicates that several spills were previously reported in this area in the 1960s. A copy of the spill report is provided in Exhibit 3.

Free product was observed to be present on the water table in several wells installed in the area between February and September 1986. A total of 47 monitoring wells/piezometers were installed in the area of the tank removal during this program to define the extent of the plume. The approximate location of this plume is illustrated in Figure 5. Two recovery wells were subsequently installed at the leading edge of the plume and an air-stripping tower was constructed. The system reportedly operated for several years but no free product was recovered. (UNC Geotech, 1988)

A soil gas survey was conducted in 1988 under direction of the USAF (UNC Geotech, 1988). In addition, samples of the product contained in on-site tanks and observed on the water table were collected for analysis. The results of the analysis indicated that the LNAPL on the water table consisted predominantly of jet fuel with a smaller fraction of diesel and possible small amounts of other petroleum products.

Between 1997 and 2002, the Bureau of Groundwater Resources has been monitoring groundwater and LNAPL in select piezometers. Monitored piezometers include: PZ-1, 2, 3, 5 through 11, 15, 16, 17, 26, 27, 28, 30, 42, 43, 44, and 45. From 1997 to June 1999 each of these were monitored with few exceptions. However, beginning in May 1999, due to an apparent regrading of the area, nine piezometers were removed, damaged, destroyed, or presumed buried. These include: PZ-1, 10, 11, 15, 16, 26, 42, 43, and 55. The last complete set of data was therefore collected in March 1999.

The LNAPL plume was originally identified in 1986 in the south central area of the site. As stated previously, the Suffolk County Health Department, Bureau of Groundwater Resources has been monitoring product thickness within the LNAPL plume on a biweekly basis since 1997. If observed, free product has been removed during this period as well. Data collected between 1997 and August 2002, and January through June 2003 were provided by SCHD for review in preparation of this report. Table 3 summarizes the amount of product recovered during this period. As stated in Section 1.3, the information provided indicates that a total of 9 gallons product was removed from these wells between 1997 and June 2003. Product thickness data from 2001, 2002, and 2003 are included as Exhibit 1.

Figure 10 is a graph showing the relationship of the product recovery volumes compared to the water level. As illustrated, the maximum product recovery volumes occur when the groundwater levels are low. During high water conditions, the LNAPL likely becomes smeared within the newly formed saturated zone. The maximum LNAPL thickness recorded in each well during 2002 was used to prepare a distribution map, which is included as Figure 11.

Review of the LNAPL data indicates that thickness varies from month to month as well as seasonally based on the water levels. Furthermore, in many instances, once product was removed, it was not observed during the next monitoring period which suggests that there is not product volume in the immediate vicinity of the well to readily reaccumulate in the well.

Wells PZ-5, PZ-9, PZ-10, and PZ-16 contained free product prior to 2000. These wells are located east of Building 140. In 2000, PZ-27 and PZ-28 also contained approximately 0.6 ft (7.2 in) of measurable product. These two locations are along Cook Street. This information suggests that the LNAPL pool has migrated towards the south. Given that PZ-27 and PZ-28 are located on the south side of Cook Street, which is the ADD property boundary, the LNAPL has likely migrated onto the ANG property to the south.

Of note, between January and March of 2003 LNAPL was not observed in the wells and the water table elevation had increased. This suggests that during periods of higher groundwater elevations, LNAPL formerly present on the water table becomes trapped within the pore spaces of the now-saturated soil.

Published literature suggests that measurable free product in a monitoring well does not accurately reflect the amount of free product that is actually present on the water table. The measured thickness can range from 2 to 10 times that which is actually present within the aquifer (Newell *et al*, 1995). A conservative estimate of the actual amount of free product in the aquifer would, therefore, be represented by 20 to 25 percent of the thickness measured in the well. Review of the data

provided for 2002 indicates that the amount of free product measured in the wells is generally between 0.6 and 1 ft. Using the above correlation, the amount of free product actually present on the water table is likely in the range of 0.15 and 0.25 ft (1.8 to 3 in).

It is suspected that the source of the LNAPL is located within the area of the plume identified in Figure 11. As noted on this figure, several tanks were once located in this area and spills were reported in the 1960s. Conversations between SCHD and UNC Geotech personnel in 1998 indicated that the tanks had been removed or closed in place (UNC, 1998). Therefore, the tanks themselves do not represent a current source of LNAPL. It is not known whether impacted soil was removed as part of the tank removals. It is feasible that impacted unsaturated soil is still present; however, given the elapsed time and the relatively high permeability of the soil, it is expected that any mobile LNAPL has already reached the water table and further contributions are not likely.

Groundwater quality

As part of this program groundwater samples were collected on two separate dates in 2002, in July and September. The second sampling round was completed to verify results from the first round. Monitoring wells ERM-01 through ERM-07 were sampled during the July event. ERM-05, ERM-07, PZ-08, and PZ-17 were sampled during the second event in September and analyzed for those parameters that were detected during the first event.

Groundwater sample results were compared to current New York State Class GA Groundwater Standards in addition to guidance values as presented in the NYSDEC's Division of Water Technical and Operational Guidance Series 1.1.1 (TOGS) entitled *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*.

VOCs

The only well that contained detectable concentrations of VOCs in the groundwater sample was well ERM-07, which is located within the area in which free product has been observed. A summary of the VOC data is provided on Table 15. Cyclohexane and methylcyclohexane were detected at concentrations below their respective NYS Class GA Standards. Ethylbenzene, isopropylbenzene, toluene, and xylene were detected at concentrations of 390, 46, 260, and 1,900 ppb, respectively. Each was above the Class GA Standard of 5 ppb. The second set of groundwater samples was generally consistent with the first set of samples with the exception that 1,1,1-trichloroethane and benzene were each detected at concentrations of 1 ppb during this event. These compounds were not detected during the first sampling event.

Groundwater samples were also collected from PZ-08 and PZ-17 during the second groundwater sampling event. Analysis of the PZ-08 sample revealed acetone, methylcyclohexane, and tetrachloroethene below their respective Class GA Standard. Ethylbenzene, isopropylbenzene, and xylene were detected above the Class GA Standard of 5 ppb at

concentrations of 590, 100, and 3,300 ppb, respectively. The sample from PZ-17 contained acetone, cyclohexane, isopropylbenzene, and methylcyclohexane at concentrations below Class GA Standards. Ethylbenzene and xylene were detected above Class GA Standards.

As stated in Section 1, groundwater quality information was provided in the Peer report (Peer, 2002) for wells that were located on the ANG property immediately downgradient of the petroleum plume. Groundwater data indicated detectable concentrations of VOCs in these wells in 1998. The more recent sampling activities did not include these wells. The 1998 data suggest that dissolved VOCs have migrated downgradient to the adjacent ANG property.

SVOCs

Groundwater samples from ERM-05, ERM-07, PZ-08, and PZ-17 each contained detectable concentrations of SVOCs. SVOC data are presented on Table 16. Each compound detected in the ERM-05 water sample was from the July sampling event. Specifically, five SVOCs were detected during the July event with concentrations below their respective Class GA Standard with the exception of naphthalene. The sample collected from ERM-05 in September did not contain detectable concentrations of SVOCs. No SVOCs were detected in ERM-07 during the July sampling event.

Several constituents were detected in one or more of the wells, ERM-07, PZ-08, and PZ-17, during the September sampling event. 1,1-biphenyl was detected in each sample at concentrations below the Class GA Standard. The compound 2-methylnaphthalene was also detected in wells ERM-05, ERM-07, PZ-08 and PZ-17. A Class GA Standard does not exist for this compound. 2-methylphenol, acenaphthene and 4-methylphenoal were detected in several of the wells at concentrations below their respective Class GA Standards. The only SVOC that exceeded its respective Class GA Standard of 10 ppb was naphthalene. Naphthalene was detected at concentrations of 67 and 180 ppb in samples from ERM-07 and PZ-08, respectively. PZ-17 contained naphthalene below the Class GA Standard at a concentration of 5 ppb.

Pesticide/PCBs

Groundwater samples contained no detectable concentrations of pesticides or PCBs (Table 17).

Inorganics

A number of inorganic constituents were detected. A summary of the inorganic analytical results is provided on Table 18. Two inorganic constituents were detected at concentrations above Class GA Standards. Iron was detected above the Class GA Standard of 300 ppb in samples from wells ERM-07, PZ-08, and PZ-17. Sodium exceeded the Class GA standard of 20,000 ppb in six samples. This is likely due to the proximity of the Site to the Atlantic Ocean.

Natural attenuation

Groundwater samples were analyzed for natural attenuation parameters to evaluate biodegradation potential of the hydrocarbon compounds found in the groundwater on-site. Natural attenuation parameter analytical data are presented on Tables 19 and 20. Table 19 consists of laboratory-generated data and Table 20 provides a summary of data collected in the field.

Natural attenuation data has been collected twice over a three-month period. Typically, an evaluation of natural attenuation potential requires data collected periodically over a longer time period. Therefore the following provides a preliminary assessment of the potential for natural attenuation to reduce the concentrations of residual petroleum compounds present in the groundwater.

Review of dissolved oxygen (DO) concentrations within and outside of the plume area indicates that DO concentrations are generally lower within the plume. Specifically, DO concentrations upgradient and sidegradient of the product/VOC plume area ranged from 6.72 to 8.74 mg/l, while the DO concentrations in groundwater samples collected from impacted wells ERM-07 and PZ-17 were 1.67 and 3.91 mg/l, respectively. A higher concentration of DO (6.37 mg/l) was observed at PZ-08. The lower concentrations of DO observed within the plume are likely the result of aerobic biological activity, which would consume oxygen. The concentrations of DO upgradient of the plume suggest that there is a reasonable amount of DO available to feed the biological activity within the plume at this time. Further monitoring will be required to better understand the natural attenuation processes at the site.

4. Extent of contamination

Northern Area

The northern area is located north of Wallen Street and east of County Route 31. There were no suspected sources of contamination in this area. However, historical uses such as auto repair and septic sludge disposal cannot be ruled out. Seven soil borings were installed in this area. Three surface soil samples were collected from SB-05, SB-06, and SB-07 during the first phase. A composite surface soil sample, SS-01, was collected from around the area of SB-06 and SB-07 during phase II of the program. SS-01 was collected to further evaluate analytical results from phase 1. Five subsurface samples were collected from borings SB-02, SB-05, SB-06, SB-07, and SB-08. Although no monitoring wells were installed in this area, wells ERM-01 and ERM-02 were used to provide water quality data downgradient of this area for evaluation.

Although pesticides were detected in surface soils within this area, the concentrations are below TAGM 4046 guidance value and, therefore, not considered to be a concern.

A total of four VOC and SVOC compounds were detected in the subsurface soil samples collected from this area. The concentrations were well below the TAGM 4046 screening values and, therefore, not considered to be a concern.

Groundwater samples from ERM-01 and ERM-02 did not contain detectable concentrations of VOCS and SVOCs. In addition, the sample from ERM-01, which was analyzed for pesticides, did not contain detectable concentrations of pesticides. The only inorganic constituent identified in these wells above the Class GA Standards was sodium. This is considered to be naturally occurring in this area.

MH-1 is located within a subsurface cesspool near SB-02. MH-1 was analyzed for VOCs, SVOCs, pesticides, and inorganics. The results of the analyses indicated the presence of several SVOCs, primarily PAHs, at concentrations exceeding TAGM 4046 values. A number of inorganic constituents were identified to be present above the TAGM 4046 levels as well as Eastern U.S. background soil concentrations. These include arsenic, cadmium, chromium, copper, iron, mercury, nickel, selenium, and zinc. These soils may be of concern related to future removal or decommissioning of the structure.

South-central Area

The south-central area is located south of Wallen Street and between Smith and Avenue B. The petroleum plume is located in this section of the Site. Twenty soil borings were installed in this area and surface and

subsurface samples were collected. Four monitoring wells were also installed in this area.

A total of four individual and three composite surface soil samples were collected from the south-central area of the Site. Although pesticides were detected in surface soils within this area, the concentrations are below TAGM 4046 guidance value and, therefore, not considered to be a concern. Inorganic constituents were detected in some of the samples at concentrations above the TAGM 4046 values. However, none of these constituents were found at concentrations exceeding Eastern U.S. background soil concentrations, suggesting that they may be naturally occurring.

A total of twenty soil borings (SB-14 through SB-33) were completed within the south-central area. A total of twenty subsurface soil samples and two duplicate samples were collected from these borings. Two additional soil samples were collected during the installation of monitoring well ERM-07.

VOCS were detected in subsurface soil samples from four of the soil borings (SB-21, SB-22, SB-25, and SB-26), and monitoring well ERM-07. The concentrations were below the TAGM 4046 guidance values. SVOCs were detected in samples from SB-24 and ERM-07 (31-32 ft). These concentrations were also below the TAGM 4046 guidance value. Pesticides were not detected in the subsurface soil samples. Several inorganics were detected, however none exceeded TAGM 4046 guidance values.

Four wells were installed within the south-central area. Well ERM-01 was installed upgradient. ERM-03 was installed on the western side of the area. Wells ERM-06 and ERM-07 were installed downgradient of this area. ERM-07 was specifically installed within the plume area. Samples were also collected from existing piezometers, PZ-08 and PZ-17 which are also located within the formerly identified plume area.

No pesticides were detected in the groundwater samples. No VOCs or SVOCs were detected in the samples collected from ERM-01, ERM-03, and ERM-06. The sample from ERM-07 contained ethylbenzene, toluene, and xylene at concentrations exceeding the Class GA Standards. Several other VOCs were also detected at concentrations below Class GA Standards. Ethylbenzene and xylene exceeded Class GA Standards in PZ-08 and PZ-17. Several SVOCs were detected in the groundwater samples. Napthalene was identified above the Class GA standard in samples from wells ERM-07 and PZ-08. The presence of these compounds is consistent with the fact that a free-product plume occurs in this area. Recent groundwater data from a well downgradient of this area on the ANG property indicates that VOCs are not present, suggesting that migration of dissolved phase is limited, likely as a result of natural attenuation processes.

The sodium Class GA Standard was exceeded in groundwater samples collected from ERM-01, ERM-03, and ERM-07. Iron exceeded Class

GA Standard in the ERM-07 groundwater sample. As stated previously, these are considered to be naturally occurring.

Based on the monitoring data, it appears that there are two general areas of LNAPL. One is located on the northeast side of Bldg. 140. The second area is located along and immediately south of Cook Street. These are likely residual pockets of the original LNAPL pool. Available information from wells located downgradient of this area on the ANG property does not indicate the presence of free product on the water table although LNAPL has been noted at PZ-27 and PZ-28 which are at the southern ADD property boundary. This suggests that the downgradient extent of the LNAPL does not extend far off-site onto ANG property to the south. The 2002 free product measurements in the LNAPL indicate that between 0.15 and 0.25 ft (1.8 and 3 in) of product on the water table during low water level conditions.

Southwest Area
The southwest area is located south of Wallen Street and between Smith Street and County Route 31. Two soil borings were completed in this area and one surface and two subsurface samples collected. One monitoring well, ERM-05, was installed downgradient of this area.

The surface soil sample contained detectable concentrations of two pesticide compounds, both of which were at concentrations below their respective TAGM 4046 guidance values. Iron was the only inorganic that exceeded the TAGM 4046 guidance value; however, iron was below the average Eastern U.S. background soil concentration. None of these constituents are, therefore, considered to be of concern.

No VOCs or SVOCs were detected in subsurface soil samples. Although inorganics were detected the concentrations were below the TAGM 4046 guidance values and therefore not considered to be of concern.

No VOCs, SVOCs, or pesticides were detected in the groundwater samples collected from downgradient of this area. Of the inorganics were detected, only sodium was at a concentration above Class GA Standards. This is considered to be naturally occurring.

Southeast Area
The southeast area is located south of Wallen Street and between Avenue B and Rust Ave. Three soil borings were installed in this area and one surface and three subsurface samples were collected. Two monitoring wells were installed in this area. ERM-02 was installed on the north side to monitor upgradient conditions and ERM-04 was installed on the downgradient side of this area.

One pesticide compound was detected in the surface soil sample. The concentration was below the TAGM 4046 guidance value and not considered to be a concern. Iron was the only inorganic detected above the TAGM 4046 guidance value. The concentration is below the values for Eastern U.S. soil and therefore presumed to be naturally occurring.

VOCs were detected at one of the three subsurface soil samples. Concentrations observed were below their respective TAGM 4046 guidance values. SVOCs were not detected. Several inorganic constituents were observed at concentrations below their respective TAGM 4046 guidance values.

No VOCs, SVOCs, pesticides, or PCBs were found in the groundwater samples from this area. Of the inorganics were detected, only sodium was at a concentration above Class GA Standards. This is considered to be naturally occurring.

5. Fate and transport

Two areas were found where constituents of concern were identified based on screening criteria. These areas are the residual solid sample collected from a manhole (MH-1) in the northern area of the Site, and an area in the south-central portion of the Site where the LNAPL plume is located. The following presents potential migration pathways and exposures for each of these areas.

5.1. Manhole sample MH-1

The residual solid sample collected from the bottom of the manhole in the northern area of the Site was found to contain elevated concentrations of PAHs and a variety of inorganic constituents.

Fate and transport
The residual material was contained within the manhole structure. However, based on the Site history the manhole was and may still be connected to a cesspool or dry well rather than a sewerline that discharges to a publicly-owned treatment works (POTW). As such there is potential for constituents within the residual material to become suspended within stormwater flowing though the system. The suspended materials could then migrate to the soil within and surrounding the drywell. Once in the soil, there is a potential that inorganics may leach from the solids and enter the groundwater, although this pathway does not appear to be complete based on the groundwater quality data collected at the site.

Potential exposures
Contractors working on and around the manhole or cesspool may potentially come in contact with impacted soil or the residual solids within the structure.

5.2. LNAPL and VOC plume

LNAPL and dissolved petroleum-related VOCs were observed within the groundwater in the south-central area of the site. The impacted area is confined to the area 70 ft wide by 170 ft long within the ADD property. Dissolved VOCs have migrated to the ANG property and LNAPL is likely present at least for a short distance onto the ANG property, as it was observed at PZ-27 and PZ-28 located on the southern side of Cook Street in 2002. The water table is located at approximately 32 ft below grade in this area. No evidence of impacts to unsaturated soil was noted during the investigation. However, given the source of the petroleum is

suspected to be one or more tanks that were located near the ground surface, impacted unsaturated soils may be present in the area. Fingerprinting analysis completed on free product in 1988 indicates that the product consists primarily of jet fuel with minor amounts of heavier fuel oils. Groundwater analyses completed in 2002 reveal the presence of ethylbenzene, isopropylbenzene, toluene, xylene, and naphthalene at concentrations above the Class GA groundwater standard for each of these compounds.

LNAPL information suggests that product presence and thickness at individual piezometer/well locations varies with each bi-weekly event. The maximum thickness measured in 2002 was 1.05 ft in PZ-06 and the distribution of the LNAPL in 2002 was slightly larger than that observed in 1986. No product was observed between January and March 2003 as a result of an increase in the groundwater elevation.

Fate and transport

The Peer report summarizing investigations conducted on the ANG property (Peer, 2002) suggests that the VOC plume has migrated approximately 350 ft onto the ANG property. (see Figure E-1 in Exhibit 2) Constituents identified in the groundwater at the leading edge of the plume are xylenes, ethylbenzene, and naphthalene. Using 1984 as the date that the loss was initially discovered, the plume appears to have migrated at an average rate of approximately 19.5 ft per year. This value is likely lower given the fact that spills reportedly occurred as early as the 1960s. Using the hydrogeologic information obtained for the shallow aquifer (hydraulic conductivity 3 x 10^{-2} cm/sec; hydraulic gradient 0.001 ft/ft; and porosity 30%) the average ground water flow velocity is on the order of 134 ft/year. The discrepancy in these velocities suggests that attenuation processes (retardation, degradation, and dispersion) are occurring which limit the forward migration of the detectable plume. Migration of the plume to the water supply wells is therefore not expected to occur.

Mobility of LNAPL is subject to a number of factors including the slope or hydraulic gradient of the water table, the thickness of the product pool, the permeability of the subsurface material, and capillary forces. The hydraulic gradient at the Site is very flat (0.001 ft/ft). The estimated thickness of LNAPL in the aquifer in 2002 is on the order of 3 to 4 inches. The head or thickness of the LNAPL, which is a driving force for horizontal migration of the LNAPL pool, is therefore limited. Furthermore, the observed LNAPL thicknesses have been highly variable as a result of the water table fluctuations. When not observed on the water table, the product is likely contained within the saturated soil within the zone of water table fluctuation. As stated in Section 3.8, this was likely the condition observed in early 2003.

Characteristics of residual LNAPL are limited and variable measured thickness of LNAPL in wells, no change in the extent of measurable LNAPL, no increase in the extent or magnitude of the associated dissolved plume, and limited LNAPL recovery success (Newell et.al,

1995; Charbeneau, 1999; Huntley and Beckett, 2002; and Sale, 2003). The Site data indicate that LNAPL recovery and presence of LNAPL in wells is inconsistent and temporally variable. This is a typical behavior of residual LNAPL where mobility is restricted by water in the pore spaces and thickness of the LNAPL layer. In these situations migration of the LNAPL will be limited. Although this is likely the case at the Site, the lack of data from downgradient of the ADD property limits further evaluation of the potential rate of migration.

Potential exposures

The depth of the water table at the Site (32 ft) will limit direct contact to the LNAPL and the VOCs. LNAPL has likely migrated onto the ANG property as evidenced by the presence of product in PZ-27 and PZ-28. The VOC plume has not migrated past 350 ft onto the ANG property. The closest water supply wells are located 0.61 miles south of the ANG property and draw water from the same aquifer. There is a potential for vapor phase migration of VOCs from the LNAPL or VOC plume into structures constructed over the area.

6. Conclusions

Based on the investigations completed there are two areas of concern identified within soil and groundwater across the majority of the Site. The following areas should be addressed as follows:

1. MH-1 residual solids – The material within this structure contained SVOCs, primarily polynuclear aromatics (PAHs), and inorganics above the screening criteria. There are a number of structures similar to that identified at MH-1, which are currently present at the site. These structures were reportedly used for discharge of stormwater and/or sanitary water to the subsurface. Furthermore, there is no report of historic operations within the northern portion of the property which would result in the generation of these types of materials. This suggests that the historic accounts of the Site activities may not be complete. Although field inspection of several structures did not indicate evidence of impacted materials, characteristics of residuals within MH-1 may require removal or further action. In general, the groundwater data from the Site do not suggest that these structures represent a general source of groundwater contamination.

2. South-Central Area. – The southern portion of this area has been impacted by historic petroleum product losses. The source of the LNAPL was likely one or more of the former storage tanks located in the area. Although data obtained during this investigation did not reveal the presence of petroleum-related constituents in the unsaturated soil, it cannot be ruled out.

   As previously stated, LNAPL monitoring and removal actions have been ongoing since at least 1997. The area in which the LNAPL is located is approximately 70 ft wide by 170 ft long. The downgradient extent of LNAPL appears to extend beyond the ADD property. In 2002, the estimated thickness of LNAPL in these areas was between 0.15 and 0.25 ft (1.8 and 3 in). LNAPL was not observed in early 2003 due to an increase in the groundwater elevation.

   Groundwater data collected by Peer on the ANG property suggest that the VOC plume has migrated approximately 1,000 ft onto the ANG property. At the leading edge of the plume, concentrations of xylenes, ethylbenzene, and napthalene were generally observed to be below 100 µg/L.

   Although based on limited temporal data, it appears that natural attenuation processes are occurring within the plume area on the ADD property. This conclusion is based on the occurrence of lower

DO concentrations within the plume as compared to background areas. The current DO concentrations should continue to support aerobic biological activity. Continued monitoring of both natural attenuation parameters and general groundwater quality will provide additional documentation and allow for the assessment of the need for the addition of oxygen to the system.

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Table 3

LNAPL Recovery Information

Airport Development District
Francis S. Gabreski Airport
Westhampton, New York

Date	Gallons Recovered	Piezometer Collected From
1997		
Jan	0.11	9
Feb	0.06	9
Mar	0.11	9
Apr	0.05	9
May	0.03	9,10
Jun	0.03	9,10
Jul	0.04	9,10
Aug	0.02	9,10
Sep	0.03	5,9,10
Oct	0.12	5,9,10
Nov	0.14	5,9,10
Dec	0.4	5,10
Subtotal	1.14	
1998		
Jan	0.38	5,10,16
Feb	0	
Mar	0	
Apr	0	
May	0	
Jun	0	
Jul	0	
Aug	0	
Sep	0	
Oct	0	
Nov	0	
Dec	0	
Subtotal	0.38	
1999		
Jan	0	
Feb	0	
Mar	0	
Apr	0	
May	0	
Jun	0	
Jul	0	
Aug	0	
Sep	0	
Oct	0.02	5
Nov	0.12	5
Dec	0.13	5
Subtotal	0.27	

Date	Gallons Recovered	Piezometer Collected From
2000		
Jan	0.22	5
Feb	0.27	5
Mar	0.46	5,27
Apr	0.35	5,27
May	0	
Jun	0	
Jul	0	
Aug	0	
Sep	0	
Oct	0.13	5,27
Nov	0.3	5,6
Dec	0.2	5,6,27
Subtotal	1.93	
2001		
Jan	1	5,6,8,9,27
Feb	1.2	5,6,8,9,27,28
Mar	0.1	5,6,8
Apr	0	
May	0	
Jun	0	
Jul	0	
Aug	0.02	9
Sep	0	
Oct	0.03	9
Nov	0	
Dec		
Subtotal	2.35	
2002		
Jan	0	
Feb	0.11	5,6
Mar	0.43	5,6
Apr	1.04	5,6,8,9,27,28
May	0.9	5,6,8,9,27,28
Jun	0.1	5,6,9
Jul	0	
Aug	0.41	5,6,9
Sep	*No Data*	
Oct	*No Data*	
Nov	*No Data*	
Dec	*No Data*	
Subtotal	2.99	

Total product recovered **9.06 Gallons**

Source: Suffolk County Department of Health Services, Monthly letters to NYSDEC Regional Spills Engineer.

Table 7

Sampling and Analysis Summary

Airport Development District
Francis S. Gabreski Airport
Westhampton, New York

		Surface Soil				Sub-Surface Soil				Ground Water				
	Site Area	VOCs	SVOCs	Pesticides	Inorganics	VOCs	SVOCs	Pesticides	Inorganics	VOCs	SVOCs	Pesticides/ PCBs	Inorganics	Natural Attenuation
ERM-01	SC									X	X	X	X	X
ERM-02	SE									X	X		X	
ERM-03	SC									X	X		X	
ERM-04	SE									X	X	X	X	
ERM-05	SW									X	X	X	X	
ERM-06	SW									X	X	X	X	X
ERM-07	SW					X	X	X	X	X	X	X	X	X
SB-01*	N													
SB-02	N					X								
SB-03*	N													
SB-04*	N													
SB-05	N							X	X					
SB-06	N							X	X					
SB-07	N					X	X	X	X					
SB-08	N					X	X		X					
SB-09	SW					X	X		X					
SB-10	SW			X	X	X	X		X					
SB-11	SE			X	X	X	X		X					
SB-12	SE					X	X		X					
SB-13	SE					X								
SB-14	SC					X	X		X					
SB-15	SC					X	X		X					
SB-16	SC			X	X	X	X	X	X					
SB-17	SC			X	X	X	X							
SB-18	SC					X								
SB-19	SC					X								
SB-20	SC					X	X		X					
SB-21	SC					X	X		X					
SB-22	SC					X								
SB-23	SC					X								
SB-24	SC					X	X							
SB-25	SC					X								
SB-26	SC					X	X							
SB-27	SC					X	X		X					
SB-28	SC					X	X							
SB-29	SC					X	X	X						
SB-30	SC					X		X						
SB-31	SC			X	X	X	X		X					
SB-32	SC					X			X					
SB-33	SC			X	X	X	X	X						
SS-01	N			X										
SS-02	SC			X										
SS-03	SC			X										
SS-04	SC			X										
MH-1	N					X	X							
PZ-08	SC									X	X		X	X
PZ-17	SC									X	X		X	X

Note: * - No samples were collected for analysis at this location

VOCs	SVOCs	PCBs	Inorganics	
0	0	10	6	Surface Soil
30	21	8	17	Sub-Surface Soil
9	9	5	9	Ground Water
39	30	23	32	Total Samples

Table 8

Groundwater Elevation Data

Airport Development District
Francis S. Gabreski Airport
Westhampton, New York

Site ID	Casing Elevation	Depth to Ground Water 7/11/02	Ground Water Elevation 7/11/02	Depth to Ground Water 9/24/02	Ground Water Elevation 9/24/02
ERM-01	47.22	32.28	14.94	32.72	14.50
ERM-02	53.46	38.59	14.87	39.07	14.39
ERM-03	53.16	38.70	14.46	39.16	14.00
ERM-04	50.73	36.58	14.15	37.06	13.67
ERM-05	58.13	43.85	14.28	44.33	13.80
ERM-06	53.79	39.63	14.16	40.11	13.68
ERM-07	44.77	30.73	14.04	31.20	13.57

Note: Elevations in feet above mean sea level.

O'BRIEN & GERE ENGINEERS, INC.

Table 9
Gabreski Airport
Surface Soil Samples
Pesticide Data

Compound	Sample ID	Avg. Eastern US Background Concentrations	NYS TAGM 4046 Recommended Soil Cleanup	SB-05	SB-06	SB-07	SB-10	SB-11	SB-16	SB-17	SB-31
	Sample Depth			0.3 - 0.5 ft	0.3 - 0.8 ft	0.3 - 0.8 ft	0.0 - 0.5 ft	0.0 - 0.5 ft	0.0 - 0.5 ft	0.0 - 0.5 ft	0.0 - 0.5 ft
	Sample Date			06/19/02	06/19/02	06/20/02	07/11/02	07/10/02	07/01/02	06/28/02	06/26/02
	Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	Matrix			SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
4,4-DDD		NC	2.9	0.00350 U	0.07100 U	0.03700	0.00340 U	0.00340 U	0.03400 U	0.00330 U	0.03200
4,4-DDE		NC	2.1	0.00500 J	0.07100 U	0.05900	0.00870	0.00340 U	0.05200	0.00330 U	0.00360 J
4,4-DDT		NC	2.1	0.00720	0.13000 J	0.08400	0.01000	0.00340 U	0.06400	0.00330 U	0.03400 J
Aldrin		NC	0.041	0.00180 U	0.03700 U	0.00940 U	0.00170 U	0.00180 U	0.01800 U	0.00170 U	0.00180 U
Dieldrin		NC	0.044	0.00350 U	0.07100 U	0.01800 U	0.00340 U	0.00340 U	0.03400 U	0.00330 U	0.01100
Endosulfan I		NC	0.9	0.00180 U	0.03700 U	0.00940 U	0.00170 U	0.00180 U	0.01800 U	0.00170 U	0.00180 U
Endosulfan II		NC	0.9	0.00350 U	0.07100 U	0.01800 U	0.00340 U	0.00340 U	0.03400 U	0.00330 U	0.00350 U
Endosulfan sulfate		NC	1	0.00350 UJ	0.72000 J	0.02900 J	0.00340 U	0.00340 U	0.03400 U	0.00330 U	0.01300 J
Endrin		NC	0.1	0.00350 U	0.07100 U	0.01800 U	0.00340 U	0.00340 U	0.03400 U	0.00330 U	0.00350 U
Endrin aldehyde		NC	NC	0.00350 U	0.07100 U	0.01800 U	0.00340 U	0.00340 U	0.03400 U	0.00330 U	0.01700 J
Endrin ketone		NC	NC	0.00350 U	0.07100 U	0.01800 U	0.00340 U	0.00340 U	0.03400 U	0.00330 U	0.00980 J
Heptachlor		NC	0.1	0.00180 U	0.03700 U	0.00940 U	0.00170 U	0.00180 U	0.01800 U	0.00170 U	0.00180 U
Heptachlor epoxide		NC	0.02	0.00180 U	0.03700 U	0.00940 U	0.00170 U	0.00180 U	0.01800 U	0.00170 U	0.00180 U
Methoxychlor		NC	NC	0.01800 U	0.37000 U	0.09400 U	0.01700 U	0.01800 U	0.18000 U	0.01700 U	0.01800 U
Toxaphene		NC	NC	0.18000 U	3.70000 U	0.94000 U	0.17000 U	0.18000 U	1.80000 U	0.17000 U	0.18000 U
alpha-BHC		NC	0.11	0.00180 UJ	0.03700 UJ	0.00940 UJ	0.00170 U	0.00180 U	0.01800 U	0.00170 U	0.00180 U
alpha-Chlordane		NC	NC	0.00180 U	0.07400 J	0.01100 J	0.00170 U	0.00180 U	0.01800 U	0.00170 U	0.01700 J
beta-BHC		NC	0.2	0.00180 U	0.03700 U	0.00940 U	0.00170 U	0.00200 J	0.01800 U	0.00170 U	0.00180 U
delta-BHC		NC	0.3	0.00180 UJ	0.03700 UJ	0.00940 UJ	0.00170 UJ	0.00180 UJ	0.01800 UJ	0.00170 UJ	0.00180 UJ
gamma-BHC (Lindane)		NC	0.06	0.00180 UJ	0.03700 UJ	0.00940 UJ	0.00170 U	0.00180 U	0.01800 U	0.00170 U	0.00180 U
gamma-Chlordane		NC	0.54	0.00180 U	0.05400	0.00940 U	0.00170 U	0.00180 U	0.01800 U	0.00170 U	0.01800 J

NOTES: U - Not detected, J - Estimated value, R - Data unusable, --- - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.

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Table 9
Gabreski Airport
Surface Soil Samples
Pesticide Data

Compound	Sample ID	Avg. Eastern US Background Concentrations	NYS TAGM 4046 Recommended Soil Cleanup	SB-33	SS-01	SS-02	SS-03	SS-04
	Sample Depth			0.0 - 0.5 ft	0.0 - 0.5 ft	0.0 - 0.5 ft	0.0 - 0.5 ft	0.0 - 0.5 ft
	Sample Date			06/24/02	09/23/02	09/23/02	09/23/02	09/23/02
	Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	Matrix			SOLID	SOLID	SOLID	SOLID	SOLID
4,4-DDD		NC	2.9	0.00350 U	0.02200	0.01900 U	0.17000	0.03200
4,4-DDE		NC	2.1	0.00350 U	0.04800 J	0.01900 J	0.03600 J	0.01700 U
4,4-DDT		NC	2.1	0.00610 J	0.10000	0.02100 J	0.18000	0.07700 J
Aldrin		NC	0.041	0.00180 U	0.01100 U	0.00990 U	0.00990 U	0.00890 U
Dieldrin		NC	0.044	0.00350 U	0.02100 U	0.01900 U	0.01900 U	0.01700 U
Endosulfan I		NC	0.9	0.00180 U	0.01100 U	0.00990 U	0.00990 U	0.00890 U
Endosulfan II		NC	0.9	0.00350 UJ	0.02100 U	0.01900 U	0.01900 U	0.01700 U
Endosulfan sulfate		NC	1	0.00350 U	0.05500	0.01900 U	0.01900 U	0.03100 J
Endrin		NC	0.1	0.00350 U	0.02100 U	0.01900 U	0.01900 U	0.01700 U
Endrin aldehyde		NC	NC	0.00350 U	0.02100 U	0.01900 U	0.01900 U	0.01700 U
Endrin ketone		NC	NC	0.00350 U	0.02100 U	0.01900 U	0.01900 U	0.01700 U
Heptachlor		NC	0.1	0.00180 U	0.01100 U	0.00990 U	0.00990 U	0.00890 U
Heptachlor epoxide		NC	0.02	0.00180 U	0.01100 U	0.00990 U	0.00990 U	0.00890 U
Methoxychlor		NC	NC	0.01800 U	0.11000 U	0.09900 U	0.09900 U	0.08900 U
Toxaphene		NC	NC	0.18000 U	1.10000 U	0.99000 U	0.99000 U	0.89000 U
alpha-BHC		NC	0.11	0.00190 J	0.01100 U	0.00990 U	0.00990 U	0.00890 U
alpha-Chlordane		NC	NC	0.00560 J	0.03200	0.07100	0.02500	0.01500
beta-BHC		NC	0.2	0.00180 U	0.01100 U	0.03700 J	0.00990 U	0.00890 U
delta-BHC		NC	0.3	0.00180 UJ	0.01100 U	0.00990 U	0.00990 U	0.00890 U
gamma-BHC (Lindane)		NC	0.06	0.00180 UJ	0.01100 U	0.00990 U	0.00990 U	0.00890 U
gamma-Chlordane		NC	0.54	0.00440 J	0.01300 J	0.03600	0.02200	0.01600

NOTES: U - Not detected, J - Estimated value, R - Data unusable, — - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.

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Table 10
Gabreski Airport
Surface Soil Samples
Inorganic Data

Compound	Sample ID	Avg. Eastern US Background	NYS TAGM 4046 Recommended	SB-05	SB-06	SB-07	SB-10	SB-11	SB-16	SB-17	SB-31
	Sample Depth	Concentrations	Soil Cleanup	0.3 - 0.5 ft	0.3 - 0.8 ft	0.3 - 0.8 ft	0.0 - 0.5 ft	0.0 - 0.5 ft	0.0 - 0.5 ft	0.0 - 0.5 ft	0.0 - 0.5 ft
	Sample Date			06/19/02	06/19/02	06/20/02	07/11/02	07/10/02	07/01/02	06/28/02	06/26/02
	Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	Matrix			SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Aluminum		33000	SB	1150	10500	4810	3450	1800	2310 J	2140 J	993 J
Antimony		NC	SB	0.18 UJ	0.19 UJ	0.52 UJ	0.83	0.89	0.25 UJ	0.42 UJ	0.38 UJ
Arsenic		5	7.5	1.1 U	[5.2]	[6]	1.4	0.67	1.6 J	0.8 J	0.63 J
Barium		290	300	6.3	16.8	62.6	9.9	4.9 U	6.7 J	3.8 J	4.7 J
Beryllium		0.6	0.16	0.041 U	(0.26)	0.13	0.081 U	0.073 U	0.062 J	0.041 J	0.044 J
Cadmium		0.2	1*	[0.31]	0.063 U	[0.43]	0.61 U	0.6 U	0.063 J	0.035 UJ	[0.37 J]
Calcium		3400	SB	197 J	328 J	1530 J	260	109	247 J	11.8 UJ	99 J
Chromium		33	10*	2.8 J	(11.3 J)	(15.2 J)	(13.3)	3.6	3.9 J	2.7 J	2.8 J
Cobalt		5.9	30	0.19 U	2.9	1.6	0.44 U	0.55 U	0.68 UJ	0.46 UJ	0.33 UJ
Copper		13	25	4 U	4.9	11	7.5 U	4.5 U	3.7 UJ	1.4 UJ	7.3 UJ
Cyanide		NC	NC	0.086 U	0.095 U	0.11 U	0.1 U	0.095 U	0.093 UJ	0.097 UJ	0.1 UJ
Iron		14000	2000	1500 J	(11000 J)	(5620 J)	(3660)	(2210)	(2520 J)	(2130 J)	1340 J
Lead		14	SB	[15.4 J]	9.7 J	[79.3 J]	13.6	6	11.6 J	2.7 J	[22.4 J]
Magnesium		2300	SB	91	1170	604	226	156 U	167 J	105 J	133 J
Manganese		285	SB	9.4	66.9	66.5	43.9	16.8	21.7 J	14.3 J	7.8 J
Mercury		0.81	0.1	(0.18)	(0.13)	(0.22)	0.051 U	0.05 U	0.053 UJ	0.041 UJ	0.046 UJ
Nickel		12	13	0.9 U	5.7	4.2	1.8 U	1 U	1.6 J	1.4 UJ	1.5 UJ
Potassium		12000	SB	40.1 U	250	140 U	91.5 U	84 U	91.1 UJ	41 UJ	52.2 UJ
Selenium		0.3	2	0.41 UJ	[0.94 J]	[0.95 J]	0.83 U	0.9 U	[0.83 J]	0.52 UJ	0.45 UJ
Silver		NC	SB	0.26 UJ	1.1 J	0.63 J	0.27 UJ	0.2 UJ	0.44 UJ	0.17 UJ	6.5 J
Sodium		2500	SB	34.1 U	46.2 U	34.5 U	14.7 U	14.4 U	30.7 UJ	12.5 UJ	11.5 UJ
Thallium		NC	SB	0.41 U	0.63	0.43 U	0.61 U	0.6 U	0.46 J	0.35 UJ	0.3 UJ
Vanadium		43	150	3.8	18.6	11	8.4	4	5.2 J	3.9 J	3.8 J
Zinc		40	20	14.6 UJ	(20.8 J)	([92.8 J])	19.3 J	6.6 UJ	13.3 J	3.8 UJ	(23.1 J)

NOTES: U - Not detected, J - Estimated value, R - Data unusable, — - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.
* - indicates NYSDEC revised values for nonresidential sites which have not yet been incorporated into TAGM 4046.
SB = Site background

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Table 10
Gabreski Airport
Surface Soil Samples
Inorganic Data

Compound	Sample ID	Avg. Eastern US Background Concentrations	NYS TAGM 4046 Recommended Soil Cleanup	SB-33
	Sample Depth			0.0 - 0.5 ft
	Sample Date			06/24/02
	Units	mg/Kg	mg/Kg	mg/Kg
	Matrix			SOLID
Aluminum		33000	SB	1390
Antimony		NC	SB	0.18 UJ
Arsenic		5	7.5	1.4
Barium		290	300	14.9
Beryllium		0.6	0.16	0.041 U
Cadmium		0.2	1*	[0.32]
Calcium		3400	SB	2440 J
Chromium		33	10*	6.3 J
Cobalt		5.9	30	0.42 U
Copper		13	25	5.3
Cyanide		NC	NC	0.34 U
Iron		14000	2000	(2630 J)
Lead		14	SB	[81.2 J]
Magnesium		2300	SB	1550
Manganese		285	SB	24.6
Mercury		0.81	0.1	(0.12)
Nickel		12	13	1.6
Potassium		12000	SB	46.5 U
Selenium		0.3	2	[0.97 J]
Silver		NC	SB	0.28 UJ
Sodium		2500	SB	32.7 U
Thallium		NC	SB	0.41 UJ
Vanadium		43	150	5.4
Zinc		40	20	(37.8 J)

NOTES: U - Not detected, J - Estimated value, R - Data unusable, --- - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.
* - indicates NYSDEC revised values for nonresidential sites which have not yet been incorporated into TAGM 4046.
SB = Site background

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Table 11
Gabreski Airport
Subsurface Soil Samples
Volatile Organic Compound Data

Compound	Sample ID	Avg. Eastern US Background	NYS TAGM 4046 Recommended	ERM-07	ERM-07	MH-1	SB-02	SB-07	SB-08	SB-09	SB-10
	Sample Depth	Concentrations	Soil Cleanup	31.0 - 32.0 ft	32.0 - 34.0 ft	5.0 - 5.0 ft	31.0 - 32.0 ft	27.0 - 28.0 ft	35.0 - 36.0 ft	39.0 - 41.0 ft	27.0 - 28.0 ft
	Sample Date			06/27/02	06/27/02	09/23/02	06/18/02	06/20/02	06/20/02	07/11/02	07/11/02
	Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	Matrix			SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
1,1,1-Trichloroethane		NC	0.8	0.01000 U	0.01200 UJ	0.01300 UJ	0.00100 J	0.01000 U	0.01100 U	0.00900 U	0.00900 U
1,1,2,2-Tetrachloroethane		NC	0.6	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
1,1,2-Trichloroethane		NC	NC	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
1,1-Dichloroethane		NC	0.2	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
1,1-Dichloroethene		NC	0.4	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
1,2,4-Trichlorobenzene		NC	3.4	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
1,2-Dibromo-3-chloropropane		NC	NC	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 UR	0.01000 UR	0.01100 UR	0.00900 U	0.00900 U
1,2-Dibromoethane (EDB)		NC	NC	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
1,2-Dichlorobenzene		NC	7.9	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
1,2-Dichloroethane		NC	0.1	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
1,2-Dichloropropane		NC	NC	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
1,3-Dichlorobenzene		NC	1.6	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
1,4-Dichlorobenzene		NC	8.5	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
2-Butanone (MEK)		NC	0.3	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
2-Hexanone		NC	NC	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
4-Methyl-2-pentanone (MIBK)		NC	1	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Acetone		NC	0.2	0.02400 UJ	0.01200 UJ	0.03100 J	0.01000 UJ	0.01000 UJ	0.01100 UJ	0.00900 U	0.00900 U
Benzene		NC	0.06	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Bromodichloromethane		NC	NC	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Bromoform		NC	NC	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Bromomethane		NC	NC	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Carbon disulfide		NC	2.7	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Carbon tetrachloride		NC	0.6	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Chlorobenzene		NC	1.7	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Chloroethane		NC	1.9	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Chloroform		NC	0.3	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Chloromethane		NC	NC	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Cyclohexane		NC	NC	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Dibromochloromethane		NC	NC	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Dichlorodifluoromethane		NC	NC	0.01000 UJ	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Ethylbenzene		NC	5.5	0.01000 U	0.09700 J	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
1,1,2-Trichloro-1,2,2-trifluoroethane		NC	6	0.01000 UJ	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Isopropylbenzene		NC	NC	0.01000 U	0.05000 J	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Methyl acetate		NC	NC	0.01000 U	0.01200 UJ	0.00800 J	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Methyl tert butyl ether		NC	NC	0.01000 U	0.01200 UJ	0.01300 UJ	0.00400 J	0.01000 U	0.01100 U	0.00900 U	0.00900 U

NOTES: U - Not detected, J - Estimated value, R - Data unusable, --- - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.

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Table 11
Gabreski Airport
Subsurface Soil Samples
Volatile Organic Compound Data

Compound	Sample ID	Avg. Eastern US Background Concentrations	NYS TAGM 4046 Recommended Soil Cleanup	ERM-07	ERM-07	MH-1	SB-02	SB-07	SB-08	SB-09	SB-10
	Sample Depth			31.0 - 32.0 ft	32.0 - 34.0 ft	5.0 - 5.0 ft	31.0 - 32.0 ft	27.0 - 28.0 ft	35.0 - 36.0 ft	39.0 - 41.0 ft	27.0 - 28.0 ft
	Sample Date			06/27/02	06/27/02	09/23/02	06/18/02	06/20/02	06/20/02	07/11/02	07/11/02
	Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	Matrix			SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Methylcyclohexane		NC	NC	0.01000 U	0.20000 J	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Methylene chloride		NC	0.1	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.01100 U	0.01100 U
Styrene		NC	NC	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Tetrachloroethene		NC	1.4	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Toluene		NC	1.5	0.01000 U	0.00700 J	0.01300 UJ	0.00100 J	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Trichloroethene		NC	0.7	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Trichlorofluoromethane		NC	NC	0.01000 UJ	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Vinyl chloride		NC	0.2	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Xylene (total)		NC	1.2	0.01000 U	0.42000 J	0.01300 UJ	0.00100 J	0.01000 U	0.01100 U	0.00900 U	0.00900 U
cis-1,2-Dichloroethene		NC	0.25	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
cis-1,3-Dichloropropylene		NC	NC	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
trans-1,2-Dichloroethene		NC	0.3	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 UJ	0.00900 UJ
trans-1,3-Dichloropropene		NC	NC	0.01000 U	0.01200 UJ	0.01300 UJ	0.01000 U	0.01000 U	0.01100 U	0.00900 U	0.00900 U
Total VOCs		NC	NC	—	0.77400	0.03900	0.00700	—	—	—	—

NOTES: U - Not detected, J - Estimated value, R - Data unusable, — - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.

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O'BRIEN & GERE ENGINEERS, INC.

Table 11
Gabreski Airport
Subsurface Soil Samples
Volatile Organic Compound Data

Compound	Sample ID / Sample Depth / Sample Date / Units / Matrix	Avg. Eastern US Background Concentrations mg/Kg	NYS TAGM 4046 Recommended Soil Cleanup mg/Kg	SB-11 27.0 - 28.0 ft 07/10/02 mg/Kg SOLID	SB-12 36.0 - 37.0 ft 06/21/02 mg/Kg SOLID	SB-13 34.0 - 35.0 ft 06/21/02 mg/Kg SOLID	SB-14 39.0 - 40.0 ft 06/25/02 mg/Kg SOLID	SB-15 39.0 - 40.0 ft 06/25/02 mg/Kg SOLID	SB-16 39.0 - 40.0 ft 07/01/02 mg/Kg SOLID	SB-17 35.0 - 36.0 ft 06/28/02 mg/Kg SOLID	SB-18 33.0 - 34.0 ft 06/28/02 mg/Kg SOLID
1,1,1-Trichloroethane		NC	0.8	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
1,1,2,2-Tetrachloroethane		NC	0.6	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
1,1,2-Trichloroethane		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
1,1-Dichloroethane		NC	0.2	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
1,1-Dichloroethene		NC	0.4	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
1,2,4-Trichlorobenzene		NC	3.4	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
1,2-Dibromo-3-chloropropane		NC	NC	0.01000 U	0.01000 UR	0.01000 UR	0.01000 UR	0.01000 UR	0.01000 U	0.01100 U	0.01000 U
1,2-Dibromoethane (EDB)		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
1,2-Dichlorobenzene		NC	7.9	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
1,2-Dichloroethane		NC	0.1	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
1,2-Dichloropropane		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
1,3-Dichlorobenzene		NC	1.6	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
1,4-Dichlorobenzene		NC	8.5	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
2-Butanone (MEK)		NC	0.3	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
2-Hexanone		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
4-Methyl-2-pentanone (MIBK)		NC	1	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Acetone		NC	0.2	0.01000 U	0.01000 UJ	0.01000 UJ	0.01000 UJ	0.01000 UJ	0.01000 U	0.01100 UJ	0.01000 UJ
Benzene		NC	0.06	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Bromodichloromethane		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Bromoform		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Bromomethane		NC	NC	0.01000 UJ	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Carbon disulfide		NC	2.7	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Carbon tetrachloride		NC	0.6	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Chlorobenzene		NC	1.7	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Chloroethane		NC	1.9	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Chloroform		NC	0.3	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Chloromethane		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Cyclohexane		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Dibromochloromethane		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Dichlorodifluoromethane		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 UJ	0.01000 UJ
Ethylbenzene		NC	5.5	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
1,1,2-Trichloro-1,2,2-trifluoroethane		NC	6	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 UJ	0.01000 UJ
Isopropylbenzene		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Methyl acetate		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Methyl tert butyl ether		NC	NC	0.01000 J	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U

NOTES: U - Not detected, J - Estimated value, R - Data unusable, — - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.

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O'BRIEN & GERE ENGINEERS, INC.

Table 11
Gabreski Airport
Subsurface Soil Samples
Volatile Organic Compound Data

Compound	Sample ID	Avg. Eastern US Background Concentrations	NYS TAGM 4046 Recommended Soil Cleanup	SB-11	SB-12	SB-13	SB-14	SB-15	SB-16	SB-17	SB-18
	Sample Depth			27.0 - 28.0 ft	36.0 - 37.0 ft	34.0 - 35.0 ft	39.0 - 40.0 ft	39.0 - 40.0 ft	39.0 - 40.0 ft	35.0 - 36.0 ft	33.0 - 34.0 ft
	Sample Date			07/10/02	06/21/02	06/21/02	06/25/02	06/25/02	07/01/02	06/28/02	06/28/02
	Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	Matrix			SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Methylcyclohexane		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Methylene chloride		NC	0.1	0.01700 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Styrene		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Tetrachloroethene		NC	1.4	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Toluene		NC	1.5	0.00200 J	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Trichloroethene		NC	0.7	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Trichlorofluoromethane		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 UJ	0.01000 UJ
Vinyl chloride		NC	0.2	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Xylene (total)		NC	1.2	0.00100 J	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
cis-1,2-Dichloroethene		NC	0.25	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
cis-1,3-Dichloropropylene		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
trans-1,2-Dichloroethene		NC	0.3	0.01000 UJ	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
trans-1,3-Dichloropropene		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U	0.01000 U
Total VOCs		NC	NC	0.01300	---	---	---	---	---	---	---

NOTES: U - Not detected, J - Estimated value, R - Data unusable, --- - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.

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O'BRIEN & GERE ENGINEERS, INC.

Table 11
Gabreski Airport
Subsurface Soil Samples
Volatile Organic Compound Data

Compound	Sample ID / Sample Depth / Sample Date / Units / Matrix	Avg. Eastern US Background Concentrations mg/Kg	NYS TAGM 4046 Recommended Soil Cleanup mg/Kg	SB-19 15.0 - 16.0 ft 07/02/02 mg/Kg SOLID	SB-20 26.0 - 28.0 ft 07/02/02 mg/Kg SOLID	SB-21 31.0 - 32.0 ft 07/10/02 mg/Kg SOLID	SB-22 6.0 - 8.0 ft 07/10/02 mg/Kg SOLID	SB-23 31.0 - 32.0 ft 07/08/02 mg/Kg SOLID	SB-24 8.0 - 9.0 ft 07/08/02 mg/Kg SOLID	SB-25 11.0 - 12.0 ft 07/03/02 mg/Kg SOLID	SB-26 31.0 - 32.0 ft 07/03/02 mg/Kg SOLID
1,1,1-Trichloroethane		NC	0.8	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
1,1,2,2-Tetrachloroethane		NC	0.6	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
1,1,2-Trichloroethane		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
1,1-Dichloroethane		NC	0.2	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
1,1-Dichloroethene		NC	0.4	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
1,2,4-Trichlorobenzene		NC	3.4	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
1,2-Dibromo-3-chloropropane		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
1,2-Dibromoethane (EDB)		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
1,2-Dichlorobenzene		NC	7.9	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
1,2-Dichloroethane		NC	0.1	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
1,2-Dichloropropane		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
1,3-Dichlorobenzene		NC	1.6	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
1,4-Dichlorobenzene		NC	8.5	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
2-Butanone (MEK)		NC	0.3	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
2-Hexanone		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
4-Methyl-2-pentanone (MIBK)		NC	1	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Acetone		NC	0.2	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Benzene		NC	0.06	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Bromodichloromethane		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Bromoform		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Bromomethane		NC	NC	0.01000 U	0.01000 U	0.01000 UJ	0.01200 UJ	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Carbon disulfide		NC	2.7	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Carbon tetrachloride		NC	0.6	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Chlorobenzene		NC	1.7	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Chloroethane		NC	1.9	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Chloroform		NC	0.3	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Chloromethane		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Cyclohexane		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Dibromochloromethane		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Dichlorodifluoromethane		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Ethylbenzene		NC	5.5	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
1,1,2-Trichloro-1,2,2-trifluoroethane		NC	6	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Isopropylbenzene		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Methyl acetate		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Methyl tert butyl ether		NC	NC	0.01000 U	0.01000 U	0.00100 J	0.01200	0.01000 U	0.01000 U	0.00100 J	0.00100 J

NOTES: U - Not detected, J - Estimated value, R - Data unusable, --- - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.

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Subsurface Soil Samples
Volatile Organic Compound Data

Compound	Sample ID / Sample Depth / Sample Date / Units / Matrix	Avg. Eastern US Background Concentrations mg/Kg	NYS TAGM 4046 Recommended Soil Cleanup mg/Kg	SB-19 15.0 - 16.0 ft 07/02/02 mg/Kg SOLID	SB-20 26.0 - 28.0 ft 07/02/02 mg/Kg SOLID	SB-21 31.0 - 32.0 ft 07/10/02 mg/Kg SOLID	SB-22 6.0 - 8.0 ft 07/10/02 mg/Kg SOLID	SB-23 31.0 - 32.0 ft 07/08/02 mg/Kg SOLID	SB-24 8.0 - 9.0 ft 07/08/02 mg/Kg SOLID	SB-25 11.0 - 12.0 ft 07/03/02 mg/Kg SOLID	SB-26 31.0 - 32.0 ft 07/03/02 mg/Kg SOLID
Methylcyclohexane		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Methylene chloride		NC	0.1	0.01000 U	0.01000 U	0.01200 U	0.01800 U	0.01000 U	0.01000 U	0.01000 U	0.01200 U
Styrene		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Tetrachloroethene		NC	1.4	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Toluene		NC	1.5	0.01000 U	0.01000 U	0.01000 U	0.00100 J	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Trichloroethene		NC	0.7	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Trichlorofluoromethane		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Vinyl chloride		NC	0.2	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Xylene (total)		NC	1.2	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
cis-1,2-Dichloroethene		NC	0.25	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
cis-1,3-Dichloropropylene		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
trans-1,2-Dichloroethene		NC	0.3	0.01000 U	0.01000 U	0.01000 UJ	0.01200 UJ	0.01000 U	0.01000 U	0.01000 U	0.01000 U
trans-1,3-Dichloropropene		NC	NC	0.01000 U	0.01000 U	0.01000 U	0.01200 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U
Total VOCs		NC	NC	—	—	0.00100	0.01300	—	—	0.00100	0.00100

NOTES: U - Not detected, J - Estimated value, R - Data unusable, — - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.

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File Number: 10569/25466

O'BRIEN & GERE ENGINEERS, INC.

Table 11
Gabreski Airport
Subsurface Soil Samples
Volatile Organic Compound Data

Compound	Sample ID / Sample Depth / Sample Date / Units / Matrix	Avg Eastern US Background Concentrations mg/Kg	NYS TAGM 4046 Recommended Soil Cleanup mg/Kg	SB-27 28.0 - 29.0 ft 06/27/02 mg/Kg SOLID	SB-28 30.5 - 31.5 ft 07/02/02 mg/Kg SOLID	SB-29 31.0 - 32.0 ft 06/26/02 mg/Kg SOLID	SB-30 30.0 - 31.0 ft 06/27/02 mg/Kg SOLID	SB-31 27.0 - 28.0 ft 06/26/02 mg/Kg SOLID	SB-32 30.0 - 31.0 ft 06/24/02 mg/Kg SOLID	SB-33 27.0 - 28.0 ft 06/24/02 mg/Kg SOLID
1,1,1-Trichloroethane		NC	0.8	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
1,1,2,2-Tetrachloroethane		NC	0.6	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
1,1,? Trichloroethane		NC	NC	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
1,1-Dichloroethane		NC	0.2	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
1,1-Dichloroethene		NC	0.4	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
1,2,4-Trichlorobenzene		NC	3.4	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
1,2-Dibromo-3-chloropropane		NC	NC	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 UR	0.01100 UR
1,2-Dibromoethane (EDB)		NC	NC	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
1,2-Dichlorobenzene		NC	7.9	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
1,2-Dichloroethane		NC	0.1	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
1,2-Dichloropropane		NC	NC	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
1,3-Dichlorobenzene		NC	1.6	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
1,4-Dichlorobenzene		NC	8.5	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
2-Butanone (MEK)		NC	0.3	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
2-Hexanone		NC	NC	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
4-Methyl-2-pentanone (MIBK)		NC	1	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Acetone		NC	0.2	0.01100 UJ	0.01000 U	0.01000 UJ	0.01000 UJ	0.01000 UJ	0.01000 UJ	0.01100 UJ
Benzene		NC	0.06	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Bromodichloromethane		NC	NC	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Bromoform		NC	NC	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Bromomethane		NC	NC	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Carbon disulfide		NC	2.7	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Carbon tetrachloride		NC	0.6	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Chlorobenzene		NC	1.7	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Chloroethane		NC	1.9	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Chloroform		NC	0.3	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Chloromethane		NC	NC	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Cyclohexane		NC	NC	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Dibromochloromethane		NC	NC	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Dichlorodifluoromethane		NC	NC	0.01100 UJ	0.01000 U	0.01000 UJ	0.01000 UJ	0.01000 UJ	0.01000 U	0.01100 U
Ethylbenzene		NC	5.5	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
1,1,2-Trichloro-1,2,2-trifluoroethane		NC	6	0.01100 UJ	0.01000 U	0.01000 UJ	0.01000 UJ	0.01000 UJ	0.01000 U	0.01100 U
Isopropylbenzene		NC	NC	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Methyl acetate		NC	NC	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Methyl tert butyl ether		NC	NC	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U

NOTES: U - Not detected, J - Estimated value, R - Data unusable, — - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.

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O'BRIEN & GERE ENGINEERS, INC.

Table 11
Gabreski Airport
Subsurface Soil Samples
Volatile Organic Compound Data

Compound	Sample ID / Sample Depth / Sample Date / Units / Matrix	Avg. Eastern US Background Concentrations mg/Kg	NYS TAGM 4046 Recommended Soil Cleanup mg/Kg	SB-27 28.0 - 29.0 ft 06/27/02 mg/Kg SOLID	SB-28 30.5 - 31.5 ft 07/02/02 mg/Kg SOLID	SB-29 31.0 - 32.0 ft 06/26/02 mg/Kg SOLID	SB-30 30.0 - 31.0 ft 06/27/02 mg/Kg SOLID	SB-31 27.0 - 28.0 ft 06/26/02 mg/Kg SOLID	SB-32 30.0 - 31.0 ft 06/24/02 mg/Kg SOLID	SB-33 27.0 - 28.0 ft 06/24/02 mg/Kg SOLID
Methylcyclohexane		NC	NC	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Methylene chloride		NC	0.1	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Styrene		NC	NC	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Tetrachloroethene		NC	1.4	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Toluene		NC	1.5	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Trichloroethene		NC	0.7	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Trichlorofluoromethane		NC	NC	0.01100 UJ	0.01000 U	0.01000 UJ	0.01000 UJ	0.01000 UJ	0.01000 U	0.01100 U
Vinyl chloride		NC	0.2	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Xylene (total)		NC	1.2	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
cis-1,2-Dichloroethene		NC	0.25	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
cis-1,3-Dichloropropylene		NC	NC	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
trans-1,2-Dichloroethene		NC	0.3	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
trans-1,3-Dichloropropene		NC	NC	0.01100 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01000 U	0.01100 U
Total VOCs		NC	NC	—	—	—	—	—	—	—

NOTES: U - Not detected, J - Estimated value, R - Data unusable, — - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.

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O'BRIEN & GERE
ENGINEERS, INC.

Table 12
Gabreski Airport
Subsurface Soil Samples
Semivolatile Organic Compound Data

Compound	Sample ID	Avg. Eastern US Background	NYS TAGM 4046 Recommended	ERM-07	ERM-07	MH-1	SB-07	SB-08	SB-09	SB-10	SB-11
	Sample Depth	Concentrations	Soil Cleanup	31.0 - 32.0 ft	32.0 - 34.0 ft	5.0 - 5.0 ft	27.0 - 28.0 ft	35.0 - 36.0 ft	39.0 - 41.0 ft	27.0 - 28.0 ft	27.0 - 28.0 ft
	Sample Date			06/27/02	06/27/02	09/23/02	06/20/02	06/20/02	07/11/02	07/11/02	07/10/02
	Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	Matrix			SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
1,1-Biphenyl		NC	NC	0.86000	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
2,2-oxybis(1-Chloropropane)		NC	NC	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
2,4,5-Trichlorophenol		NC	0.1	0.89000 U	0.98000 U	1.10000 UJ	0.88000 U	0.88000 U	0.86000 U	0.88000 U	0.87000 U
2,4,6-Trichlorophenol		NC	NC	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
2,4-Dichlorophenol		NC	0.4	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
2,4-Dimethylphenol		NC	NC	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
2,4-Dinitrophenol		NC	0.2	0.89000 UJ	0.98000 UJ	1.10000 UJ	0.88000 UJ	0.88000 UJ	0.86000 U	0.88000 U	0.87000 U
2,4-Dinitrotoluene		NC	NC	0.35000 UJ	0.39000 UJ	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
2,6-Dinitrotoluene		NC	1	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
2-Chloronaphthalene		NC	NC	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
2-Chlorophenol		NC	0.8	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
2-Methylnaphthalene		NC	36.4	5.90000	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
2-Methylphenol		NC	0.1	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
2-Nitroaniline		NC	0.43	0.89000 U	0.98000 U	1.10000 UJ	0.88000 U	0.88000 U	0.86000 U	0.88000 U	0.87000 U
2-Nitrophenol		NC	0.33	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
3,3-Dichlorobenzidine		NC	NC	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
3-Nitroaniline		NC	0.5	0.89000 U	0.98000 U	1.10000 UJ	0.88000 U	0.88000 U	0.86000 U	0.88000 U	0.87000 U
4,6-Dinitro-2-methylphenol		NC	NC	0.89000 UJ	0.98000 UJ	1.10000 UJ	0.88000 U	0.88000 U	0.86000 U	0.88000 U	0.87000 U
4-Bromophenyl-phenylether		NC	NC	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
4-Chloro-3-methylphenol		NC	0.24	0.35000 UJ	0.39000 UJ	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
4-Chloroaniline		NC	0.22	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
4-Chlorophenyl-phenylether		NC	NC	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
4-Methylphenol		NC	0.9	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
4-Nitroaniline		NC	NC	0.89000 U	0.98000 U	1.10000 UJ	0.88000 U	0.88000 U	0.86000 U	0.88000 U	0.87000 U
4-Nitrophenol		NC	0.1	0.89000 UJ	0.98000 UJ	1.10000 UJ	0.88000 UJ	0.88000 U	0.86000 UJ	0.88000 UJ	0.87000 UJ
Acenaphthene		NC	50	0.35000 U	0.39000 U	0.69000 J	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Acenaphthylene		NC	41	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Acetophenone		NC	NC	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Anthracene		NC	50	0.35000 U	0.39000 U	1.60000 J	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Atrazine		NC	NC	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Benzaldehyde		NC	NC	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Benzo(a)anthracene		NC	0.224**	0.35000 U	0.39000 U	(5.70000 J)	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Benzo(a)pyrene		NC	0.061**	0.35000 U	0.39000 U	(5.60000 J)	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Benzo(b)fluoranthene		NC	1.1	0.35000 U	0.39000 U	(6.90000 J)	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Benzo(ghi)perylene		NC	50	0.35000 U	0.39000 U	2.30000 J	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U

NOTES: U - Not detected, J - Estimated value, R - Data unusable, --- - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.
** - Carcinogenic PAH

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O'BRIEN & GERE ENGINEERS, INC.

Table 12
Gabreski Airport
Subsurface Soil Samples
Semivolatile Organic Compound Data

Compound	Sample ID	Avg. Eastern US Background	NYS TAGM 4046 Recommended	ERM-07	ERM-07	MH-1	SB-07	SB-08	SB-09	SB-10	SB-11
	Sample Depth	Concentrations	Soil Cleanup	31.0 - 32.0 ft	32.0 - 34.0 ft	5.0 - 5.0 ft	27.0 - 28.0 ft	35.0 - 36.0 ft	39.0 - 41.0 ft	27.0 - 28.0 ft	27.0 - 28.0 ft
	Sample Date			06/27/02	06/27/02	09/23/02	06/20/02	06/20/02	07/11/02	07/11/02	07/10/02
	Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	Matrix			SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Benzo(k)fluoranthene		NC	1.1**	0.35000 U	0.39000 U	(2.90000 J)	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Butyl benzyl phthalate		NC	50	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Caprolactam		NC	NC	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Carbazole		NC	NC	0.35000 U	0.39000 U	0.72000 J	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Chrysene		NC	0.4**	0.35000 U	0.39000 U	(5.70000 J)	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Di-n-butyl phthalate		NC	8.1	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Di-n-octyl phthalate		NC	50	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Dibenzo(a,h)anthracene		NC	0.014**	0.35000 U	0.39000 U	(0.65000 J)	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Dibenzofuran		NC	6.2	0.21000 J	0.39000 U	0.16000 J	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Diethyl phthalate		NC	7.1	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Dimethyl phthalate		NC	2	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Fluoranthene		NC	50	0.35000 U	0.39000 U	12.00000 J	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Fluorene		NC	50	0.32000 J	0.39000 U	0.52000 J	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Hexachlorobenzene		NC	0.41	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Hexachlorobutadiene		NC	NC	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Hexachlorocyclopentadiene		NC	NC	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Hexachloroethane		NC	NC	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Indeno(1,2,3-cd)pyrene		NC	3.2**	0.35000 U	0.39000 U	2.70000 J	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Isophorone		NC	4.4	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
N-Nitrosodipropylamine		NC	NC	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
N-Nitrosodiphenylamine(1)		NC	NC	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Naphthalene		NC	13	0.35000 U	0.39000 U	0.06700 J	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Nitrobenzene		NC	0.2	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Pentachlorophenol		NC	1	0.89000 UJ	0.98000 UJ	1.10000 UJ	0.88000 U	0.88000 U	0.86000 U	0.88000 U	0.87000 U
Phenanthrene		NC	50	0.38000	0.39000 U	6.50000 J	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Phenol		NC	0.03	0.35000 UJ	0.39000 UJ	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Pyrene		NC	50	0.35000 U	0.39000 U	11.00000 J	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Bis (2-chloroethoxy) methane		NC	NC	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Bis (2-chloroethyl) ether		NC	NC	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Bis(2-ethylhexyl)phthalate		NC	50	0.35000 U	0.39000 U	0.45000 UJ	0.35000 U	0.05600 J	0.34000 U	0.35000 U	0.34000 U
Total SVOCs		NC	NC	7.67000	—	65.70700	—	0.05600	—	—	—

NOTES: U - Not detected, J - Estimated value, R - Data unusable, — - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.
** - Carcinogenic PAH

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O'BRIEN & GERE ENGINEERS, INC.

Table 12
Gabreski Airport
Subsurface Soil Samples
Semivolatile Organic Compound Data

Compound	Sample ID / Sample Depth / Sample Date / Units / Matrix	Avg. Eastern US Background Concentrations mg/Kg	NYS TAGM 4046 Recommended Soil Cleanup mg/Kg	SB-12 36.0 - 37.0 ft 06/21/02 mg/Kg SOLID	SB-14 39.0 - 40.0 ft 06/25/02 mg/Kg SOLID	SB-15 39.0 - 40.0 ft 06/25/02 mg/Kg SOLID	SB-16 39.0 - 40.0 ft 07/01/02 mg/Kg SOLID	SB-17 35.0 - 36.0 ft 06/28/02 mg/Kg SOLID	SB-20 26.0 - 28.0 ft 07/02/02 mg/Kg SOLID	SB-21 31.0 - 32.0 ft 07/10/02 mg/Kg SOLID	SB-24 8.0 - 9.0 ft 07/08/02 mg/Kg SOLID
1,1-Biphenyl		NC	NC	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
2,2-oxybis(1-Chloropropane)		NC	NC	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
2,4,5-Trichlorophenol		NC	0.1	0.87000 U	0.86000 U	0.88000 U	0.92000 U	0.94000 U	0.88000 U	0.86000 U	0.86000 U
2,4,6-Trichlorophenol		NC	NC	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
2,4-Dichlorophenol		NC	0.4	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
2,4-Dimethylphenol		NC	NC	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
2,4-Dinitrophenol		NC	0.2	0.87000 U	0.86000 U	0.88000 U	0.92000 UJ	0.94000 UJ	0.88000 UJ	0.86000 U	0.86000 U
2,4-Dinitrotoluene		NC	NC	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 UJ	0.35000 U	0.34000 U	0.34000 U
2,6-Dinitrotoluene		NC	1	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
2-Chloronaphthalene		NC	NC	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
2-Chlorophenol		NC	0.8	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
2-Methylnaphthalene		NC	36.4	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
2-Methylphenol		NC	0.1	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
2-Nitroaniline		NC	0.43	0.87000 U	0.86000 U	0.88000 U	0.92000 U	0.94000 U	0.88000 U	0.86000 U	0.86000 U
2-Nitrophenol		NC	0.33	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
3,3-Dichlorobenzidine		NC	NC	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
3-Nitroaniline		NC	0.5	0.87000 U	0.86000 U	0.88000 U	0.92000 U	0.94000 U	0.88000 U	0.86000 U	0.86000 U
4,6-Dinitro-2-methylphenol		NC	NC	0.87000 U	0.86000 U	0.88000 U	0.92000 U	0.94000 UJ	0.88000 U	0.86000 U	0.86000 U
4-Bromophenyl-phenylether		NC	NC	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
4-Chloro-3-methylphenol		NC	0.24	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 UJ	0.35000 U	0.34000 U	0.34000 U
4-Chloroaniline		NC	0.22	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
4-Chlorophenyl-phenylether		NC	NC	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
4-Methylphenol		NC	0.9	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
4-Nitroaniline		NC	NC	0.87000 U	0.86000 U	0.88000 U	0.92000 U	0.94000 U	0.88000 U	0.86000 U	0.86000 U
4-Nitrophenol		NC	0.1	0.87000 U	0.86000 U	0.88000 U	0.92000 U	0.94000 UJ	0.88000 U	0.86000 UJ	0.86000 UJ
Acenaphthene		NC	50	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Acenaphthylene		NC	41	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Acetophenone		NC	NC	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Anthracene		NC	50	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Atrazine		NC	NC	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Benzaldehyde		NC	NC	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Benzo(a)anthracene		NC	0.224**	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Benzo(a)pyrene		NC	0.061**	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Benzo(b)fluoranthene		NC	1.1	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Benzo(ghi)perylene		NC	50	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U

NOTES: U - Not detected, J - Estimated value, R - Data unusable, --- - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.
** - Carcinogenic PAH

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O'BRIEN & GERE ENGINEERS, INC.

Table 12
Gabreski Airport
Subsurface Soil Samples
Semivolatile Organic Compound Data

Compound	Sample ID	Avg. Eastern US Background Concentrations	NYS TAGM 4046 Recommended Soil Cleanup	SB-12	SB-14	SB-15	SB-16	SB-17	SB-20	SB-21	SB-24
	Sample Depth			36.0 - 37.0 ft	39.0 - 40.0 ft	39.0 - 40.0 ft	39.0 - 40.0 ft	35.0 - 36.0 ft	26.0 - 28.0 ft	31.0 - 32.0 ft	8.0 - 9.0 ft
	Sample Date			06/21/02	06/25/02	06/25/02	07/01/02	06/28/02	07/02/02	07/10/02	07/08/02
	Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	Matrix			SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Benzo(k)fluoranthene		NC	1.1**	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Butyl benzyl phthalate		NC	50	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Caprolactam		NC	NC	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Carbazole		NC	NC	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Chrysene		NC	0.4**	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Di-n-butyl phthalate		NC	8.1	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Di-n-octyl phthalate		NC	50	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Dibenzo(a,h)anthracene		NC	0.014**	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Dibenzofuran		NC	6.2	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Diethyl phthalate		NC	7.1	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Dimethyl phthalate		NC	2	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Fluoranthene		NC	50	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Fluorene		NC	50	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Hexachlorobenzene		NC	0.41	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Hexachlorobutadiene		NC	NC	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Hexachlorocyclopentadiene		NC	NC	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Hexachloroethane		NC	NC	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Indeno(1,2,3-cd)pyrene		NC	3.2**	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Isophorone		NC	4.4	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
N-Nitrosodipropylamine		NC	NC	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
N-Nitrosodiphenylamine(1)		NC	NC	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Naphthalene		NC	13	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Nitrobenzene		NC	0.2	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Pentachlorophenol		NC	1	0.87000 U	0.86000 U	0.88000 U	0.92000 U	0.94000 UJ	0.88000 U	0.86000 U	0.86000 U
Phenanthrene		NC	50	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.05800 J
Phenol		NC	0.03	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 UJ	0.35000 U	0.34000 U	0.34000 U
Pyrene		NC	50	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Bis (2-chloroethoxy) methane		NC	NC	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Bis (2-chloroethyl) ether		NC	NC	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Bis(2-ethylhexyl)phthalate		NC	50	0.35000 U	0.34000 U	0.35000 U	0.36000 U	0.37000 U	0.35000 U	0.34000 U	0.34000 U
Total SVOCs		NC	NC	—	—	—	—	—	—	—	0.05800

NOTES: U - Not detected, J - Estimated value, R - Data unusable, --- - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.
** - Carcinogenic PAH

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O'BRIEN & GERE ENGINEERS, INC.

Table 12
Gabreski Airport
Subsurface Soil Samples
Semivolatile Organic Compound Data

Compound	Sample ID	Avg. Eastern US Background Concentrations	NYS TAGM 4046 Recommended Soil Cleanup	SB-26	SB-27	SB-28	SB-29	SB-31	SB-33
	Sample Depth			31.0 - 32.0 ft	28.0 - 29.0 ft	30.5 - 31.5 ft	31.0 - 32.0 ft	27.0 - 28.0 ft	27.0 - 28.0 ft
	Sample Date			07/03/02	06/27/02	07/02/02	06/26/02	06/26/02	06/24/02
	Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	Matrix			SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
1,1-Biphenyl		NC	NC	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
2,2-oxybis(1-Chloropropane)		NC	NC	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
2,4,5-Trichlorophenol		NC	0.1	0.84000 U	0.93000 U	0.87000 U	0.86000 U	0.88000 U	0.87000 U
2,4,6-Trichlorophenol		NC	NC	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
2,4-Dichlorophenol		NC	0.4	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
2,4-Dimethylphenol		NC	NC	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
2,4-Dinitrophenol		NC	0.2	0.84000 UJ	0.93000 UJ	0.87000 UJ	0.86000 UJ	0.88000 UJ	0.87000 U
2,4-Dinitrotoluene		NC	NC	0.34000 U	0.37000 UJ	0.35000 U	0.34000 UJ	0.35000 UJ	0.34000 U
2,6-Dinitrotoluene		NC	1	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
2-Chloronaphthalene		NC	NC	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
2-Chlorophenol		NC	0.8	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
2-Methylnaphthalene		NC	36.4	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
2-Methylphenol		NC	0.1	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
2-Nitroaniline		NC	0.43	0.84000 U	0.93000 U	0.87000 U	0.86000 U	0.88000 U	0.87000 U
2-Nitrophenol		NC	0.33	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
3,3-Dichlorobenzidine		NC	NC	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
3-Nitroaniline		NC	0.5	0.84000 U	0.93000 U	0.87000 U	0.86000 U	0.88000 U	0.87000 U
4,6-Dinitro-2-methylphenol		NC	NC	0.84000 U	0.93000 UJ	0.87000 U	0.86000 UJ	0.88000 UJ	0.87000 U
4-Bromophenyl-phenylether		NC	NC	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
4-Chloro-3-methylphenol		NC	0.24	0.34000 U	0.37000 UJ	0.35000 U	0.34000 UJ	0.35000 UJ	0.34000 U
4-Chloroaniline		NC	0.22	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
4-Chlorophenyl-phenylether		NC	NC	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
4-Methylphenol		NC	0.9	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
4-Nitroaniline		NC	NC	0.84000 U	0.93000 U	0.87000 U	0.86000 U	0.88000 U	0.87000 U
4-Nitrophenol		NC	0.1	0.84000 U	0.93000 UJ	0.87000 U	0.86000 UJ	0.88000 UJ	0.87000 U
Acenaphthene		NC	50	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Acenaphthylene		NC	41	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Acetophenone		NC	NC	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Anthracene		NC	50	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Atrazine		NC	NC	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Benzaldehyde		NC	NC	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Benzo(a)anthracene		NC	0.224**	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Benzo(a)pyrene		NC	0.061**	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Benzo(b)fluoranthene		NC	1.1	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Benzo(ghi)perylene		NC	50	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U

NOTES: U - Not detected, J - Estimated value, R - Data unusable, — - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.
** - Carcinogenic PAH

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ENGINEERS, INC.

Table 12
Gabreski Airport
Subsurface Soil Samples
Semivolatile Organic Compound Data

Compound	Sample ID	Avg. Eastern US Background	NYS TAGM 4046 Recommended	SB-26	SB-27	SB-28	SB-29	SB-31	SB-33
	Sample Depth	Concentrations	Soil Cleanup	31.0 - 32.0 ft	28.0 - 29.0 ft	30.5 - 31.5 ft	31.0 - 32.0 ft	27.0 - 28.0 ft	27.0 - 28.0 ft
	Sample Date			07/03/02	06/27/02	07/02/02	06/26/02	06/26/02	06/24/02
	Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	Matrix			SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Benzo(k)fluoranthene		NC	1.1**	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Butyl benzyl phthalate		NC	50	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Caprolactam		NC	NC	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Carbazole		NC	NC	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Chrysene		NC	0.4**	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Di-n-butyl phthalate		NC	8.1	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Di-n-octyl phthalate		NC	50	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Dibenzo(a,h)anthracene		NC	0.014**	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Dibenzofuran		NC	6.2	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Diethyl phthalate		NC	7.1	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Dimethyl phthalate		NC	2	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Fluoranthene		NC	50	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Fluorene		NC	50	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Hexachlorobenzene		NC	0.41	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Hexachlorobutadiene		NC	NC	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Hexachlorocyclopentadiene		NC	NC	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Hexachloroethane		NC	NC	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Indeno(1,2,3-cd)pyrene		NC	3.2**	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Isophorone		NC	4.4	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
N-Nitrosodipropylamine		NC	NC	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
N-Nitrosodiphenylamine(1)		NC	NC	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Naphthalene		NC	13	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Nitrobenzene		NC	0.2	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Pentachlorophenol		NC	1	0.84000 U	0.93000 UJ	0.87000 U	0.86000 UJ	0.88000 UJ	0.87000 U
Phenanthrene		NC	50	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Phenol		NC	0.03	0.34000 U	0.37000 UJ	0.35000 U	0.34000 UJ	0.35000 UJ	0.34000 U
Pyrene		NC	50	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Bis (2-chloroethoxy) methane		NC	NC	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Bis (2-chloroethyl) ether		NC	NC	0.34000 U	0.37000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Bis(2-ethylhexyl)phthalate		NC	50	0.34000 U	0.95000 U	0.35000 U	0.34000 U	0.35000 U	0.34000 U
Total SVOCs		NC	NC	---	---	---	---	---	---

NOTES: U - Not detected, J - Estimated value, R - Data unusable, --- - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.
** - Carcinogenic PAH

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Table 13
Gabreski Airport
Subsurface Soil Samples
Pesticide Data

Compound	Sample ID / Sample Depth / Sample Date / Units / Matrix	Avg. Eastern US Background Concentrations mg/Kg	NYS TAGM 4046 Recommended Soil Cleanup mg/Kg	ERM-07 31.0 - 32.0 ft 06/27/02 mg/Kg SOLID	ERM-07 32.0 - 34.0 ft 06/27/02 mg/Kg SOLID	SB-16 39.0 - 40.0 ft 07/01/02 mg/Kg SOLID	SB-29 31.0 - 32.0 ft 06/26/02 mg/Kg SOLID	SB-30 30.0 - 31.0 ft 06/27/02 mg/Kg SOLID	SB-33 27.0 - 28.0 ft 06/24/02 mg/Kg SOLID
4,4-DDD		NC	2.9	0.00350 U	0.00390 U	0.00360 U	0.00340 U	0.00340 U	0.00350 U
4,4-DDE		NC	2.1	0.00350 U	0.00390 U	0.00360 U	0.00340 U	0.00340 U	0.00350 U
4,4-DDT		NC	2.1	0.00350 U	0.00390 U	0.00360 U	0.00340 U	0.00340 U	0.00350 U
Aldrin		NC	0.041	0.00180 U	0.00200 U	0.00190 U	0.00180 U	0.00180 U	0.00180 U
Dieldrin		NC	0.044	0.00350 U	0.00390 U	0.00360 U	0.00340 U	0.00340 U	0.00350 U
Endosulfan I		NC	0.9	0.00180 U	0.00200 U	0.00190 U	0.00180 U	0.00180 U	0.00180 U
Endosulfan II		NC	0.9	0.00350 U	0.00390 U	0.00360 U	0.00340 U	0.00340 U	0.00350 UJ
Endosulfan sulfate		NC	1	0.00350 U	0.00390 U	0.00360 U	0.00340 U	0.00340 U	0.00350 U
Endrin		NC	0.1	0.00350 U	0.00390 U	0.00360 U	0.00340 U	0.00340 U	0.00350 U
Endrin aldehyde		NC	NC	0.00350 U	0.00390 U	0.00360 U	0.00340 U	0.00340 U	0.00350 U
Endrin ketone		NC	NC	0.00350 U	0.00390 U	0.00360 U	0.00340 U	0.00340 U	0.00350 U
Heptachlor		NC	0.1	0.00180 U	0.00200 U	0.00190 U	0.00180 U	0.00180 U	0.00180 U
Heptachlor epoxide		NC	0.02	0.00180 U	0.00200 U	0.00190 U	0.00180 U	0.00180 U	0.00180 U
Methoxychlor		NC	NC	0.01800 U	0.02000 U	0.01900 U	0.01800 U	0.01800 U	0.01800 U
Toxaphene		NC	NC	0.18000 U	0.20000 U	0.19000 U	0.18000 U	0.18000 U	0.18000 U
alpha-BHC		NC	0.11	0.00180 U	0.00200 U	0.00190 U	0.00180 U	0.00180 U	0.00180 UJ
alpha-Chlordane		NC	NC	0.00180 U	0.00200 U	0.00190 U	0.00180 U	0.00180 U	0.00180 UJ
beta-BHC		NC	0.2	0.00180 U	0.00200 U	0.00190 U	0.00180 U	0.00180 U	0.00180 U
delta-BHC		NC	0.3	0.00180 UJ	0.00200 UJ	0.00190 UJ	0.00180 UJ	0.00180 UJ	0.00180 UJ
gamma-BHC (Lindane)		NC	0.06	0.00180 U	0.00200 U	0.00190 U	0.00180 U	0.00180 U	0.00180 UJ
gamma-Chlordane		NC	0.54	0.00180 U	0.00200 U	0.00190 U	0.00180 U	0.00180 U	0.00180 UJ

NOTES: U - Not detected, J - Estimated value, R - Data unusable, --- - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.

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ENGINEERS, INC.

Table 14
Gabreski Airport
Subsurface Soil Samples
Inorganic Data

Compound	Sample ID	Avg. Eastern US Background Concentrations	NYS TAGM 4046 Recommended Soil Cleanup	ERM-07	ERM-07	MH-1	SB-07	SB-08	SB-09	SB-10	SB-11
	Sample Depth			31.0 - 32.0 ft	32.0 - 34.0 ft	5.0 - 5.0 ft	27.0 - 28.0 ft	35.0 - 36.0 ft	39.0 - 41.0 ft	27.0 - 28.0 ft	27.0 - 28.0 ft
	Sample Date			06/27/02	06/27/02	09/23/02	06/20/02	06/20/02	07/11/02	07/11/02	07/10/02
	Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	Matrix			SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Aluminum		33000	SB	299 J	186 J	3290	286	202	315	421	381
Antimony		NC	SB	0.46 UJ	0.6 UJ	4.2 UJ	0.17 UJ	0.18 UJ	0.61 U	1	0.76
Arsenic		5	7.5	0.47 J	0.19 UJ	([9.4 J])	0.73 U	0.23 U	0.61 U	0.59 U	0.61 U
Barium		290	300	1.3 UJ	1 UJ	40.7	1.1 U	1.3 U	1.7 U	1.8 U	2.5 U
Beryllium		0.6	0.16	0.04 J	0.042 UJ	0.1	0.038 U	0.041 U	0.051 U	0.045 U	0.053 U
Cadmium		0.2	1*	0.03 UJ	0.042 UJ	([1.8 J])	0.057 U	0.061 U	0.61 U	0.59 U	0.61 U
Calcium		3400	SB	10.1 UJ	14.3 UJ	1730	20.3 UJ	20.8 UJ	47.9 U	46.7 U	48 U
Chromium		33	10*	1.8 J	1 UJ	([39.6 J])	2.3 J	1.1 J	2	1.3	1.3
Cobalt		5.9	30	0.46 UJ	0.17 UJ	3.9 J	0.38 U	0.28 U	0.36 U	0.59 U	0.61 U
Copper		13	25	1.3 UJ	1 UJ	([177 J])	1.2 U	0.55 U	1 U	0.92 U	4.2 U
Cyanide		NC	NC	0.24 UJ	0.11 UJ	—	0.27	0.4	0.091 U	0.097 U	0.096 U
Iron		14000	2000	529 J	279 J	([23000 J])	969 J	559 J	925	948	621
Lead		14	SB	1.9 J	0.82 UJ	[46.8]	1.1 J	0.69 J	1	0.54	3.8
Magnesium		2300	SB	47.1 J	40.2 J	343 J	45.8	41.6	48.4 U	52.7 U	108 U
Manganese		285	SB	3.4 UJ	2.4 UJ	124 J	9.6	14.5	25.2	37.4	26.5
Mercury		0.81	0.1	0.049 UJ	0.052 UJ	([0.9 J])	0.061	0.079	0.052 U	0.046 U	0.046 U
Nickel		12	13	0.65 UJ	0.49 UJ	([16])	0.63 U	0.29 U	0.46 U	0.42 U	0.68 U
Potassium		12000	SB	31.9 UJ	30.3 UJ	131	16.7 U	13 U	39.9 U	47.9 U	62.8 U
Selenium		0.3	2	0.44 UJ	0.63 UJ	([5.5 J])	0.38 UJ	0.41 UJ	0.81 U	0.91 U	0.81 U
Silver		NC	SB	0.074 UJ	0.11 UJ	1.5 U	0.095 UJ	0.061 UJ	0.14 UJ	0.14 UJ	0.14 UJ
Sodium		2500	SB	10.7 UJ	15.2 UJ	23.4 UJ	22.7 U	21.5 U	14.6 U	14.2 U	14.6 U
Thallium		NC	SB	0.3 UJ	0.42 UJ	0.66 U	0.38 U	0.41 U	0.61 U	0.59 U	0.61 U
Vanadium		43	150	2 J	0.91 J	25.9	2.1	1.9	2.6	2 U	1.4 U
Zinc		40	20	2.1 UJ	2.3 UJ	([391 J])	4.3 UJ	3.5 UJ	2.3 UJ	2.1 UJ	3 UJ

NOTES:
U - Not detected, J - Estimated value, R - Data unusable, — - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.
* - Indicates NYSDEC revised values for nonresidential sites which have not yet been incorporated into TAGM 4046.
SB - Site Background.

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Table 14
Gabreski Airport
Subsurface Soil Samples
Inorganic Data

Compound	Sample ID / Sample Depth / Sample Date / Units / Matrix	Avg. Eastern US Background Concentrations mg/Kg	NYS TAGM 4046 Recommended Soil Cleanup mg/Kg	SB-12 36.0 - 37.0 ft 06/21/02 mg/Kg SOLID	SB-14 39.0 - 40.0 ft 06/25/02 mg/Kg SOLID	SB-15 39.0 - 40.0 ft 06/25/02 mg/Kg SOLID	SB-16 39.0 - 40.0 ft 07/01/02 mg/Kg SOLID	SB-20 26.0 - 28.0 ft 07/02/02 mg/Kg SOLID	SB-21 31.0 - 32.0 ft 07/10/02 mg/Kg SOLID	SB-27 28.0 - 29.0 ft 06/27/02 mg/Kg SOLID	SB-31 27.0 - 28.0 ft 06/26/02 mg/Kg SOLID
Aluminum		33000	SB	331	277	306	559 J	428 J	333	198 J	252 J
Antimony		NC	SB	0.17 UJ	0.17 UJ	0.19 UJ	0.2 UJ	0.14 UJ	0.61 U	0.63 UJ	0.5 UJ
Arsenic		5	7.5	0.34 U	0.71 U	0.48 U	0.95 UJ	0.44 UJ	0.61 U	0.2 UJ	0.17 UJ
Barium		290	300	2.6 U	0.77 U	1.3 U	2.4 UJ	1.6 UJ	3 U	1.3 UJ	0.95 UJ
Beryllium		0.6	0.16	0.037 U	0.038 U	0.041 U	0.054 J	0.041 UJ	0.072 U	0.044 UJ	0.038 UJ
Cadmium		0.2	1*	0.056 U	0.057 U	0.062 U	0.042 UJ	0.041 UJ	0.61 U	0.044 UJ	0.038 UJ
Calcium		3400	SB	21.2 UJ	18.8 UJ	31.2 UJ	38 UJ	21 UJ	48.4 U	15.1 UJ	13 UJ
Chromium		33	10*	2 J	0.52 J	5.1 J	2.8 J	1.4 J	1.2	0.76 UJ	1.7 J
Cobalt		5.9	30	0.34 U	0.14 U	0.21 U	0.69 UJ	0.39 UJ	1.1 U	0.14 UJ	0.058 UJ
Copper		13	25	0.91 U	0.69 U	0.99 U	2.5 UJ	1.7 UJ	1.8 U	1.1 UJ	1.3 UJ
Cyanide		NC	NC	0.13	0.2 U	0.26 U	0.11 UJ	0.1 UJ	0.14 U	0.11 UJ	0.097 UJ
Iron		14000	2000	656 J	896 J	1160 J	1620 J	891 J	474	331 J	295 J
Lead		14	SB	0.9 J	0.92 J	1.6 J	2.4 J	0.82 UJ	0.6	0.72 UJ	0.65 UJ
Magnesium		2300	SB	72.9	33.3	87.6	111 J	77.3 J	59.9 U	43.5 J	46.9 J
Manganese		285	SB	11.1	2.9	5.1	27.2 J	15.2 J	74.9	10.3 J	2.6 UJ
Mercury		0.81	0.1	0.053	0.068	0.084	0.056 UJ	0.046 UJ	0.05 U	0.051 UJ	0.046 UJ
Nickel		12	13	0.5 U	0.25 U	0.49 U	1.2 UJ	0.92 UJ	0.68 U	0.4 UJ	0.31 UJ
Potassium		12000	SB	33.1 U	12.1 U	26.9 U	69.2 UJ	57.3 UJ	57.1 U	24 UJ	31.6 UJ
Selenium		0.3	2	0.37 UJ	0.38 UJ	[0.44 J]	0.63 UJ	0.62 UJ	0.88 U	0.67 UJ	0.58 UJ
Silver		NC	SB	0.064 UJ	0.092 UJ	0.075 UJ	0.12 UJ	0.14 UJ	0.2 UJ	0.11 UJ	0.17 UJ
Sodium		2500	SB	30.5 U	18.6 U	20.2 U	22.5 UJ	20.8 UJ	21.8 U	16 UJ	13.8 UJ
Thallium		NC	SB	0.37 U	0.38 U	0.41 U	0.42 UJ	0.41 UJ	0.61 U	0.44 UJ	0.38 UJ
Vanadium		43	150	1.5	2	3.6	5.3 J	2 J	1.3 U	0.7 J	0.83 J
Zinc		40	20	3.9 UJ	3.4 UJ	3.9 UJ	3.5 UJ	4.3 UJ	4.4 UJ	2.8 UJ	2.6 UJ

NOTES:
U - Not detected, J - Estimated value, R - Data unusable, — - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.
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O'BRIEN & GERE
ENGINEERS, INC.

Table 14
Gabreski Airport
Subsurface Soil Samples
Inorganic Data

Compound	Sample ID	Avg. Eastern US Background Concentrations	NYS TAGM 4046 Recommended Soil Cleanup	SB-32
	Sample Depth			30.0 - 31.0 ft
	Sample Date			06/24/02
	Units	mg/Kg	mg/Kg	mg/Kg
	Matrix			SOLID
Aluminum		33000	SB	707
Antimony		NC	SB	0.19 UJ
Arsenic		5	7.5	0.58 U
Barium		290	300	2 U
Beryllium		0.6	0.16	0.042 U
Cadmium		0.2	1*	0.063 U
Calcium		3400	SB	756 J
Chromium		33	10*	5.9 J
Cobalt		5.9	30	0.33 U
Copper		13	25	1.6 U
Cyanide		NC	NC	0.59 U
Iron		14000	2000	1270 J
Lead		14	SB	1.9 J
Magnesium		2300	SB	561
Manganese		285	SB	8.5
Mercury		0.81	0.1	0.08
Nickel		12	13	0.77 U
Potassium		12000	SB	23.5 U
Selenium		0.3	2	[0.55 J]
Silver		NC	SB	0.15 UJ
Sodium		2500	SB	26.6 U
Thallium		NC	SB	0.42 U
Vanadium		43	150	2.3
Zinc		40	20	4.9 UJ

NOTES: U - Not detected, J - Estimated value, R - Data unusable, — - Not analyzed/Sum of compounds not detected.
NC - No screening value available, [ ] - Exceeds Average Concentration of Eastern U.S. Soils, ( ) - Exceeds NYS TAGM 4046 - Recommended Soil Cleanup.
* - Indicates NYSDEC revised values for nonresidential sites which have not yet been incorporated into TAGM 4046.
SB - Site Background.

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O'BRIEN & GERE ENGINEERS, INC.

Table 15
Gabreski Airport
Ground Water Samples
Volatile Organic Compound Data

Compound	Sample ID	NYS Class GA Standards (6/98)	ERM-01	ERM-02	ERM-03	ERM-04	ERM-05	ERM-06	ERM-07	ERM-07	PZ-08
	Sample Depth										
	Sample Date		07/08/02	07/09/02	07/09/02	07/09/02	07/10/02	07/10/02	09/25/02	07/10/02	09/25/02
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix		WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
1,1,1-Trichloroethane		5	10 U	10 U	10 U	10 U	10 U	10 U	1 J	40 U	10 U
1,1,2,2-Tetrachloroethane		5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
1,1,2-Trichloroethane		5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
1,1-Dichloroethane		5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
1,1-Dichloroethene		5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
1,2,4-Trichlorobenzene		5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
1,2-Dibromo-3-chloropropane		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
1,2-Dibromoethane (EDB)		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
1,2-Dichlorobenzene		3	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
1,2-Dichloroethane		0.6	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
1,2-Dichloropropane		1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
1,3-Dichlorobenzene		3	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
1,4-Dichlorobenzene		3	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
2-Butanone (MEK)		50 #	10 UJ	10 U	10 U	10 U	10 U	10 U	10 UJ	40 U	10 UJ
2-Hexanone		50 #	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	40 U	10 UJ
4-Methyl-2-pentanone (MIBK)		50	10 UJ	10 U	10 U	10 U	10 U	10 U	10 UJ	40 U	10 UJ
Acetone		NC	10 UJ	10 UJ	10 U	10 UJ	10 U	10 U	10 U	40 U	22
Benzene		1	10 U	10 U	10 U	10 U	10 U	10 U	1 J	40 U	10 U
Bromodichloromethane		50 #	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
Bromoform		50 #	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
Bromomethane		5	10 U	10 UJ	10 UJ	10 UJ	10 U	10 U	10 U	40 U	10 U
Carbon disulfide		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
Carbon tetrachloride		5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
Chlorobenzene		5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
Chloroethane		5	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
Chloroform		7	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
Chloromethane		5	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
Cyclohexane		NC	10 UJ	10 U	10 U	10 U	10 U	10 U	42	72	110
Dibromochloromethane		50 #	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
Dichlorodifluoromethane		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
Ethylbenzene		5	10 U	10 U	10 U	10 U	10 U	10 U	[260]	[390]	[590]
1,1,2-Trichloro-1,2,2-trifluoroethane		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
Isopropylbenzene		5	10 U	10 U	10 U	10 U	10 U	10 U	[28]	[46]	[100]
Methyl acetate		NC	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
Methyl tert butyl ether		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U

NOTES: U - Not detected, J - Estimated value, — Not analyzed, ND = Nondetect.
NC - No GA Standard, [ ] - Exceeds GA Standard, # - Guidelines per TOGS.

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O'BRIEN & GERE ENGINEERS, INC.

Table 15
Gabreski Airport
Ground Water Samples
Volatile Organic Compound Data

Compound	Sample ID / Sample Depth / Sample Date / Units / Matrix	NYS Class GA Standards (6/98)	ERM-01 07/08/02 ug/L WATER	ERM-02 07/09/02 ug/L WATER	ERM-03 07/09/02 ug/L WATER	ERM-04 07/09/02 ug/L WATER	ERM-05 07/10/02 ug/L WATER	ERM-06 07/10/02 ug/L WATER	ERM-07 09/25/02 ug/L WATER	ERM-07 07/10/02 ug/L WATER	PZ-08 09/25/02 ug/L WATER
Methylcyclohexane		NC	10 U	10 U	10 U	10 U	10 U	10 U	73	150	170
Methylene chloride		5	10 U	10 UJ	10 UJ	10 UJ	10 U	10 U	10 U	40 U	10 U
Styrene		5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
Tetrachloroethene		5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	2 J
Toluene		5	10 U	10 U	10 U	10 U	10 U	10 U	[600 J]	[260]	10 U
Trichloroethene		5	10 U	10 U	10 U	10 U	10 U	10 U	1 J	40 U	10 U
Trichlorofluoromethane		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
Vinyl chloride		2	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
Xylene (total)		5	10 U	10 U	10 U	10 U	10 U	10 U	[1400]	[1900]	[3300]
cis-1,2-Dichloroethene		5 POC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
cis-1,3-Dichloropropylene		0.4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
trans-1,2-Dichloroethene		5 POC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
trans-1,3-Dichloropropene		0.4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
Total VOCs		NC	—	—	—	—	—	—	2406	2818	4294

NOTES: U - Not detected, J - Estimated value, — Not analyzed, ND = Nondetect.
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O'BRIEN & GERE
ENGINEERS, INC.

Table 15
Gabreski Airport
Ground Water Samples
Volatile Organic Compound Data

Compound	Sample ID	NYS Class GA Standards (6/98)	PZ-17
	Sample Depth		
	Sample Date		09/25/02
	Units	ug/L	ug/L
	Matrix		WATER
1,1,1-Trichloroethane		5	10 U
1,1,2,2-Tetrachloroethane		5	10 U
1,1,2-Trichloroethane		5	10 U
1,1-Dichloroethane		5	10 U
1,1-Dichloroethene		5	10 U
1,2,4-Trichlorobenzene		5	10 U
1,2-Dibromo-3-chloropropane		NC	10 U
1,2-Dibromoethane (EDB)		NC	10 U
1,2-Dichlorobenzene		3	10 U
1,2-Dichloroethane		0.6	10 U
1,2-Dichloropropane		1	10 U
1,3-Dichlorobenzene		3	10 U
1,4-Dichlorobenzene		3	10 U
2-Butanone (MEK)		50 #	10 UJ
2-Hexanone		50 #	10 UJ
4-Methyl-2-pentanone (MIBK)		50	10 UJ
Acetone		NC	25
Benzene		1	10 U
Bromodichloromethane		50 #	10 U
Bromoform		50 #	10 U
Bromomethane		5	10 U
Carbon disulfide		NC	10 U
Carbon tetrachloride		5	10 U
Chlorobenzene		5	10 U
Chloroethane		5	10 U
Chloroform		7	10 U
Chloromethane		5	10 U
Cyclohexane		NC	96
Dibromochloromethane		50 #	10 U
Dichlorodifluoromethane		NC	10 U
Ethylbenzene		5	[25]
1,1,2-Trichloro-1,2,2-trifluoroethane		NC	10 U
Isopropylbenzene		5	[81]
Methyl acetate		NC	10 U
Methyl tert butyl ether		NC	10 U

NOTES: U - Not detected, J - Estimated value, --- Not analyzed, ND = Nondetect.
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O'BRIEN & GERE ENGINEERS, INC.

Table 15
Gabreski Airport
Ground Water Samples
Volatile Organic Compound Data

Compound	Sample ID	NYS Class GA Standards (6/98)	PZ-17
	Sample Depth		
	Sample Date		09/25/02
	Units	ug/L	ug/L
	Matrix		WATER
Methylcyclohexane		NC	220
Methylene chloride		5	10 U
Styrene		5	10 U
Tetrachloroethene		5	10 U
Toluene		5	10 U
Trichloroethene		5	10 U
Trichlorofluoromethane		NC	10 U
Vinyl chloride		2	10 U
Xylene (total)		5	[95]
cis-1,2-Dichloroethene		5 POC	10 U
cis-1,3-Dichloropropylene		0.4	10 U
trans-1,2-Dichloroethene		5 POC	10 U
trans-1,3-Dichloropropene		0.4	10 U
Total VOCs		NC	542

NOTES: U - Not detected, J - Estimated value, --- Not analyzed, ND = Nondetect.
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O'BRIEN & GERE ENGINEERS, INC.

Table 16
Gabreski Airport
Ground Water Samples
Semivolatile Organic Compound Data

Compound	Sample ID	NYS Class GA Standards (6/98)	ERM-01	ERM-02	ERM-03	ERM-04	ERM-05	ERM-05	ERM-06	ERM-07	ERM-07
	Sample Depth										
	Sample Date		07/08/02	07/09/02	07/09/02	07/09/02	09/25/02	07/10/02	07/10/02	09/25/02	07/10/02
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix		WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
1,1-Biphenyl		5	10 U	10 U	10 U	10 U	10 U	2 J	10 U	3 J	10 U
2,2-oxybis(1-Chloropropane)		5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol		NC	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2,4,6-Trichlorophenol		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol		1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol		1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dinitrophenol		1	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2,4-Dinitrotoluene		5	10 UJ	10 UJ	10 UJ	10 UJ	10 U	10 UJ	10 UJ	10 U	10 UJ
2,6-Dinitrotoluene		5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Chloronaphthalene		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene		NC	10 U	10 U	10 U	10 U	10 U	20 J	10 U	29	10 U
2-Methylphenol		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	14	10 U
2-Nitroaniline		5	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2-Nitrophenol		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
3,3-Dichlorobenzidine		5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
3-Nitroaniline		5	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
4,6-Dinitro-2-methylphenol		NC	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
4-Bromophenyl-phenylether		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol		NC	10 UJ	10 UJ	10 UJ	10 UJ	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline		5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chlorophenyl-phenylether		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methylphenol		NC	10 U	10 U	10 U	10 U	10 U	3 J	10 U	10 U	10 U
4-Nitroaniline		5	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
4-Nitrophenol		NC	25 UJ	25 UJ	25 UJ	25 UJ	25 U	25 UJ	25 UJ	25 U	25 UJ
Acenaphthene		NC	10 U	10 U	10 U	10 U	10 U	1 J	10 U	10 U	10 U
Acenaphthylene		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetophenone		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Anthracene		50 #	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Atrazine		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzaldehyde		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene		0.002 #	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene		NC **	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene		0.002 #	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(ghi)perylene		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

NOTES: U - Not detected, J - Estimated value, — Not analyzed, ND = Nondetect.
NC - No GA Standard, [ ] - Exceeds GA Standard, # - Guidelines per TOGS.
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O'BRIEN & GERE ENGINEERS, INC.

Table 16
Gabreski Airport
Ground Water Samples
Semivolatile Organic Compound Data

Compound	Sample ID / Sample Depth / Sample Date / Units / Matrix	NYS Class GA Standards (6/98)	ERM-01 07/08/02 ug/L WATER	ERM-02 07/09/02 ug/L WATER	ERM-03 07/09/02 ug/L WATER	ERM-04 07/09/02 ug/L WATER	ERM-05 09/25/02 ug/L WATER	ERM-05 07/10/02 ug/L WATER	ERM-06 07/10/02 ug/L WATER	ERM-07 09/25/02 ug/L WATER	ERM-07 07/10/02 ug/L WATER
Benzo(k)fluoranthene		0.002 #	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Butyl benzyl phthalate		50 #	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Caprolactam		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbazole		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene		NC **	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Di-n-butyl phthalate		50	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Di-n-octyl phthalate		50 #	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzo(a,h)anthracene		NC **	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzofuran		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Diethyl phthalate		50 #	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dimethyl phthalate		50 #	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene		50 #	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene		50 #	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorobenzene		0.04	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene		0.5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene		5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachloroethane		5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene		0.002 #	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Isophorone		50 #	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-Nitrosodipropylamine		NC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-Nitrosodiphenylamine(1)		50 #	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene		NC	10 U	10 U	10 U	10 U	10 U	69 J	10 U	67	10 U
Nitrobenzene		0.4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Pentachlorophenol		1	25 UJ	25 UJ	25 UJ	25 UJ	25 U	25 UJ	25 UJ	25 U	25 UJ
Phenanthrene		50 #	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Phenol		1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Pyrene		50 #	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bis (2-chloroethoxy) methane		5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bis (2-chloroethyl) ether		1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-ethylhexyl)phthalate		5	10 U	28 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Total SVOCs		NC	—	—	—	—	—	95	—	113	—

NOTES: U - Not detected, J - Estimated value, — Not analyzed, ND = Nondetect.
NC - No GA Standard, [ ] - Exceeds GA Standard, # - Guidelines per TOGS.
** - Carcinogenic PAH

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Table 16
Gabreski Airport
Ground Water Samples
Semivolatile Organic Compound Data

Compound	Sample ID / Sample Depth / Sample Date / Units / Matrix	NYS Class GA Standards (6/98)	PZ-08 09/25/02 ug/L WATER	PZ-17 09/25/02 ug/L WATER
1,1-Biphenyl		5	5 J	1 J
2,2-oxybis(1-Chloropropane)		5	10 U	10 U
2,4,5-Trichlorophenol		NC	25 U	25 U
2,4,6-Trichlorophenol		NC	10 U	10 U
2,4-Dichlorophenol		1	10 U	10 U
2,4-Dimethylphenol		1	10 U	10 U
2,4-Dinitrophenol		1	25 U	25 U
2,4-Dinitrotoluene		5	10 U	10 U
2,6-Dinitrotoluene		5	10 U	10 U
2-Chloronaphthalene		NC	10 U	10 U
2-Chlorophenol		NC	10 U	10 U
2-Methylnaphthalene		NC	75	7 J
2-Methylphenol		NC	10 U	10 U
2-Nitroaniline		5	25 U	25 U
2-Nitrophenol		NC	10 U	10 U
3,3-Dichlorobenzidine		5	10 U	10 U
3-Nitroaniline		5	25 U	25 U
4,6-Dinitro-2-methylphenol		NC	25 U	25 U
4-Bromophenyl-phenylether		NC	10 U	10 U
4-Chloro-3-methylphenol		NC	10 U	10 U
4-Chloroaniline		5	10 U	10 U
4-Chlorophenyl-phenylether		NC	10 U	10 U
4-Methylphenol		NC	6 J	10 U
4-Nitroaniline		5	25 U	25 U
4-Nitrophenol		NC	25 U	25 U
Acenaphthene		NC	10 U	10 U
Acenaphthylene		NC	10 U	10 U
Acetophenone		NC	10 U	10 U
Anthracene		50 #	10 U	10 U
Atrazine		NC	10 U	10 U
Benzaldehyde		NC	10 U	10 U
Benzo(a)anthracene		0.002 #	10 U	10 U
Benzo(a)pyrene		NC **	10 U	10 U
Benzo(b)fluoranthene		0.002 #	10 U	10 U
Benzo(ghi)perylene		NC	10 U	10 U

NOTES: U - Not detected, J - Estimated value, — Not analyzed, ND = Nondetect.
NC - No GA Standard, [ ] - Exceeds GA Standard, # - Guidelines per TOGS.
** - Carcinogenic PAH

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Table 16
Gabreski Airport
Ground Water Samples
Semivolatile Organic Compound Data

Compound	Sample ID / Sample Depth / Sample Date / Units / Matrix	NYS Class GA Standards (6/98) ug/L	PZ-08 09/25/02 ug/L WATER	PZ-17 09/25/02 ug/L WATER
Benzo(k)fluoranthene		0.002 #	10 U	10 U
Butyl benzyl phthalate		50 #	10 U	10 U
Caprolactam		NC	10 U	10 U
Carbazole		NC	10 U	10 U
Chrysene		NC **	10 U	10 U
Di-n-butyl phthalate		50	10 U	10 U
Di-n-octyl phthalate		50 #	10 U	10 U
Dibenzo(a,h)anthracene		NC **	10 U	10 U
Dibenzofuran		NC	10 U	10 U
Diethyl phthalate		50 #	10 U	10 U
Dimethyl phthalate		50 #	10 U	10 U
Fluoranthene		50 #	10 U	10 U
Fluorene		50 #	10 U	10 U
Hexachlorobenzene		0.04	10 U	10 U
Hexachlorobutadiene		0.5	10 U	10 U
Hexachlorocyclopentadiene		5	10 U	10 U
Hexachloroethane		5	10 U	10 U
Indeno(1,2,3-cd)pyrene		0.002 #	10 U	10 U
Isophorone		50 #	10 U	10 U
N-Nitrosodipropylamine		NC	10 U	10 U
N-Nitrosodiphenylamine(1)		50 #	10 U	10 U
Naphthalene		NC	180	5 J
Nitrobenzene		0.4	10 U	10 U
Pentachlorophenol		1	25 U	25 U
Phenanthrene		50 #	10 U	10 U
Phenol		1	10 U	10 U
Pyrene		50 #	10 U	10 U
Bis (2-chloroethoxy) methane		5	10 U	10 U
Bis (2-chloroethyl) ether		1	10 U	10 U
Bis(2-ethylhexyl)phthalate		5	10 U	10 U
Total SVOCs		NC	266	13

NOTES: U - Not detected, J - Estimated value, — Not analyzed, ND = Nondetect.
NC - No GA Standard, [ ] - Exceeds GA Standard, # - Guidelines per TOGS.
** - Carcinogenic PAH

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Table 17
Gabreski Airport
Ground Water Samples
Pesticide/PCB Data

Compound	Sample ID / Sample Depth / Sample Date / Units / Matrix	NYS Class GA Standards (6/98)	ERM-01 07/08/02 ug/L WATER	ERM-04 07/09/02 ug/L WATER	ERM-05 07/10/02 ug/L WATER	ERM-06 07/10/02 ug/L WATER	ERM-07 07/10/02 ug/L WATER
4,4-DDD		0.3	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4-DDE		0.2	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4-DDT		0.2	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Aldrin		ND	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor 1016		0.09**	1 U	1 U	1 U	1 U	1 U
Aroclor 1221		0.09**	2 U	2 U	2 U	2 U	2 U
Aroclor 1232		0.09**	1 U	1 U	1 U	1 U	1 U
Aroclor 1242		0.09**	1 U	1 U	1 U	1 U	1 U
Aroclor 1248		0.09**	1 U	1 U	1 U	1 U	1 U
Aroclor 1254		0.09**	1 U	1 U	1 U	1 U	1 U
Aroclor 1260		0.09**	1 U	1 U	1 U	1 U	1 U
Dieldrin		0.004	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Endosulfan I		NC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Endosulfan II		NC	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Endosulfan sulfate		NC	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Endrin		ND	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Endrin aldehyde		5	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Endrin ketone		5	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Heptachlor		0.04	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Heptachlor epoxide		0.03	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methoxychlor		35	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toxaphene		0.06	5 U	5 U	5 U	5 U	5 U
alpha-BHC		0.01	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
alpha-Chlordane		0.05	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
beta-BHC		0.04	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
delta-BHC		0.04	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
gamma-BHC (Lindane)		0.05	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
gamma-Chlordane		0.05	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

NOTES: U - Not detected, J - Estimated value, -- Not analyzed, ND = Nondetect.
NC - No GA Standard, [ ] - Exceeds GA Standard, # - Guidelines per TOGS.
** - For total PCBs.

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Table 18
Gabreski Airport
Ground Water Samples
Inorganic Data

Compound	Sample ID / Sample Depth / Sample Date / Units / Matrix	NYS Class GA Standards (6/98)	ERM-01	ERM-02	ERM-03	ERM-04	ERM-05	ERM-06	ERM-07	ERM-07	PZ-08
			07/08/02	07/09/02	07/09/02	07/09/02	07/10/02	07/10/02	09/25/02	07/10/02	09/25/02
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
			WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Aluminum		NC	76.6 U	69.2	91.6	37.3	109 U	235 U	55 U	53 U	55 U
Antimony		3	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Arsenic		25	3 U	3 U	3 U	3 U	3 U	3 U	3.4	3 U	4.1
Barium		1000	38.7 J	35 UJ	14.1 UJ	26 UJ	56.9 J	25.7 J	41.3 J	35 J	40 J
Beryllium		3 #	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium		5	0.3 U	0.3 U	0.3 U	0.3 U	0.47	0.3 U	0.44 U	0.3 U	0.31 U
Calcium		NC	24800	10800	8810	12400	31600	10700	20900	20600	22600
Chromium		50	3.6	3.4	1.5	3	12	8.8	3	0.6 U	2.3
Cobalt		NC	3.2 U	4.4	3.7	0.84 U	0.62 U	1.5 U	1.7 U	0.97 U	0.7 U
Copper		200	6.6 U	0.9 U	4.4 U	1.3 U	3.9 U	2.6 U	4.6 U	0.9 U	2.6 U
Cyanide		200	2 U	2 U	2 U	2 U	2 UJ	2 U	—	2 U	—
Iron		300	85.6 U	72.3 U	94.5 U	44.6 U	86.4 U	195 U	[6620]	[6710]	[10300]
Lead		25	2 U	2 U	2 U	2 U	2 U	2 U	3 U	2 U	10.8
Magnesium		NC	5370	3040	1420	3150	3460	2110	4460	5030	9180
Manganese		300	8.6	8.2	9.4	8.4	12.1	34	76.8	52.2	32.6
Mercury		0.7	0.13 U	0.14 U	0.13 U	0.13 U	0.052 U	0.052 U	0.13 U	0.051 U	0.13 U
Nickel		100	4.3 U	1.5	2.6	1.4	2.8 U	3.9 U	3.2 U	0.9 U	1.7 U
Potassium		NC	2490	5960	1890	12700	24800	26700	1920	1790	859
Selenium		10	4.6 J	4 U	4 U	4 U	4 U	4	5 U	5.8	6.9
Silver		50	0.7 UJ	0.7 UJ	0.7 UJ	0.7 UJ	0.7 UJ	0.7 UJ	2 U	0.7 UJ	2 U
Sodium		20000	[48900]	[34300]	[34400]	18200	[63100]	15300	[58600]	[46900]	4560
Thallium		0.5 #	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Vanadium		NC	2.5 U	0.98	4.6	0.97	1.5 U	2.1 U	3.3	2.5 U	4.3
Zinc		NC	7.6 UJ	5.5 UJ	12.1 UJ	2.4 UJ	6.2 UJ	23.4 J	15.6	2 U	6 U

NOTES: U - Not detected, J - Estimated value, --- Not analyzed, ND = Nondetect.
NC - No GA Standard, [ ] - Exceeds GA Standard, # - Guidelines per TOGS.

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Table 18
Gabreski Airport
Ground Water Samples
Inorganic Data

Compound	Sample ID	NYS Class GA Standards (6/98)	PZ-17
	Sample Depth		
	Sample Date		09/25/02
	Units	ug/L	ug/L
	Matrix		WATER
Aluminum		NC	55 U
Antimony		3	3 U
Arsenic		25	3.6
Barium		1000	21.5 UJ
Beryllium		3 #	0.2 U
Cadmium		5	0.43 U
Calcium		NC	18600
Chromium		50	3.5
Cobalt		NC	2.3 U
Copper		200	2 U
Cyanide		200	---
Iron		300	[6890]
Lead		25	17.4
Magnesium		NC	6940
Manganese		300	58.6
Mercury		0.7	0.14 U
Nickel		100	2.3 U
Potassium		NC	507
Selenium		10	5 U
Silver		50	2 U
Sodium		20000	5500
Thallium		0.5 #	3 U
Vanadium		NC	4.5
Zinc		NC	4.8 U

NOTES: U - Not detected, J - Estimated value, --- Not analyzed, ND = Nondetect.
NC - No GA Standard, [ ] - Exceeds GA Standard, # - Guidelines per TOGS.

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Table 19
Gabreski Airport
Ground Water Samples
Other Data

Compound	Sample ID / Sample Depth / Sample Date / Units / Matrix	NYS Class GA Standards (6/98)	ERM-01 07/08/02 WATER	ERM-06 07/10/02 WATER	ERM-07 09/25/02 WATER	ERM-07 07/10/02 WATER	PZ-08 09/25/02 WATER	PZ-17 09/25/02 WATER
Ammonia (as N) (mg/L)		NC	0.2 J	0.3	0.88	0.4	1.3	0.95
Nitrate (as N) (mg/L)		NC	4.3	5.9	---	1.3	---	---
Nitrate plus Nitrite (mg/L)		NC	---	---	2	---	0.25 U	0.25 U
Phosphate (mg/L)		NC	0.26	0.36	0.12 U	0.09	0.069	0.06 U
TKN (mg/L)		NC	1 U	1 U	1.1	1 U	1.4	1 U

NOTES: U - Not detected, J - Estimated value, --- Not analyzed, ND = Nondetect.
NC - No GA Standard, [ ] - Exceeds GA Standard, # - Guidelines per TOGS.

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TABLE 20
NATURAL ATTENUATION
PARAMETERS
FRANCIS S. GABRESKI AIRPORT
WESTHAMPTON, NEW YORK

NATURAL ATTENUATION PARAMETER	*Units*	*Location*	Device	ERM-01 7/8/02	ERM-02 7/9/02	ERM-03 7/9/02	ERM-04 7/9/02	ERM-05 7/10/02	ERM-05 9/25/02	ERM-06 7/10/02	ERM-07 7/10/02	ERM-07 9/25/02	PZ-08 9/25/02	PZ-17 9/25/02
Dissolved Oxygen	mg/L	Field	Meter	6.72	7.86	7.23	8.68	7.23	8.74	6.86	1.67	2.87	6.37	3.91
Specific Conductance	mS/cm	Field	Meter	0.366	0.243	0.214	0.195	0.546	0.61	0.204	0.364	0.412	0.208	0.164
pH	Standard Units	Field	Meter	5.37	4.93	5.22	5.43	5.41	5.92	5.62	6.2	5.93	5.89	5.72
Temperature	°C	Field	Meter	18.95	16.12	16.87	17.12	19.56	20.4	17.94	17.06	19.8	14.69	17.76
Ferrous Iron	mg/L	Field	Test Kit	1.7	0.3	0.4	0.6	0.2	NA	0.7	14	5	5	5
Ferric Iron	mg/L	Calculation[1]	-	NC	NC	NC	NC	NC	NC	NC	NC	1.62	5.3	1.89
Total Iron	mg/L	Laboratory	-	<0.085	<0.072	<0.094	<0.045	<0.086	NA	<0.195	6.71	6.62	10.3	6.89
Nitrate	mg/L	Laboratory	-	4.3	NA	NA	NA	NA	NA	5.9	1.3	2	<0.25	<0.25
Total Kjeldahl Nitrogen (TKN)	mg/L	Laboratory	-	<1	NA	NA	NA	NA	NA	<1	<1	1.1	1.4	<1.0
Total Organic Nitrogen	mg/L	Calculation[1]	-	NC	NA	NA	NA	NA	NA	NC	NC	0.22	0.1	NC
Ammonia	mg/L	Laboratory	-	0.2	NA	NA	NA	NA	NA	0.3	0.4	0.88	1.3	0.95
Phosphate	mg/L	Laboratory	-	0.26	NA	NA	NA	NA	NA	0.36	0.09	<0.12	0.069	<0.06
ORP	mV	Field	Meter	210	213	215	203	188	145	187	-34	-119	-212	-221

Notes:

1. Ferric Iron = Total Iron - Ferrous Iron; Total Organic Nitrogen = Total Kjeldahl Nitrogen - Ammonia

NA = Not Analyzed

NC = Not Calculated

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Table 21

Gabreski Airport
Surface Soil Samples
Maximum and Minimum Detected Concentrations

Parameter	NYSDEC TAGM Values	Average Eastern U.S. Background Concentrations	# of Samples/ # of Detects	Minimum Detected Concentration	Maximum Detected Concentration
INORGANICS (mg/Kg)					
Aluminum	SB	33000	6/6	993	3450
Antimony	SB	NC	6/2	0.83	0.89
Arsenic	7.5	5	6/6	0.63	1.6
Barium	300	290	6/5	3.8	14.9
Beryllium	0.16	0.6	6/3	0.041	0.062
Cadmium	1*	0.2	6/3	0.063	0.37
Calcium	SB	3400	6/5	99	2440
Chromium	10*	33	6/6	2.7	13.3
Copper	25	13	6/1	5.3	5.3
Iron	2000	14000	6/6	1340	3660
Lead	SB	14	6/6	2.7	81.2
Magnesium	SB	2300	6/5	105	1550
Manganese	SB	285	6/6	7.8	43.9
Mercury	0.1	0.81	6/1	0.12	0.12
Nickel	13	12	6/2	1.6	1.6
Selenium	2	0.3	6/2	0.83	0.97
Silver	SB	NC	6/1	6.5	6.5
Thallium	SB	NC	6/1	0.46	0.46
Vanadium	150	43	6/6	3.8	8.4
Zinc	20	40	6/4	13.3	37.8
POLYCHLORINATED BIPHENYLS (mg/Kg)					
SEMIVOLATILE ORGANIC COMPOUNDS (mg/Kg)					
VOLATILE ORGANIC COMPOUNDS (mg/Kg)					
PESTICIDES (mg/Kg)					
4,4-DDD	2.9	NC	10/4	0.02200	0.17000
4,4-DDE	2.1	NC	10/6	0.00360	0.05200
4,4-DDT	2.1	NC	10/8	0.00610	0.18000
alpha-BHC	0.11	NC	10/1	0.00190	0.00190
alpha-Chlordane	NC	NC	10/6	0.00560	0.07100
beta-BHC	0.2	NC	10/2	0.00200	0.03700
Dieldrin	0.044	NC	10/1	0.01100	0.01100
Endrin aldehyde	NC	NC	10/1	0.01700	0.01700
Endrin ketone	NC	NC	10/1	0.00980	0.00980
Endosulfan sulfate	I	NC	10/3	0.01300	0.05500
gamma-Chlordane	0.54	NC	10/6	0.00440	0.03600

NOTES: * - 1 mg/Kg for surface soil, 10 mg/Kg for subsurface soil.
** - Indicates carcinogenic PAHs.
SB - site background.
NC - no criteria.

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Table 21

Gabreski Airport
Subsurface Soil Samples
Maximum and Minimum Detected Concentrations

Parameter	NYSDEC TAGM Values	Average Eastern U.S. Background Concentrations	# of Samples/ # of Detects	Minimum Detected Concentration	Maximum Detected Concentration
INORGANICS (mg/Kg)					
Aluminum	SB	33000	20/20	186	10500
Antimony	SB	NC	20/2	0.76	1
Arsenic	7.5	5	20/4	0.47	9.4
Barium	300	290	20/4	6.3	62.6
Beryllium	0.16	0.6	20/5	0.04	0.26
Cadmium	1*	0.2	20/3	0.31	1.8
Calcium	SB	3400	20/5	197	1730
Chromium	10*	33	20/18	0.52	39.6
Cobalt	30	5.9	20/3	1.6	3.9
Copper	25	13	20/3	4.9	177
Cyanide	NC	NC	19/3	0.13	0.4
Iron	2000	14000	20/20	279	23000
Lead	SB	14	20/16	0.54	79.3
Magnesium	SB	2300	20/16	33.3	1170
Manganese	SB	285	20/17	2.9	124
Mercury	0.1	0.81	20/10	0.053	0.9
Nickel	13	12	20/3	4.2	16
Potassium	SB	12000	20/2	131	250
Selenium	2	0.3	20/5	0.44	5.5
Silver	SB	NC	20/2	0.63	1.1
Thallium	SB	NC	20/1	0.63	0.63
Vanadium	150	43	20/17	0.7	25.9
Zinc	20	40	20/3	20.8	391
POLYCHLORINATED BIPHENYLS (mg/Kg)					
SEMIVOLATILE ORGANIC COMPOUNDS (mg/Kg)					
1,1-Biphenyl	NC	NC	22/1	0.86000	0.86000
2-Methylnaphthalene	36.4	NC	22/1	5.90000	5.90000
Acenaphthene	50	NC	22/1	0.69000	0.69000
Anthracene	50	NC	22/1	1.60000	1.60000
Benzo(a)anthracene	0.224**	NC	22/1	5.70000	5.70000
Benzo(a)pyrene	0.061**	NC	22/1	5.60000	5.60000
Benzo(b)fluoranthene	1.1	NC	22/1	6.90000	6.90000
Benzo(ghi)perylene	50	NC	22/1	2.30000	2.30000
Benzo(k)fluoranthene	1.1**	NC	22/1	2.90000	2.90000
Bis(2-ethylhexyl)phthalate	50	NC	22/1	0.05600	0.05600
Carbazole	NC	NC	22/1	0.72000	0.72000
Chrysene	0.4**	NC	22/1	5.70000	5.70000
Dibenzo(a,h)anthracene	0.014**	NC	22/1	0.65000	0.65000
Dibenzofuran	6.2	NC	22/2	0.16000	0.21000
Fluoranthene	50	NC	22/1	12.00000	12.00000
Fluorene	50	NC	22/2	0.32000	0.52000
Indeno(1,2,3-cd)pyrene	3.2**	NC	22/1	2.70000	2.70000
Naphthalene	13	NC	22/1	0.06700	0.06700
Phenanthrene	50	NC	22/3	0.05800	6.50000
Pyrene	50	NC	22/1	11.00000	11.00000
VOLATILE ORGANIC COMPOUNDS (mg/Kg)					
1,1,1-Trichloroethane	0.8	NC	31/1	0.00100	0.00100
1,2-Dibromo-3-chloropropane	NC	NC	31/9	0.01000	0.01100
Acetone	0.2	NC	31/1	0.03100	0.03100
Ethylbenzene	5.5	NC	31/1	0.09700	0.09700
Isopropylbenzene	NC	NC	31/1	0.05000	0.05000
Methyl acetate	NC	NC	31/1	0.00800	0.00800
Methyl tert butyl ether	NC	NC	31/6	0.00100	0.01200
Methylcyclohexane	NC	NC	31/1	0.20000	0.20000
Toluene	1.5	NC	31/4	0.00100	0.00700
Xylene (total)	1.2	NC	31/3	0.00100	0.42000

NOTES: * - 1 mg/Kg for surface soil, 10 mg/Kg for subsurface soil.
** - Indicates carcinogenic PAHs.
SB - site background.
NC - no criteria.

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O'BRIEN & GERE ENGINEERS, INC.

Table 21

Gabreski Airport
Subsurface Soil Samples
Maximum and Minimum Detected Concentrations

Parameter	NYSDEC TAGM Values	Average Eastern U.S. Background Concentrations	# of Samples/ # of Detects	Minimum Detected Concentration	Maximum Detected Concentration
PESTICIDES (mg/Kg)					
4,4-DDD	2.9	NC	9/1	0.03700	0.03700
4,4-DDE	2.1	NC	9/2	0.00500	0.05900
4,4-DDT	2.1	NC	9/3	0.00720	0.13000
alpha-Chlordane	NC	NC	9/2	0.01100	0.07400
Endosulfan sulfate	1	NC	9/2	0.02900	0.72000
gamma-Chlordane	0.54	NC	9/1	0.05400	0.05400

NOTES: * - 1 mg/Kg for surface soil, 10 mg/Kg for subsurface soil.
** - Indicates carcinogenic PAHs.
SB - site background.
NC - no criteria.

O'BRIEN & GERE ENGINEERS, INC.

Table 21

Gabreski Airport
Ground Water Samples
Maximum and Minimum Detected Concentrations

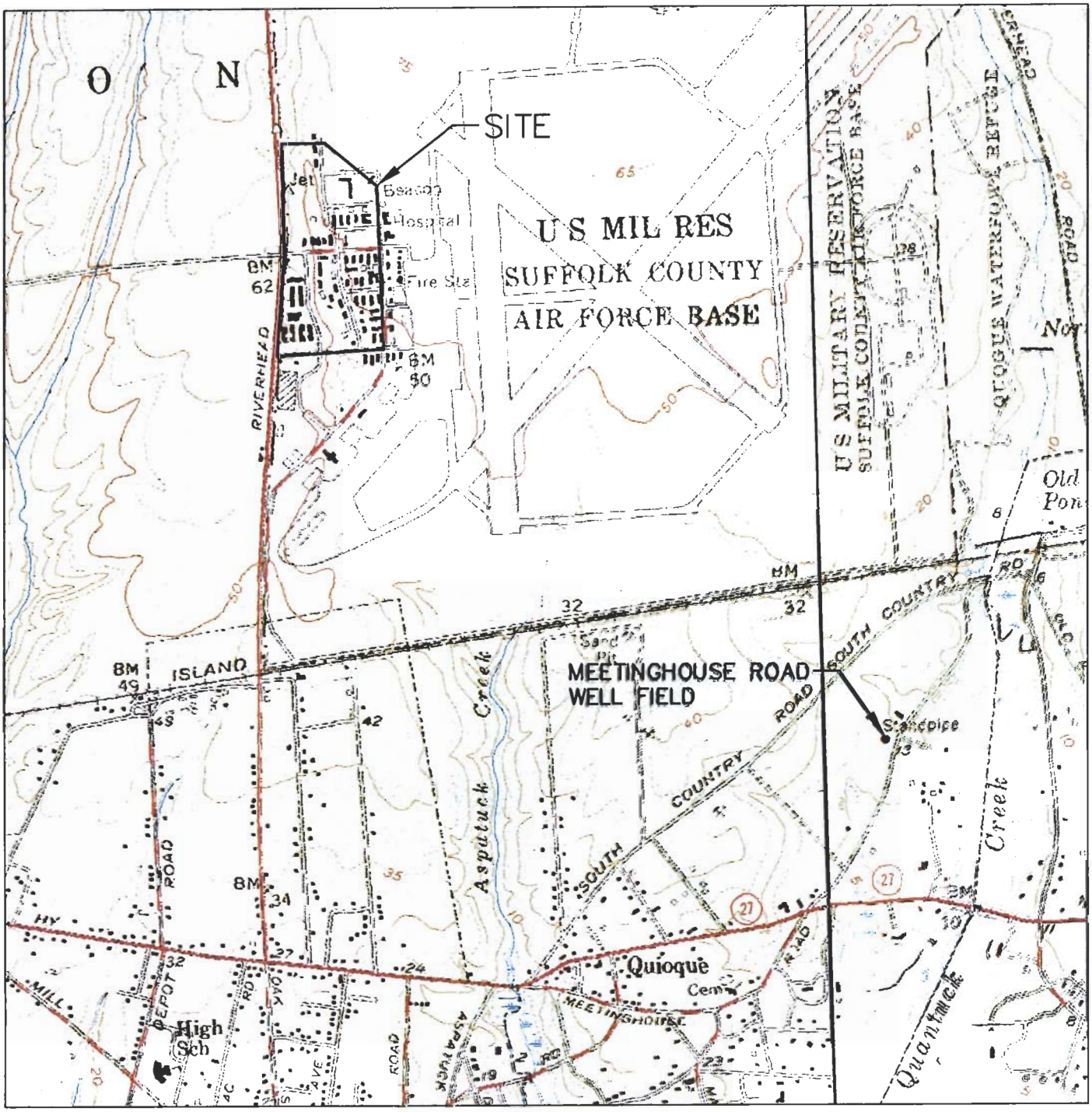
Parameter	NY State Class GA Standards	Average Eastern U.S. Background Concentrations	# of Samples/ # of Detects	Minimum Detected Concentration	Maximum Detected Concentration
INORGANICS (ug/L)					
Aluminum	NC	NC	10/3	37.3	91.6
Arsenic	25	NC	10/3	3.4	4.1
Barium	1000	NC	10/6	25.7	56.9
Cadmium	5	NC	10/1	0.47	0.47
Calcium	NC	NC	10/10	8810	31600
Chromium	50	NC	10/9	1.5	12
Cobalt	NC	NC	10/2	3.7	4.4
Iron	300	NC	10/4	6620	10300
Lead	25	NC	10/2	10.8	17.4
Magnesium	NC	NC	10/10	1420	9180
Manganese	300	NC	10/10	8.2	76.8
Nickel	100	NC	10/3	1.4	2.6
Potassium	NC	NC	10/10	507	26700
Selenium	10	NC	10/4	4	6.9
Sodium	20000	NC	10/10	4560	63100
Vanadium	NC	NC	10/6	0.97	4.6
Zinc	NC	NC	10/2	15.6	23.4
SEMIVOLATILE ORGANIC COMPOUNDS (ug/L)					
1,1-Biphenyl	5	NC	11/4	1	5
1,1,1-Trichloroethane	5	NC	10/1	1	1
2-Methylnaphthalene	NC	NC	11/4	7	75
2-Methylphenol	NC	NC	11/1	14	14
4-Methylphenol	NC	NC	11/2	3	6
Acenaphthene	NC	NC	11/1	1	1
Naphthalene	NC	NC	11/4	5	180
Acetone	NC	NC	10/2	22	25
Benzene	1	NC	10/1	1	1
Cyclohexane	NC	NC	10/4	42	110
Ethylbenzene	5	NC	10/4	25	590
Isopropylbenzene	5	NC	10/4	28	100
Methylcyclohexane	NC	NC	10/4	73	220
Tetrachloroethene	5	NC	10/1	2	2
Toluene	5	NC	10/2	260	600
Trichloroethene	5	NC	10/1	1	1
Xylene (total)	5	NC	10/4	95	3300

NOTES: ** - Indicates carcinogenic PAHs.
NC - no criteria.

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DBF File: Q:\10569_UNIONSHP\25466\GABRESKIAIRPORT\TEMPDATA.DBF
File Number: 10569.25466

FIGURES

FIGURE 1



AIRPORT DEVELOPMENT DISTRICT
FRANCIS S. GABRESKI AIRPORT
WESTHAMPTON, NEW YORK

SITE LOCATION MAP

STATE LOCATION MAP

FILE NO. 10569.25466.004
DATE: JANUARY 2002

1"=800' 800 0 800

O'BRIEN & GERE ENGINEERS INC.

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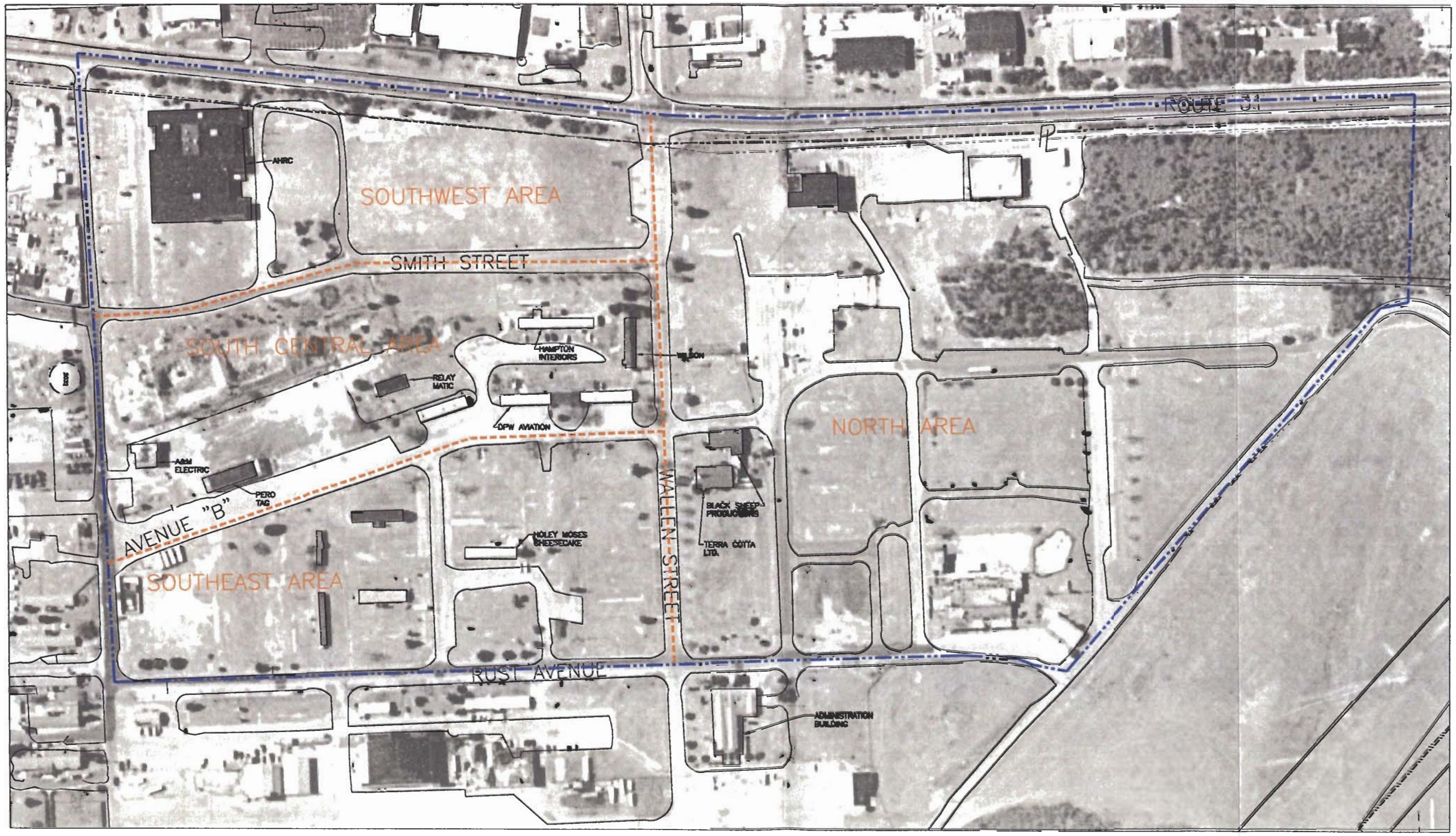


FIGURE 2

LEGEND

APPROXIMATE LIMITS OF AIRPORT DEVELOPMENT DISTRICT

AREA BOUNDARY

EMPIRE STATE DEVELOPMENT

AIRPORT DEVELOPMENT DISTRICT
FRANCIS S. GABRESKI AIRPORT
WESTHAMPTON, NEW YORK

SITE MAP

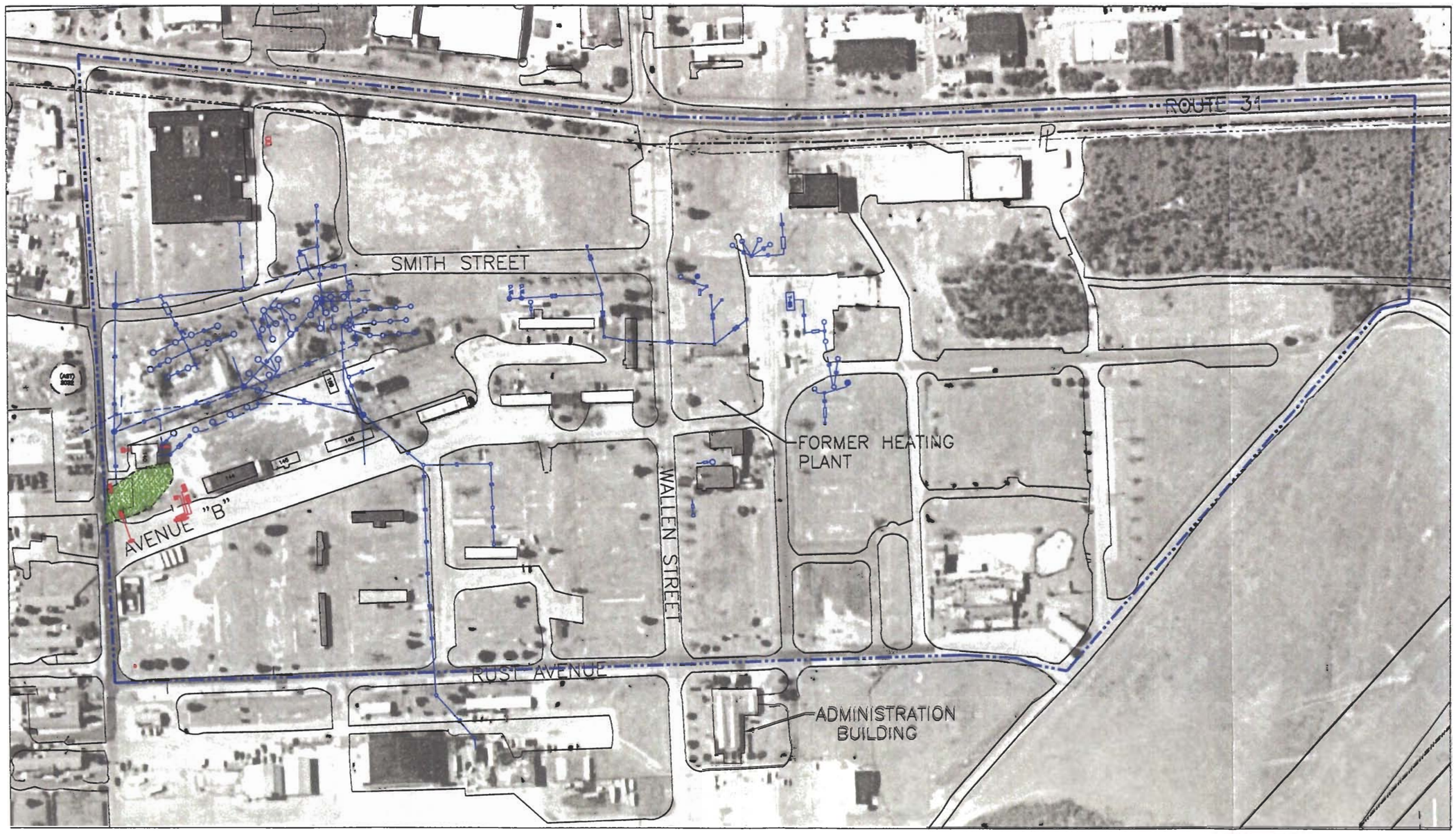
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FILE NO. 10569.25466.022
MAY 2003

O'BRIEN & GERE ENGINEERS, INC.

PLOT DATE: 9/24/03

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BUILDING HISTORIC USE

140(32)– VEHICLE REPAIR
144(40)– VEHICLE MAINTENANCE
146(41)– PHOTOTECH
148(42)– ARMAMENT & ELECTRONICS HANGAR

FIGURE 3

LEGEND

- STORM DRAIN
- SANITARY LINE
- CESSPOOL
- PETROLEUM STORAGE TANKS
- APPROXIMATE LOCATION OF VOC PLUME
- APPROXIMATE LIMITS OF AIRPORT DEVELOPMENT DISTRICT

EMPIRE STATE DEVELOPMENT

AIRPORT DEVELOPMENT DISTRICT
FRANCIS S. GABRESKI AIRPORT
WESTHAMPTON, NEW YORK

HISTORIC SITE FEATURES

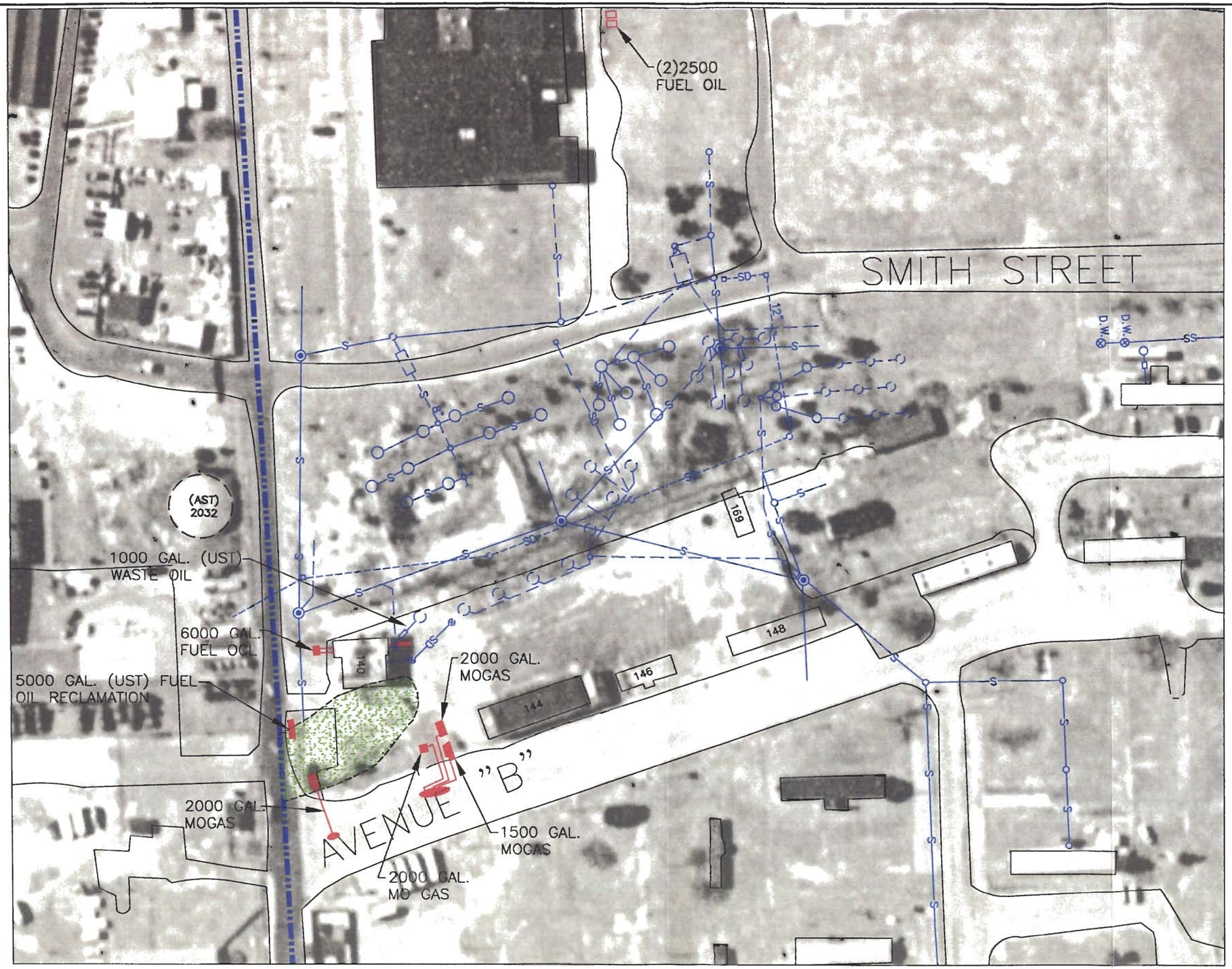
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MAY 2003

O'BRIEN & GERE ENGINEERS, INC.

PLOT DATE: 10/22/03

PATH: I:\DWGS\PROJECTS\10569\25466\DWGS\026.DWG SF-100



BUILDING HISTORIC USE

140(32)– VEHICLE REPAIR
144(40)– VEHICLE MAINTENANCE
146(41)– PHOTOTECH
148(42)– ARMAMENT & ELECTRONICS HANGAR

FIGURE 4

LEGEND

- STORM DRAIN
- SANITARY LINE
- CESSPOOL
- PETROLEUM STORAGE TANKS
- APPROXIMATE LOCATION OF LNAPL VOC PLUME
- APPROXIMATE LIMITS OF AIRPORT DEVELOPMENT DISTRICT

EMPIRE STATE DEVELOPMENT

AIRPORT DEVELOPMENT DISTRICT
FRANCIS S. GABRESKI AIRPORT
WESTHAMPTON, NEW YORK

SOUTHERN AREA HISTORIC FEATURES

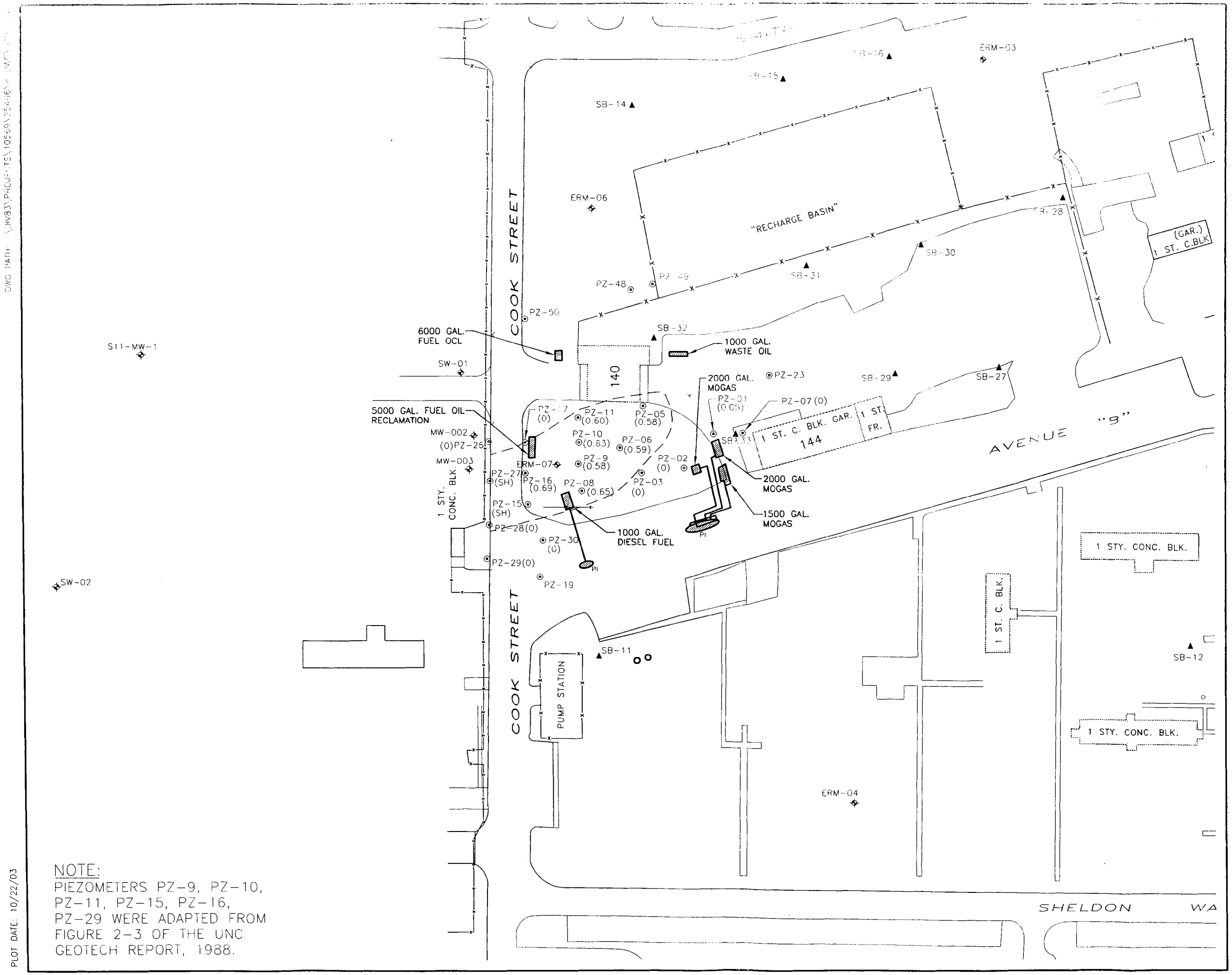
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APPROXIMATE SCALE

FILE NO. 10569.25466.026
SEPTEMBER 2003

O'BRIEN & GERE ENGINEERS, INC.

PLOT DATE: 10/22/03

FIGURE 5



NOTE:
PIEZOMETERS PZ-9, PZ-10, PZ-11, PZ-15, PZ-16, PZ-29 WERE ADAPTED FROM FIGURE 2-3 OF THE UNC GEOTECH REPORT, 1988.

LEGEND

TP-01	TEXT PIT LOCATION
SB-02	SOIL BORING LOCATION
ERM-03	MONITORING WELL LOCATION
PZ-26	PIEZOMETER LOCATION
SH	SHEEN
(0.16 FT.)	RECORDED THICKNESS ON JULY 27 1986 AT PIEZOMETER LOCATION
	EXTENT OF FREE PRODUCT(DASHED WHERE INFERRED)
	APPROXIMATE LOCATION OF PETROLEUM STORAGE TANKS
PI	PUMP ISLAND

AIRPORT DEVELOPMENT DISTRICT
FRANCIS S. GABRESKI AIRPORT
WESHAMPTON, N.Y.

1986 EXTENT OF LNAPL

1"=80' 80 0 80

FILE NO. 10569.25466.019
MAY 2003

O'BRIEN & GERE ENGINEERS INC.

PLOT DATE: 10/22/03

SYSTEM	SERIES	GEOLOGIC UNIT		PRINCIPLE LITHOLOGY	HYDROGEOLOGIC UNIT
QUATERNARY	HOLOCENE	UNNAMED SURFICIAL DEPOSITS		SAND, SILT, CLAY, ORGANIC MUD AND SHELLS	CONFINING UNIT IN SOME AREAS. BEACH SANDS LOCALLY YIELD WATER
	PLEISTOCENE	UNNAMED PLEISTOCENE DEPOSITS		TILL, OUTWASH, AND GLACIAL LAKE DEPOSITS. CLAY, SAND, GRAVEL, AND BOULDERS. EXTENSIVE MARINE CLAY IN QUEENS AND SOUTHERN NASSAU COUNTIES	UPPER GLACIAL AQUIFER
		GARDINERS CLAY		MARINE CLAY AND SILT	GARDINERS CONFINING UNIT
		JAMECO GRAVEL		FINE SAND AND GRAVEL WITH SOME LENSES OF CLAY AND SILT	JAMECO AQUIFER
CRETACEOUS	UPPER	MONMOUTH GROUP		CLAYEY GLAUCONITIC SAND	MONMOUTH GREENSAND CONFINING UNIT
		MAGOTHY FORMATION		FINE TO MEDIUM QUARTZOSE SAND WITH INTERBEDDED CLAY, SILT, AND COARSE SAND AND GRAVEL	MAGOTHY AQUIFER
		RARITAN FORMATION	UNNAMED CLAY MEMBER	SILTY CLAY WITH A FEW LENSES OF SAND AND LIGNITE	RARITAN CONFINING UNIT
			LLOYD SAND MEMBER	FINE TO COARSE SAND WITH SOME GRAVEL, COMMONLY WITH A CLAYEY MATRIX	LLOYD AQUIFER
PRECAMBRIAN		UNDIFFERENTIATED BEDROCK		METAMORPHIC ROCKS AND GRANITE	BEDROCK CONFINING UNIT

SURFICIAL AQUIFER SYSTEM

NORTHERN ATLANTIC COASTAL PLAIN AQUIFER SYSTEM

MODIFIED REILLY, T.E., BUXTON, H.T., FRANKE, O.L., AND WAIT, R.L., 1983, GEOHYDROGEOLOGY, MODELING STRATEGY, AND REGIONAL EVOLUTION, PT. 1 OF EFFECTS OF SANITARY SEWERS ON GROUND-WATER LEVELS AND STREAMS IN NASSAU AND SUFFOLK COUNTIES, NEW YORK: U.S. GELOGICAL SURVEY WATER-RESOURCES INVESTIGATIONS REPORT 82-4045, 45P.

AIRPORT DEVELOPMENT DISTRICT
FRANCIS S. GABRESKI AIRPORT
WESTHAMPTON, N.Y.

GEOLOGIC/HYDROGEOLOGIC COLUMN

10569.25466.021
MAY 2002

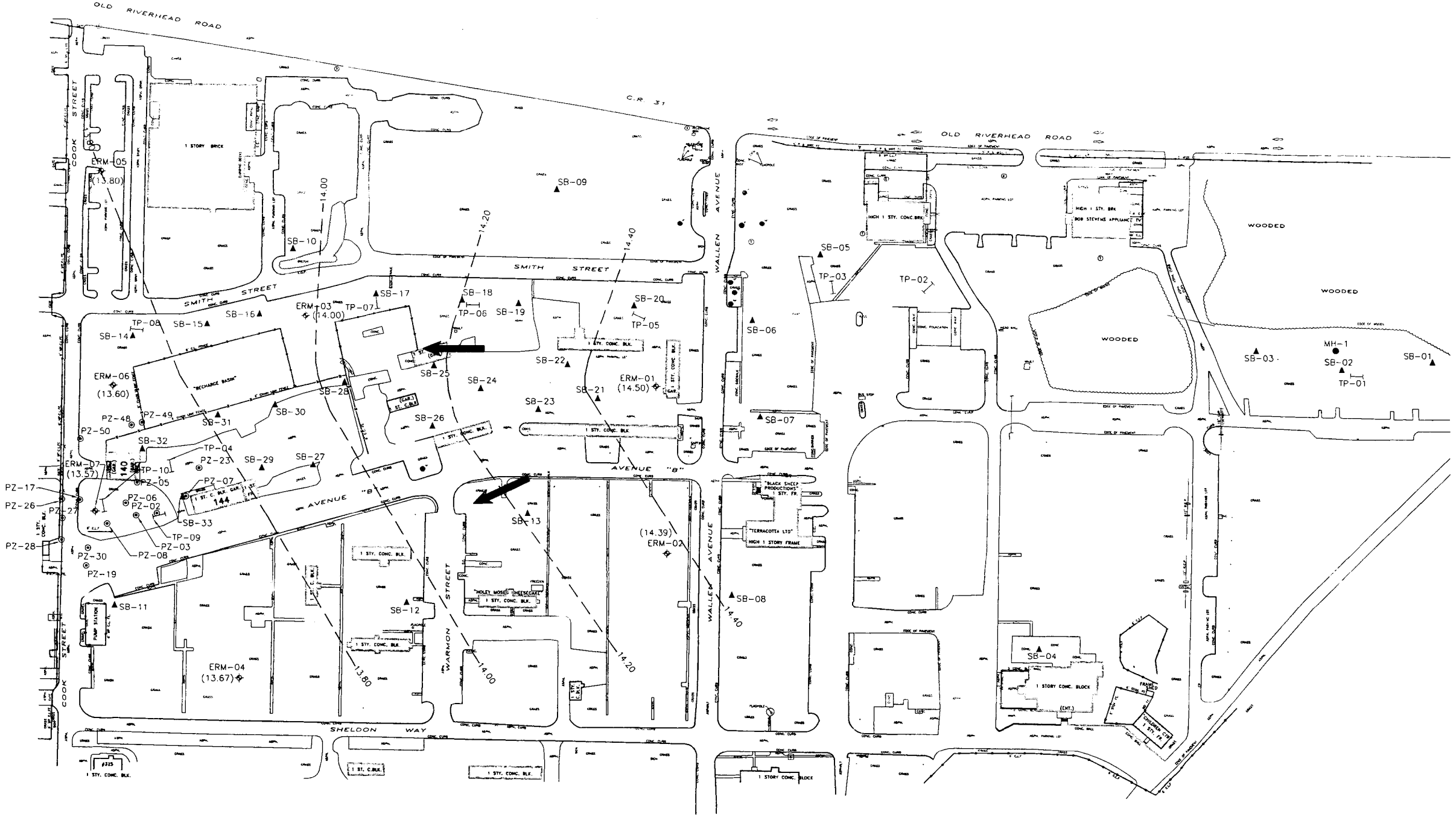
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DWG PATH: I:\DIV83\PROJECTS\10569\25466



FIGURE 9



LEGEND

- TP-01 — TEXT PIT LOCATION
- SB-02 — SOIL BORING LOCATION
- ERM-03 — MONITORING WELL LOCATION
- (14.39) — GROUND WATER ELEVATION (FT.)
- 14.40 — GROUND WATER ELEVATION CONTOUR (FT.)(DASHED WHERE INFERRED)
- FLOW DIRECTION

AIR DEVELOPMENT DISTRICT
FRANCIS S. GABRESKI AIRPORT
WEST HAMPTON, NEW YORK

GROUND WATER FLOW MAP (9/24/02)

1"=200' 200 0 200

NOTE:
MH-1 LOCATION ADAPTED FROM ERM FIELD NOTES.

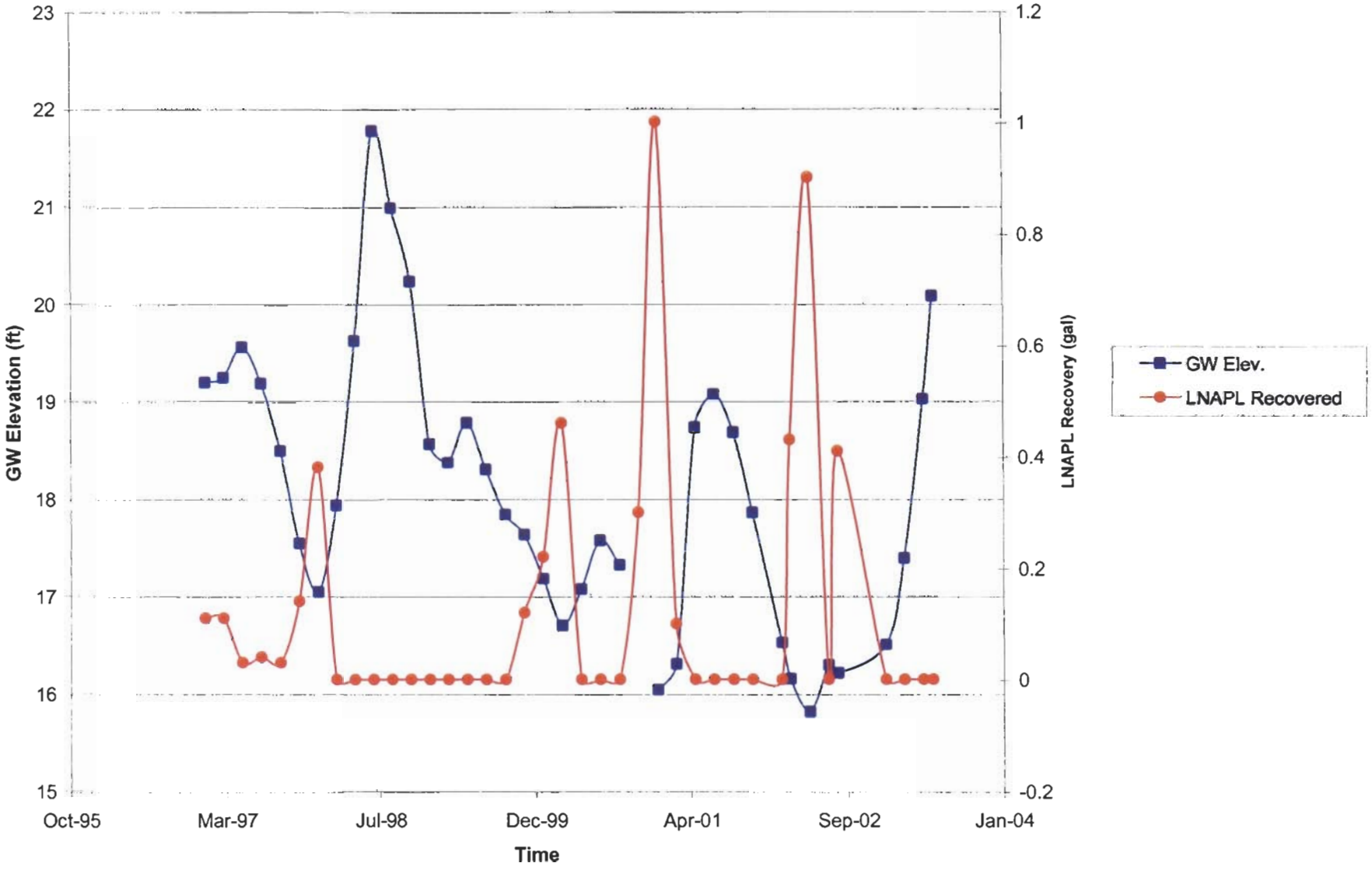
FILE NO. 10569.25466.014
JANUARY 2003

O'BRIEN & GERE ENGINEERS INC.

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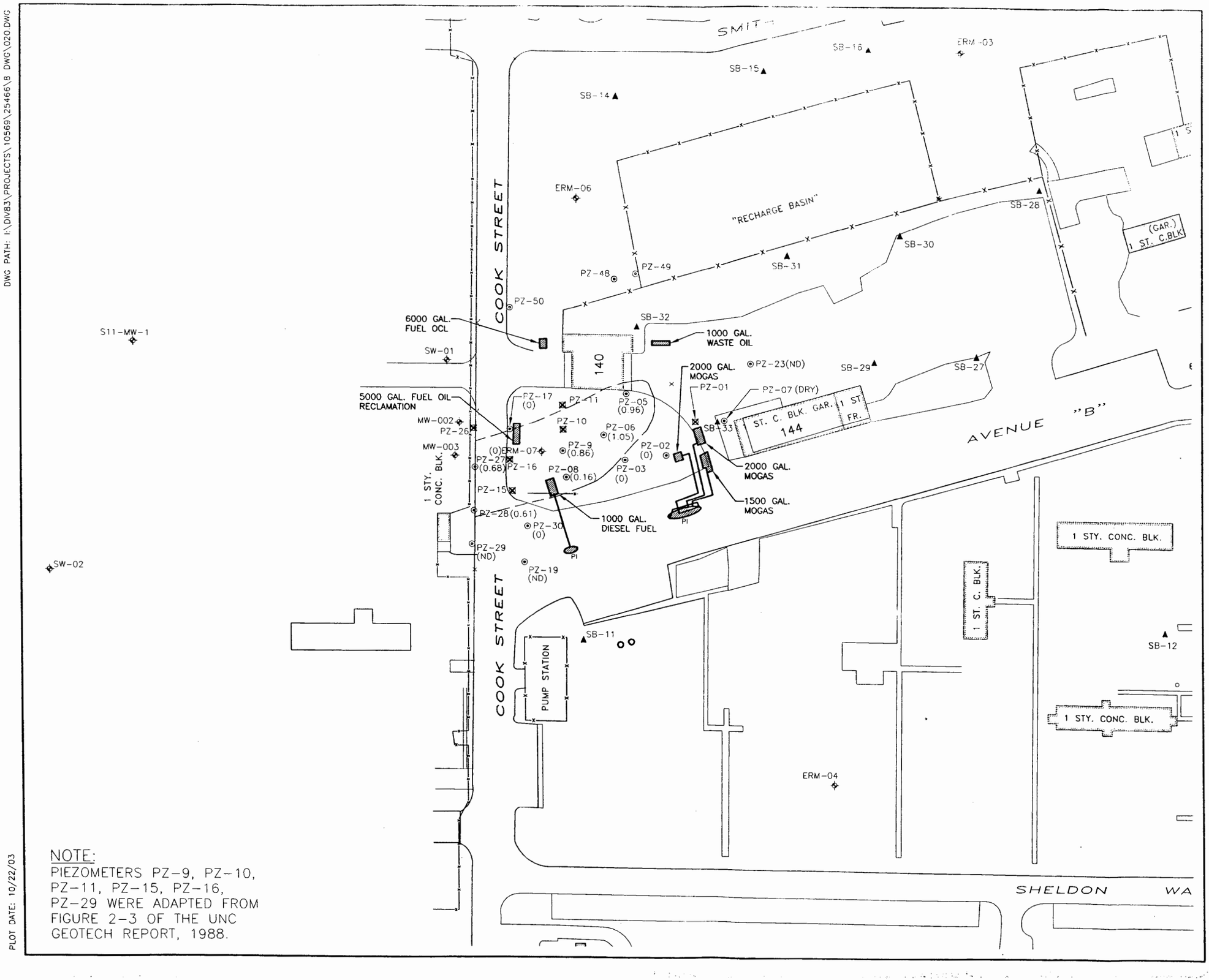
Figure 10
PZ-17 Historic GW Elevations vs. LNAPL Recovered
Airport Development District
Francis Gabreski Airport
Westhampton, New York



DWG PATH: I:\DW83\PROJECTS\10569\25466\8 DWG\020.DWG

PLOT DATE: 10/22/03

FIGURE 11



NOTE:
PIEZOMETERS PZ-9, PZ-10, PZ-11, PZ-15, PZ-16, PZ-29 WERE ADAPTED FROM FIGURE 2-3 OF THE UNC GEOTECH REPORT, 1988.

LEGEND

- TP-01 — TEST PIT LOCATION
- SB-02 — SOIL BORING LOCATION
- ERM-03 — MONITORING WELL LOCATION
- PZ-26 — PIEZOMETER LOCATION
- PIEZOMETER DESTROYED OR BROKEN AS OF 2002 (NO DATA)
- (ND) — NO DATA
- (0.16 FT.) — MAXIMUM RECORDED THICKNESS DURING 2002 AT PIEZOMETER LOCATION.
- HYDROCARBON PLUME (DASHED WHERE INFERRED)
- APPROXIMATE LOCATION OF PETROLEUM STORAGE TANKS

AIRPORT DEVELOPMENT DISTRICT
FRANCIS S. GABRESKI AIRPORT
WESTHAMPTON, N.Y.

2002 EXTENT OF LNAPL

1"=80' 80 0 80

FILE NO. 10569.25466.020
MAY 2003

O'BRIEN & GERE ENGINEERS INC.

APPENDICES

Appendix A

Soil Boring Logs

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number ERM-01 (MW-01)

Project Name & Location	Project Number	Date & Time Started: 6/19/02 13:45 PM		
GABRESKI AIRPORT, NYSDEC	72708.01.01	Date & Time Completed:		
Drilling Company	Foreman	Sampler(s)	Sampler Hammer	Drop
Delta Well & Pump	Jake Elder	Stephen Citrin	140 lb	24"
Drilling Equipment / Falking	Method	Elevation & Datum	Completion Depth	Rock Depth
Truck Moonted / F-75	HAS			
Bit Size(s)	Core Barrel(s)	Geologist(s)		
7 1/4"	4 3/4"	Conrad Strebel		

DEPTH (ft below grade)	SAMPLES: Sample Identification	Recovery (feet)	FID/PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS
	LOCATION: ~4 ft West of ERM-02				SURFACE DESCRIPTION: Black-Top (Parking Lot)	
0						Dry
					Black top (Tar coated angular sand and gravel)	Removed with Post hole
1	NS	*				digger
	NS	1.9	0.7		Light Brown, fine to medium loose sand, moist	No odor
2	NS		0.5			No staining
	NS		0.7		Light Brown grading to greenish gray, fine - medium loose sand, moist	No odor
3	*		0.7		Dark gray, fine to med loose sand, mottling, moist, trace organic	No staining
	NS	1.3	0.5		Light Brown grading to greenish gray, fine - medium loose sand, moist	No odor
4	NS		0.2		Fine to medium loose sand - moist	No staining
	NS		0.6		Dark Gray grading to olive gray, fine to	No odor
5	NS		0.5		medium loose sand, very moist	No staining
	NS		0.4		Light brown, medium loose sand	No odor
6	NS	1.2			moist	No staining
	NS		0.5		Light brown, medium loose sand	No odor
7	NS				moist	No staining
	NS		0.2		Light brown, fine to medium loose	No odor
8	NS	1.2			sand, moist	No staining
	NS		0.3		Light brown, fine to medium loose	No odor
9	NS				sand, moist	No staining
	NS	**NM**	**NM**		**NS (Auger Only)**	**NONE**
30						
	NS		0.5		Light brown, medium to fine loose sand	No staining
31		0.7			moist, trace rounded gravel	No odor
			0.6		Light brown, medium to fine loose sand	No staining
32					moist, trace rounded gravel	No odor
	NS	**NM**	**NM**		**NS (Auger Only)**	**NONE**
36						
			0.1		Light brown, medium to fine loose sand with some rounded	No staining
37		1.3			pebbles and gravel	Saturated, No odor
			0.2		Light brown, medium to fine loose sand with some rounded	No staining
38					pebbles and gravel	No odor 6/20/02
	NS	**NM**	**NM**		**NS (Auger Only)**	**NONE**
42						
					Plan to set well as follows:	
					Screen 42 - 37'	
					Sand 1.5' above screen	
					Bentorie 1.5' --> Rest Grait	

Signature: _____ Date: 6/19/02 - 6/20/02

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: ERM-02 (MW-02)

Project Name & Location: GABRESKI AIRPORT, NYSDEC	Project Number: 72708.00.01	Date & Time Started: 6/18/02 10 00 Date & Time Completed: 6/19/02 12 15	
Drilling Company: Delta Drilling & Pump	Foreman: Jake Elder	Sampler(s): Stephen Citrin	Sampler Hammer: 140 lb / Drop: 24"
Drilling Equipment: Truck Moonted / Falking: F-75	Method: HAS	Elevation & Datum	Completion Depth / Rock Depth: NE
Bit Size(s): 7 1/4"	Core Barrel(s): 4.75"	Geologist(s): Conrad Strebel	

DEPTH (ft below grade)	SAMPLES: Sample Identification	Recovery (feet)	FID/PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS
	LOCATION: West side of Wallen Street (in grass)				SURFACE DESCRIPTION: Grassy	
0						
			1.5	56	Light brown, medium to coarse, loose sand	No odor
1	NS	1.6		9	moist to dry	No staining
	NS		1.1	12	Dark brown, medium loose sand, trace silt, moist	No odor
2	NS			13		No staining
	NS		1.0	5	Light brown, medium to coarse loose sand, moist	No odor
3	NS	1.3		9		No staining
	NS		0.8	5	Light brown with dark brown zones	No odor
4	NS			8	coarse to medium sand - some rounded gravel	No staining
	NS		0.8	8	Dark brown, medium loose sand with trace silt, moist	No odor
5	NS	0.7		8		No staining
	NS		0.6	9	Light brown with brown mottling, medium	No odor
6	NS			10	loose sand, trace rounded pebbles, moist	No staining
	NS		0.7	13	Light brown with brown mottling, medium	No odor
7	NS	1.1		8	loose sand, trace rounded pebbles/gravel, moist	No staining
	NS		0.7	17	Light brown with brown mottling, medium	No odor
8	NS			16	loose sand, trace rounded pebbles/gravel, moist	No staining
	NS		0.3	8	Light brown with brown mottling, medium	No odor
9	NS	1.2		11	loose sand, trace rounded pebbles - moist	No staining
	NS		0.2	11	Light brown with brown mottling, medium	No odor
10	NS			16	loose sand, trace rounded pebbles - moist	No staining
	NS		0.5	8	Very light brown/gray, medium	No odor
11	NS	1.4		8	loose sand, trace coarse sand, rounded pebbles - moist	No staining
	NS		0.4	9	Very light brown/gray, medium	No odor
12	NS			16	loose sand, trace rounded pebbles, moist	No staining
	NS		0.6	4	Light graay/white, medium to	No odor
13	NS	1.3		11	fine loose sand, moist, dark brown to red mottling	No staining
	NS		0.4	7	Light gray/medium loose sand,	No odor
14	NS			16	trace rounded gravel, moist - dark brown/red mottling	No staining
	NS		0.6	4	Light gray, medium loose sand	No odor
15	NS	1.2		10	with some rounded gravel, moist.	No staining
	NS		0.5	12	Light gray, medium loose sand	No odor
16	NS			23	with some rounded gravel, moist.	No staining
	NS		0.7	10	Light brown, medium loose	No odor
17	NS	1.1		12	sand with some runed gravel - moist	No staining
	NS		0.4	21	Light brown, medium loose	No odor
18	NS			29	sand with some runed gravel - moist	No staining

Signature: _____ Date: 6/18/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: ERM-02 (MW-02)

DEPTH (ft below grade)	SAMPLES: Sample Identification	Recovery (feet)	FID/ PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS
18						
	NS		0.5	7	Light brown with some brown mottling	No odor
19	NS	1.3		11	coarse to medium loose sand, moist	No staining
	NS		0.5	16	Light brown with some brown mottling	No odor
20	NS			23	medium sand, some rounded gravel - moist	No staining
	NS		1.0	13	Light brown with some brown mottling	No odor
21	NS	1.4		15	medium to loose sand, trace rounded pebbles, gravel - moist	No staining
	NS		1.6	17	Light brown with some brown mottling	No odor
22	NS			24	medium to loose sand.	No staining
	NS		0.9	12	Light brown, medium loose sand, trace	No odor
23	NS	1.6		12	rouned gravel, moist	No staining
	NS		0.9	22	Light brown with reddish brown mottling	No odor
24	NS			29	medium loose sand trace rounded gravel, moist	No staining
	NS		0.3	12	Light brown, medium loose sand, trace	No odor
25	NS	1.4		16	rouned gravel, moist	No staining
	NS		1.0	19	Light brown, medium loose sand, trace	No odor
26	NS			15	rouned gravel, moist	No staining
	NS		0.3	13	Light brown, medium loose sand, trace	No odor
27	NS	1.3		12	rouned gravel, moist	No staining
	NS		0.3	13	Light brown, medium loose sand	No odor
28	NS			17	moist	No staining
	NS		0.4	17	Light brown, medium loose sand	No odor
29	NS	1.6		13	brown mottling - moist	No staining
	NS		0.3	15	Light brown, medium loose sand	No odor
30	NS			20	trace rounded gravel, brown mottling.	No staining
	NS		0.4	14	Light brown with brown mottling	No odor
31	NS	1.4		10	medium loose sand - moist	No staining
	NS		0.5	16	Light brown with brown mottling	No odor
32	NS			25	medium loose sand - moist	No staining
	NS		0.2	24	Light brown with brown mottling	No odor
33	NS	1.7		16	medium loose sand, trace rounded gravel - moist	No staining
	NS		0.2	13	Light brown with brown mottling	No odor
34	NS			20	medium loose sand, moist	No staining
	NS		0.4	8	Light brown, medium loose sand with	No odor
35	NS	1.3		12	some brown mottling, trace rounded pebbles.	No staining
	NS		0.2	14	Light brown, medium loose sand with	No odor
36	NS			22	some brown mottling, trace rounded pebbles.	No staining
			0.7			

Signature: _____ Date: 6/18/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number ERM-02 (MW-02)

DEPTH (ft below grade)	SAMPLES: Sample Identification	SAMPLES: Recovery (feet)	SAMPLES: FID/ PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS
36						
	NS		0.4	14	Light brown, medium loose sand	No odor
37	NS	1.4		10	moist	No staining
	NS		0.4	13	Light brown, medium loose sand	No odor
38	NS			25	with brown/reddish mottling - moist	No staining
	NS		0.2	17	Brown, medium loose sand	No odor
39	NS	1.3		18	too wet, saturated	No staining
	NS		0.4	19	Brown, medium loose sand	No odor
40	NS			22	too wet, saturated	No staining
	NS		0.2	18	Brown, medium loose sand	No odor
41	NS	1.4		13	too wet, saturated	No staining
	NS		0.4	13	Brown, medium loose sand	No odor
42	NS			30	too wet, saturated	No staining
	NS	**NM**	**NM**	**NM**	**NS (Auger Only)**	**NONE**
50	**NS**	**NM**	**NM**	**NM**	**NS (Auger Only)**	**NONE**
					End of Boring	
						Dtw inside augers 38.2' bgs
					During well constructio, PVC stuck at 50' bgs, could not	Using 2" schedule 40 threaded
					free PVC. 0900 DTW= 38.52'	PVC. 20 slated (screen)
					DTB= 50.25	#1 filter sand.
					Bottom plug 6" . so	
					49.75 - 34.75' screen	
				955	Drillers inform JE that PVC during extraction of auger came up	
					DTB now 48.5' - OK as DTW estimated at 38.20'	
					2.0' Dentonite	
					Rest Portland Cement to 0.5' bgs	
0.7						

Signature: _____ Date: 6/18/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: ERM-03 (MW-03)

Project Name & Location	Project Number	Date & Time Started: 6/19/02 13:45 PM		
GABRESKI AIRPORT, NYSDEC	72708.01.01	Date & Time Completed: 6/25/02 11 30		
Drilling Company	Foreman	Sampler(s)	Sampler Hammer	Drop
Delta Well & Pump	Jake Elder	Stephen Citrin	140 lb	24"
Drilling Equipment / Falking	Method	Elevation & Datum	Completion Depth	Rock Depth
Truck Moonted / F-75	HAS			
Bit Size(s)	Core Barrel(s)	Geologist(s)		
7 1/4"	4 3/4"	Conrad Strebel		

DEPTH (ft below grade)	SAMPLES: Sample Identification	Recovery (feet)	FID/PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS
	LOCATION: Just south of South Street (on hill)				SURFACE DESCRIPTION: Grassy	
0						
	NS			2	Brown, fine to medium loose	No odor
1	NS	1.4	0.2	4	sand, trace rounded gravel/pebbles	No staining
	NS			4	Brown, fine to medium loose	No odor
2	NS		0.4	6	sand, trace rounded gravel/pebbles	No staining
	NS		0.9	8	Brown, fine to medium loose	No odor
3	NS	1.2		17	sand, trace rounded pebbles -moist	No staining
	NS		0.6	18	Brown, fine to medium loose	No odor
4	NS			14	sand, trace rounded pebbles -moist	No staining
	NS		0.1	5	Brown, fine to medium loose	No odor
5	NS	1.2		4	sand, trace rounded pebbles/gravel - moist	No staining
	NS		0.3	4	Brown, fine to medium loose	No odor
6	NS			7	sand, trace rounded pebbles/gravel - moist	No staining
	NS		0.2	7	Brown, fine to medium loose	No odor
7	NS	1.5		4	sand, trace rounded gravel - moist	No staining
	NS		0.3	5	Light brown, fine to	No odor
8	NS			5	medium, loose sand, trace rounded gravel - moist	No staining
	NS	**NR**	**NR**	**NR**	**No sample (Auger Only)**	**NONE**
9	**NS**	**NR**	**NR**	**NR**	**No sample (Auger Only)**	**NONE**
	NS	**NR**	**NR**	**NR**	**No sample (Auger Only)**	**NONE**
35	**NS**	**NR**	**NR**	**NR**	**No sample (Auger Only)**	**NONE**
	NS		0.0	13	Brown, fine to medium loose	No odor
36	NS	1.4		8	sand, moist	No staining
	NS		0.0	12	Light brown, fine to medium	No odor
37	NS			19	loose sand, moist.	No staining
	NS		0.0	12	Light brown, fine to medium	No odor
38	NS	1.4		8	loose sand, moist.	No staining
	NS		0.0	7	Light brown, fine to medium	No odor
39	NS			14	loose sand, very moist to wet	No staining
	NS		0.0	11	Light brown, fine to medium	No odor
40	NS	1.4		10	loose sand, saturated	No staining
	NS		0.0	14	Light brown, fine to medium	No odor
41	NS			16	loose sand, saturated	No staining
	NS	**NR**	**NR**	**NR**	**No sample (Auger Only)**	**NONE**
46	**NS**	**NR**	**NR**	**NR**	**No sample (Auger Only)**	**NONE**

Signature: _____ Date: 6/24/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number ERM-04 (MW-04)

Project Name & Location: GABRESKI AIRPORT, NYSDEC	Project Number: 72708.01.01	Date & Time Started: 6/21/02 11 45	
		Date & Time Completed:	
Drilling Company: Delta Well & Pump	Foreman: E. Gabay	Sampler(s): Steve / Conrad	Sampler Hammer / Drop
Drilling Equipment: Falking	Method	Elevation & Datum	Completion Depth / Rock Depth
Bit Size(s): Split Spoon	Core Barrel(s)	Geologist(s): J. Petersen	

DEPTH (ft below grade)	SAMPLES: Sample Identification	Recovery (feet)	FID/ PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS	PID
	LOCATION:				**SURFACE DESCRIPTION:**		
0	NS		0.0		6" Brown top soil fine to	10YR 3/3	0.0
1	NS	1.5	0.0		medium sand dry, trace pebbles		
	NS		0.0		Fine to medium sand	10YR 7/6	0.0
2	NS		0.0		dry		
	NS		0.0		No odors between 2-4 ft		
3	NS	1.5	0.0		Fine to medium sand	10YR 6/6	0.0
	NS		0.0		moist		
4	NS		0.0				
	NS		0.0		Fine to medium sand and	10YR 4/6	0.0
5	NS	1.5	0.0		some gravel		
	NS		0.0		Fine to medium sand and	10YR 6/8	0.0
6	NS		0.0		some gravel - moist		
	NS		0.0		Fine to medium sand and	10YR17/3	0.0
7	NS	0.5	0.0		some gravel		
	NS		0.0		Fine to medium sand and	10YR 7/3	0.0
8	NS		0.0		some gravel		
	NS	**NR**	**NR**	**NR**	**No sample (Auger Only)**	**NONE**	
28	**NS**	**NR**	**NR**	**NR**	**No sample (Auger Only)**	**NONE**	
	NS	0.5	0.0		Fine to medium sand and	10YR 5/3	
29	NS		0.0		some gravel. No odor		
	NS	0.5	0.0		Fine to medium sand and	10YR 7/3	
30	NS		0.0		some gravel		
	NS	1.0	0.0		Medium to coarse sand and	10YR 5/4	
31	NS		0.0		some gravel		
	NS	1.0	0.0		Medium to coarse sand and	10YR 6/4	
32	NS		0.0		some gravel		
	NS	0.5	0.0		Medium sand and	10YR 6/4	
33	NS		0.0		some gravel/moist		
	NS	0.5	0.0		Medium sand and	10YR 7/4	
34	NS		0.0		some gravel/moist		
	NS		0.0				
35	NS		0.0				
	NS	1.0	0.0		Medium sand and	10YR 7/3	
36	NS		0.0		some gravel		
	NS	1.0	0.0		Medium sand and some gravel	10YR 7/3	
37	NS		0.0		Medium sand and some gravel		

Signature: _____ Date: 6/21/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: ERM-04 (MW-04)

DEPTH (ft below grade)	SAMPLES: Sample Identification	Recovery (feet)	FID/ PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS
	LOCATION:				SURFACE DESCRIPTION:	
37	NS	0.5	0.0		Medium sand	10YR 4/4
38	NS		0.0		saturated (hit water)	
	NS	1.0	0.0		Medium sand	10YR 6/4
39	NS		0.0		saturated	
	NS	1.0	0.0		Medium to coarse sand	10YR 4/3
40	NS		0.0		saturated	
	NS	1.0	0.0		Medium to coarse sand	10YR 4/3
41	NS		0.0		saturated	
					End of Boring	

Signature: _____ Date: 6/21/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number ERM-05 (MW-05)

Project Name & Location	Project Number	Date & Time Started: 6/18/02 10 00		
GABRESKI AIRPORT, NYSDEC	72708.01.01	Date & Time Completed: 6/19/02 12 15		
Drilling Company	Foreman	Sampler(s)	Sampler Hammer	Drop
Delta Drilling & Pump	Jake Elder	Stephen Citrin	140 lb	24"
Drilling Equipment / Falking	Method	Elevation & Datum	Completion Depth	Rock Depth
Truck Mounted / F-75	HAS			NE
Bit Size(s)	Core Barrel(s)	Geologist(s)		
7 1/4"	4.75 "	Conrad Strebel		

DEPTH (ft below grade)	SAMPLES: Sample Identification	Recovery (feet)	FID/PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS
	LOCATION: In parking lot of HRC				SURFACE DESCRIPTION: Asphalt	
0						
	NS	NM	NM	NM	Asphalt (Removed with Auger)	NONE
1	NS					NONE
	NS		0.0	5	Reddish brown, fine to coarse	No odor
2	NS	1.5	0.0	4	medium to dense sand, trace silt - moist and rounded gravel	No staining
	NS		0.0	6	Reddish brown, fine to coarse	No odor
3	NS		0.0	7	medium to dense sand, trace silt - moist and rounded gravel	No staining
	NS		0.0	10	Reddish brown, fine to coarse	No odor
4	NS	1.1	0.0	14	medium to dense sand.	No staining
	NS		0.0	13	Trace silt and rounded gravel - moist	No odor
5	NS		0.0	9		No staining
	NS		0.0	11	Trace silt and rounded gravel - moist	No odor
6	NS	1.2	1.6	10		No staining
	NS			11	Light brown, fine to coarse	No odor
7	NS		0.4	14	loose sand, trace rounded gravel - moist	No staining
	NS			10	Light brown, fine to coarse	No odor
8	NS	1.0		6	loose sand - moist	No staining
	NS			10	Light brown, fine to coarse	No odor
9	NS			13	loose sand - moist	No staining
	NS	**NM**	**NM**	**NM**	**No Sample (Auger Only)**	**NONE**
38	**NS**	**NM**	**NM**	**NM**	**No Sample (Auger Only)**	**NONE**
	NS			17	Light brown to white, fine	No odor
39	NS	1.8	0.4	19	to medium loose sand - moist	No staining
	NS			21	Light brown to white, fine	No odor
40	NS		0.1	20	to medium loose sand - moist	No staining
	NS			21	Light brown to white with	No odor
41	NS		0.2	17	reddish brown mottling	No staining
	NS			22	Medium loose sand, trace	No odor
42	NS		0.3	24	rounded gravel - moist	No staining
	NS			13	Light brown to white loose	No odor
43	NS	1.4	0.3	12	sand - moist	No staining
	NS			13	Light brown to white loose	No odor
44	NS		0.3	16	sand - moist	No staining
	NS			10	Light brown, loose sand	No odor
45	NS	1.2	0.0	15	medium to coarse, saturated	No staining
	NS			15	Light brown, loose sand	No odor
46	NS		0.0	20	medium to coarse, saturated	No staining
47-54	NS	NM	NM	NM	No Sample (Auger Only)	NONE

Signature: _____ Date: 6/25/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number ERM-06 (MW-06)

Project Name & Location	Project Number	Date & Time Started: 6/26/02		
GABRESKI AIRPORT, NYSDEC	72708.01.01	Date & Time Completed:		
Drilling Company	Foreman	Sampler(s)	Sampler Hammer	Drop
Delta Well & Pump	Jake Elder	Stephen Citrin	140 lb	24"
Drilling Equipment / Falking	Method	Elevation & Datum	Completion Depth	Rock Depth
Truck Mounted / F-75	HAS			NE
Bit Size(s)	Core Barrel(s)	Geologist(s)		
7 1/4"	4.75"	Conrad Strebel		

DEPTH (ft below grade)	SAMPLES: Sample Identification	Recovery (feet)	FID/PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS
0	LOCATION: North side of E. Cook St. (between mw- .5', .7')				SURFACE DESCRIPTION: Grassy/ Sandy	
	NS	1.2	0.0		Light brown, medium to fine	No odor
1	NS				loose sand, some silt - dry	No staining
	NS				Light brown, medium to fine	No odor
2	NS		0.0		loose sand - moist	No staining
	NS	1.0	0.0		Light brown, fine to coarse	No odor
3	NS				loose sand with some rounded pebbles	No staining
	NS				Reddish brown, medium to fine	No odor
4	NS		0.0		loose sand, some rounded pebbles	No staining
	NS	1.1	0.0		Reddish brown, medium to fine	No odor
5	NS				loose sand, some rounded pebbles	No staining
	NS				Reddish brown, medium to fine	No odor
6	NS		0.4		loose sand, some rounded pebbles	No staining
	NS	1.3	0.2		Brown, fine to coarse	No odor
7	NS				loose sand, trace rounded pebbles	No staining
	NS				Brown, fine to coarse	No odor
8	NS		0.2		loose sand, trace rounded pebbles	No staining
	NS	**NM**	**NM**		**No Sample (Auger Only)**	**None**
35	**NS**	**NM**	**NM**		**No Sample (Auger Only)**	**None**
	NS	0.0	1.2		Brown medium sand and	No odor
36	NS				gravel. Loose some silt	No staining
	NS				Brown medium sand and	No odor
37	NS				gravel. Loose some silt	No staining
	NS	0.0	1.5		Brown medium sand. Some	No odor
38	NS				fine sand, trace gravel	No staining
	NS				Brown medium sand. Some	No odor
39	NS				fine sand, trace gravel	No staining
	NS		1.5		Brown fine to medium sand and	No odor
40	NS				trace gravel. No odors	No staining
	NS				Wet fine to medium sand	Ground water @ 40 ft
41	NS				some silts with mica chips.	
	NS					
	NS					
	NS					
	NS					

Signature: _____ Date: 6/26/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: ERM-07 (MW-07)

Project Name & Location	Project Number	Date & Time Started: 6/27/02 11 45		
GABRESKI AIRPORT, NYSDEC	72708.00.01	Date & Time Completed: 6/28/02		
Drilling Company	Foreman	Sampler(s)	Sampler Hammer	Drop
Delta Drilling & Pump	Jake Elder	Stephen Citrin	140 lb	24"
Drilling Equipment / Falking	Method	Elevation & Datum	Completion Depth	Rock Depth
Truck Mounted / F-75	HAS			NE
Bit Size(s)	Core Barrel(s)	Geologist(s)		
7 1/4"	4.75"	Conrad Strebel		

DEPTH (ft below grade)	SAMPLES: Sample Identification	Recovery (feet)	FID/PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS
	LOCATION: Corner of Ave. B and Cook St. West Side				SURFACE DESCRIPTION: Grassy	
0						
	NS		0.0	5	Light brown medium to coarse loose	No odor
1	NS	0.7		5	sand dry	No staining
	NS		0.0	5		No odor
2	NS			56		No staining
	NS		0.0	10	Light brown medium to coarse	No odor
3	NS	1.0		21	sand dry.	No staining
	NS		0.0	24	Light brown, medium to coarse	No odor
4	NS			23	sand. Some gravel, moist to dry.	No staining
	NS		0.0	20	Dark medium to coarse sand	No odor
5	NS	1.2		22	some coarse gravel	No staining
	NS		0.0	8	Light brown to yellowish or medium to	No odor
6	NS			11	coarse sand - moist	No staining
	NS		0.0	16	Light brown medium to coarse	No odor
7	NS	1.0		12	sand some gravel	No staining
	NS		0.0	9	Yellowish orange medium to	No odor
8	NS			13	coarse sand - moist	No staining
	NS		0.0	5	Dark brown medium to coarse	No odor
9	NS	1.0		5	sand - moist	No staining
	NS		0.0	11	Light brown Medium to coarse	No odor
10	NS			12	sand moist	No staining
	NS				Brown medium to coarse	No odor
11	NS	1.2	0.0		sand - moist	No staining
	NS				Light brown with brown mottling	No odor
12	NS		0.0		medium to coarse sand. Some rounded gravel.	No staining
	NS			6	Light brown with brown mottling	No odor
13	NS	1.0	0.0	15	medium to coarse sand, moist.	No staining
	NS			10	Light brown medium to	No odor
14	NS		0.0	19	coarse sand, some rounded gravel	No staining
	NS			5	Light brown medium sand	No odor
15	NS	1.2	0.0	6	some gravel - moist	No staining
	NS			15	Light brown medium sand	No odor
16	NS		0.0	17	brown mottling	No staining
	NS			15	Light brown with brown mottling	No odor
17	NS	0.5	0.0	10	medium to coarse sand	No staining
	NS			13	NO RECOVERY	No odor
18	NS		0.0	14	NO RECOVERY	No staining

Signature: _____ Date: 6/28/02

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: ERM-07 (MW-07)

DEPTH (ft below grade)	SAMPLES: Sample Identification	Recovery (feet)	FID/ PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS
18						
	NS		0.0	9	Light brown medium sand	No odor
19	NS	1.3		7	some rounded gravel - moist	No staining
	NS		0.0	10	light brown with brown mottling	No odor
20	NS			13	some gravel, medium sand - moist	No staining
	NS		0.0	9	Light brown medium to coarse sand	No odor
21	NS	1.4		10	moist	No staining
	NS		0.0	8	Light brown medium to	No odor
22	NS			15	coarse sand some rounded gravel	No staining
	NS		0.0		light brown with brown mottling	No odor
23	NS	1.2			medium to coarse sand	No staining
	NS		0.0		Light brown medium to coarse	No odor
24	NS				sand, some gravel - moist	No staining
	NS		0.0	9	Light brown with brown mottling	No odor
25	NS	1.7		14	medium to coarse sand	No staining
	NS		0.0	12	Light brown medium sand	No odor
26	NS			13	mosit	No staining
	NS		0.0	14	Light brown medium sand with some	No odor
27	NS	1.3		9	rounded gravel	No staining
	NS		0.0	8	Light brown medium sand with	No odor
28	NS			9	some rouned gravel	No staining
	NS		0.0	7	light brown with brown mottling	No odor
29	NS	1.2		6	medium sand some gravel	No staining
	NS		0.0	6	Light brown with orange mottling	No odor
30	NS			10	medium sand - moist	No staining
	NS		0.0	6	Light brown medium sand	No odor
31	NS	1.4		7		No staining
	NS		202.0	10	Dark staining - petroleum odor	No odor
32	NS		296.0	15	medium sand	No staining
	NS		0.0	7	Saturated	No odor
33	NS			7	Saturated	No staining
	NS		0.0	8	Saturated	No odor
34	NS			14	Saturated	No staining
	NS		0.0	19	No staining PFD =0.0	
35	NS	2.0	532.0	16	staining at 35 PCD = 532	
	NS		0.0	17	No staining PID = 0.0	
36	NS			10		

Signature: _____ Date: 6/28/02

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-01

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					SURFACE DESCRIPTION:
18	NA	2.0	0.0		10YR(7/3) SW	Medium to coarse sand and gravel with trace mica chips, moist, no odors no staining present.
	NA					
	NA				10YR(7/3) SW	Medium to coarse sand and gravel with trace mica chips, moist, no odors no staining present. Gravel layer at 19.5
20	NA					
	NA	2.0	0.0		10YR(4/3) SP	Fine to medium sand and silt with gravel, no odors and no staining. Moist.
	NA					
	NA				10YR(4/3) SP	Fine to medium sand and silt with gravel, no odors and no staining. Moist.
22	NA					
	NA	2.0	0.0		10YR(6/3) SW	Medium to coarse sand and gravel with pebbles one inch in diameter.
	NA					
	NA				10YR(6/3) SW	Medium to coarse sand and gravel with trace fines.
24	NA					
	NA	2.0	0.0		10YR(5/4) SP	Fine, medium and coarse sand and gravel, very moist, no odors and no \ staining.
	NA					
	NA				10YR(5/4) SP	Fine, medium and coarse sand and gravel, very moist, no odors and no \ staining. Moist.
26	NA					
	NA	2.0	0.0		10YR(5/4) SP	Medium to coarse sand and gravel with trace fines. No odors and no stainging present, Moist.
	NA					
	NA				10YR(5/4) SP	Medium to coarse sand and gravel with trace fines. No odors and no stainging present, Moist.
28	NA					
	NA	2.0	0.0		10YR(6/3) SW	Medium to coarse sand and gravel with trace fines. Trace pebbles rounded up to one inch in diameter. Dry no odors and no staining.
	NA					
	NA				10YR(6/3) SW	Medium to coarse sand and gravel with trace fines. Trace pebbles rounded up to one inch in diameter. Dry no odors and no staining.
30	NA					
	NA	2.0	0.0		10YR(6/3) SW	Medium to coarse sand and gravel with trace fines. Trace pebbles rounded up to one inch in diameter. Dry no odors and no staining.
	NA					
	NA				10YR(6/3) SW	Medium to coarse sand and gravel with trace fines. Trace pebbles rounded up to one inch in diameter. Dry no odors and no staining.
32	NA					
	NA	2.0	0.0		10YR(6/3) SW	Medium to coarse sand and gravel, with trace fines. Dry no odors, no staining
	NA					
	NA				10YR(6/3) SW	Medium to coarse sand and gravel, with trace fines. Dry no odors, no staining
36	NA					
	NA	2.0	0.0		10YR(6/3) SW	Medium to coarse sand and gravel, with trace fines. Dry no odors, no staining
	NA					
	NA				10YR(6/3) SW	Medium to coarse sand and gravel, with trace fines. Dry no odors, no staining
40	NA					
						End of Boring.

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-02

Project Name & Location	Project Number	Date & Time Started: 6/18/02 07:30.		
Gabreski Airport	72708.02.01	Date & Time Completed: 6/1/02 09:30		
Drilling Company	Foreman	Sampler(s)	Sampler Hammer	Drop
Delta Well & Pump	Jim Pederson			
Drilling Equipment	Method	Elevation & Datum	Completion Depth	Rock Depth
Geoprobe	Direct Push			
Bit Size(s)	Core Barrel(s)	Geologist(s)		
2" x 4'	2" X 4'	Michael Mendes		

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION: Adjacent to cesspools MH-1, 2 and 3.					**SURFACE DESCRIPTION:** Grass
0	NA	2.0	0.0		10YR(3/2) SM	Silty soil, top soil with vegetation.
	NA					
2	NA				10YR(6/2) SP	Silty sand and gravels, no odors and no staining.
	NA					
	NA	1.0	0.0		10YR(6/2) SP	fine to medium and coarse grained sand, trace silts, no odors, very moist.
4	NA				10YR(6/2) SP	fine to medium and coarse grained sand, trace silts, no odors, very moist.
	NA					
	NA	2.0	0.0		10YR(5/3) SP	Medium to coarse sand and silts, no odor, no staining, moist from cess pools.
6	NA				10YR(5/3) SP	Medium to coarse sand and silts, no odor, no staining, moist from cess pools.
	NA					
	NA	1.5	0.0		10YR(6/3) SP	Medium to coarse sand and silts, no odor, no staining, moist from cess pools.
8	NA				10YR(6/3) SP	Medium to coarse sand and silts, no odor, no staining, moist from cess pools.
	NA					
	NA	2.0	0.0		10YR(6/6) SW	Medium to coarse sand and gravel, with trace to little fines, moist from pools. No odors, no staining.
10	NA				10YR(6/6) SW	Medium to coarse sand and gravel, with trace to little fines, moist from pools. No odors, no staining.
	NA					
	NA	1.5	0.0		10YR(6/6) SW	Medium to coarse sand and gravel, with trace to little fines, moist from pools. No odors, no staining.
12	NA				10YR(6/6) SW	Medium to coarse sand and gravel, with trace to little fines, moist from pools. No odors, no staining.
	NA					
	NA	2.0	0.0		10YR(6/4) SW	Medium to coarse sand and gravels with trace fines, moist from pools.
14	NA				10YR(5/4) SW	Medium to coarse sand and rounded gravels, no odors and no staining.
	NA					
	NA	1.5	0.0		10YR(5/8) SW	Medium to coarse sand and gravels, with trace fines, no odors and no staining.
16	NA				10YR(6/2) SW	Medium to coarse sand and gravels, with trace fines, no odors and no staining.
	NA					
	NA	2.0	0.0		10YR(6/4) SP	Medium to coarse sand, trace to some fines, and gravel. Moist, no odors.
18	NA				10YR(6/3) SP	Medium to coarse sand and gravel, trace to no fines, no odors and no staining.

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number SB-02

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION **SB-02(31-32) for VOCs @09:29**
	LOCATION:					**SURFACE DESCRIPTION:**
18	NA	2.0	0.0		10YR(6/2)	Medium to coarse sand, trace gravels, little to no silts, moist, no odors
	NA				SW	no staining present.
	NA				10YR(6/2)	Medium to coarse sand with some to trace gravels, moist, no odors
20	NA				SW	no staining present.
	NA	2.0	0.0		10YR(5/3)	Medium and coarse sand trace gravels, with rounded pebbles, no odors, no
	NA				SW	staining, moist.
	NA				10YR(6/4)	Medium and coarse sand trace gravels, with rounded pebbles, no odors, no
22	NA				SW	staining, moist.
	NA	2.0	0.0		10YR(5/3)	Medium and coarse sand trace gravels, with rounded pebbles, no odors, no
	NA				SW	staining, moist from pools.
	NA				10YR(6/4)	Medium and coarse sand trace gravels, with rounded pebbles, no odors, no
24	NA				SW	staining, moist from pools.
	NA	2.0	0.0		10YR(4/2)	Medium to coarse sand and some silts, trace gravels, no odors, no
	NA				SP	staining. Moist.
	NA				10YR(5/6)	Medium to coarse sand and some silts, trace gravels, no odors, no staining,
26	NA				SP	moist.
	NA	2.0	0.0		10YR(6/2)	Medium to coarse sand and gravel, little to no fines, no odors, no staining.
	NA				SW	Moist.
	NA				10YR(6/2)	Medium to coarse sand and gravel, little to no fines, no odors, no staining.
28	NA				SP	Moist.
	NA	2.0	0.0		10YR(6/2)	Medium to coarse sand, some to trace silts, no odors, no staining moist.
	NA				SW	
	NA				10YR(6/2)	Medium to coarse sand, some to trace silts, no odors, no staining moist.
30	NA				SW	
	NA	2.0	0.0		10YR(6/2)	Medium to coarse sand, some to trace silts, no odors, no staining moist.
	NA				SW	
	X				10YR(6/2)	Medium to coarse sand, some to trace silts, no odors, no staining moist.
32					SW	Note soil boring dry to a depth of 36 ft, groundwater not encountered.
						End of Boring.

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-03

Project Name & Location	Project Number	Date & Time Started: 6/18/02 09:45		
Gabreski Airport	72708.02.01	Date & Time Completed: 6/18/02 11:45		
Drilling Company	Foreman	Sampler(s)	Sampler Hammer	Drop
Delta Well & Pump	Jim Pederson			
Drilling Equipment	Method	Elevation & Datum	Completion Depth	Rock Depth
Geoprobe	Direct Push			
Bit Size(s)	Core Barrel(s)	Geologist(s)		
2" x 4'	2" X 4'	Michael Mendes		

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					**SURFACE DESCRIPTION:** Grass
0	NA				10YR(3/3)	~ Approximately one foot of silty soil and vegetatioin, with some sand and
	NA	1.5	0.0		SM	some gravel, no ddors, and no staining. Moist.
	NA				10YR(3/3)	Fine to medium and coarse grained sand, with some gravel. No odors, and no
2	NA				SM	staining.
	NA				10YR(4/6)	Fine to medium and coarse grained sand, with some gravel. No odors, and no
	NA	1.5	0.0		SP	staining.
	NA				10YR(4/6)	Fine to medium and coarse grained sand, with some gravel. No odors, and no
4	NA				SP	staining.
	NA				10YR(5/8)	Medium to coarse sand and trace gravel, some silts and fine sand. No odors
	NA	1.5	0.0		SP	no staining.
	NA				10YR(5/8)	Medium to coarse sand and trace gravel, some silts and fine sand. No odors
6	NA				SP	no staining.
	NA				10YR(5/8)	Medium to coarse sand and trace gravel, some silts and fine sand. No odors
	NA	1.5	0.0		SP	no staining. Moist.
	NA				10YR(5/8)	Medium to coarse sand and trace gravel, some silts and fine sand. No odors
8	NA				SP	no staining. Moist.
	NA				10YR(5/8)	Medium to coarse sand and trace gravel, some silts and fine sand. No odors
	NA	1.5	0.0		SP	no staining. Moist.
	NA				10YR(6/6)	Coarse sand and rounded gravels. Some pebbles up to 0.5 inch to 1 inch
10	NA				SP	diameter.
	NA				10YR(6/6)	Coarse sand and rounded gravels. Some pebbles up to 0.5 inch to 1 inch
	NA	1.5	0.0		SW	diameter. Moist.
	NA				10YR(6/6)	Coarse sand and rounded gravels. Some pebbles up to 0.5 inch to 1 inch
12	NA				SW	diameter. Moist.
	NA				10YR(6/6)	Medium to coarse sand and gravel with trace fines. No odors, no staining.
	NA	1.5	0.0		SW	Moist.
	NA				10YR(6/3)	Medium to coarse sand and gravel with trace fines. No odors, no staining.
14	NA				SW	Moist.
	NA				10YR(6/3)	Medium to coarse sand and gravel with trace fines. No odors, no staining.
	NA	1.5	0.0		SW	Moist.
	NA				10YR(6/3)	Medium to coarse sand and gravel with trace fines. No odors, no staining.
16	NA				SW	Moist.
	NA				10YR(5/3)	Medium to coarse sand and gravel, with trace silts and fines. No odors ,
	NA	2.0	0.0		SP	no staining.
	NA				10YR(5/3)	Medium to coarse sand and gravel, with trace silts and fines. No odors ,
18	NA				SP	no staining.

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number SB-03

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					**SURFACE DESCRIPTION:** Grass
18	NA	2.0	0.0		10YR(5/3)	Medium to coarse sand and gravel with little to trace silts, no odors, no staining.
	NA				SW	Moist.
	NA				10YR(5/3)	Medium to coarse sand and gravel with little to trace silts, no odors, no staining.
20	NA				SW	Moist.
	NA	2.0	0.0		10YR(6/3)	Medium to coarse sand-some gravel, trace silts, moist, no odors, no staining.
	NA				SW	Moist.
	NA				10YR(6/3)	Medium to coarse sand-some gravel, trace silts, moist, no odors, no staining.
22	NA				SW	Moist.
	NA	2.0	0.0		10YR(6/3)	Medium to coarse sand-some gravel, trace silts, moist, no odors, no staining.
	NA				SW	Moist.
	NA				10YR(6/3)	Medium to coarse sand-some gravel, trace silts, moist, no odors, no staining.
24	NA				SW	Moist.
						End of Boring

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-04

Project Name & Location	Project Number	Date & Time Started: 6/18/02 12:45		
Gabreski Airport	72708.02.01	Date & Time Completed: 6/18/02 14:28		
Drilling Company	Foreman	Sampler(s)	Sampler Hammer	Drop
Delta Well & Pump	Jim Pederson			
Drilling Equipment	Method	Elevation & Datum	Completion Depth	Rock Depth
Geoprobe	Direct Push			
Bit Size(s)	Core Barrel(s)	Geologist(s)		
2" x 4'	2" X 4'	Michael Mendes		

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					SURFACE DESCRIPTION: Grass
0	NA				10YR(5/2))	6 inches of concrete.
	NA	1.5	0.0		SM	Silty brown sand with gravel-moist, no odors, no staining. Fill material.
	NA				10YR(5/2))	Silty brown sand with gravel-moist, no odors, no staining. Fill material.
2	NA				SM	
	NA				10YR(4/6)	Dark yellowing brown silty fine to medium sand. No odors, no staining, moist
	NA	1.0	0.0		SM	
	NA				10YR(4/6)	Dark yellowing brown silty fine to medium sand. No odors, no staining, moist
4	NA				SM	
	NA				10YR(5/6)	Medium to coarse sand with some gravel trace silts and fines. No odors, no
	NA	1.5	0.0		SP	staining. Moist.
	NA				10YR(5/6)	Medium to coarse sand with some gravel trace silts and fines. No odors, no
6	NA				SP	staining. Moist.
	NA				10YR(6/3)	Medium to coarse sand with some gravel trace silts and fines. No odors, no
	NA	1.5	0.0		SP	staining. Moist.
	NA				10YR(6/3)	Medium to coarse sand with some gravel trace silts and fines. No odors, no
8	NA				SP	staining. Moist.
	NA				10YR(6/3)	Medium to coarse sand, some fine sand, trace silts and gravel. No odors, no
	NA	1.5	0.0		SW	staining. Moist.
	NA				10YR(6/3)	Medium to coarse sand, some fine sand, trace silts and gravel. No odors, no
10	NA				SW	staining. Moist.
	NA				10YR(6/3)	Medium to coarse sand, some fine sand, trace silts and gravel. No odors, no
	NA	2.0	0.0		SW	staining. Moist.
	NA				10YR(6/3)	Medium to coarse sand, some fine sand, trace silts and gravel. No odors, no
12	NA				SW	staining. Moist.
	NA				10YR(6/3)	Medium to coarse sand and gravel, with trace fines, mostly dry, no odors, no
	NA	2.0	0.0		SW	staining.
	NA				10YR(6/3)	Medium to coarse sand and gravel, with trace fines, mostly dry, no odors, no
14	NA				SW	staining.
	NA				10YR(5/4)	Darker unsorted sand with some more silts, present. No odors, no staining.
	NA	2.0	0.0		SM	
	NA				10YR(5/4)	Darker unsorted sand with some more silts, present. No odors, no staining.
16	NA				SM	
	NA				10YR(5/3)	Medium to coarse sand and gravel, appears moist- No odors and no staining
	NA	1.0	0.0		SP	present.
	NA				10YR(5/3)	Medium to coarse sand and gravel, appears moist- No odors and no staining
18	NA				SP	present.

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-04

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					SURFACE DESCRIPTION: Grass
18	NA	1.0	0.0		10YR(5/3)	Medium to coarse sand, and gravel, moist, No groundwater- no odors, no
	NA				SP	staining, larger size gravels.
	NA				10YR(5/3)	Medium to coarse sand, and gravel, moist, No groundwater- no odors, no
20	NA				SP	staining, larger size gravels.
	NA	2.0	0.0		10YR(4/2)	Medium to coarse sand with rounded gravels, no odors, no staining, moist.
	NA				SP	
	NA				10YR(4/2)	Medium to coarse sand with rounded gravels, no odors, no staining, moist.
22	NA				SP	
	NA	2.0	0.0		10YR(5/3)	Medium to coarse sand with rounded gravels, no odors, no staining, moist.
	NA				SW	
	NA				10YR(5/3)	Medium to coarse sand with rounded gravels, no odors, no staining, moist.
24	NA				SW	
	NA	2.0	0.0		10YR(6/3)	Medium to coarse sand, some gravel, little to no fines. No odors, no staining,
	NA				SW	very moist, however no water encountered.
	NA				10YR(6/3)	Medium to coarse sand, some gravel, little to no fines. No odors, no staining,
26	NA				SW	very moist, however no water encountered.
	NA	2.0	0.0		10YR(6/3)	Coarse to gravely sand very little fines, no odors, no staining, moist.
	NA				SW	
	NA				10YR(6/3)	Coarse to gravely sand very little fines, no odors, no staining, moist.
28	NA				SW	
						End Of Boring

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

ERM

Boring Number SB-05

BORING LOG

Project Name & Location	Project Number	Date & Time Started: 6/19/02 07:30		
Gabreski Airport	72708.02.01	Date & Time Completed: 6/19/02 11:40		
Drilling Company	Foreman	Sampler(s)	Sampler Hammer	Drop
Delta Well & Pump	Jim Pederson			
Drilling Equipment	Method	Elevation & Datum	Completion Depth	Rock Depth
Geoprobe	Direct Push			
Bit Size(s)	Core Barrel(s)	Geologist(s)		
2" x 4'	2" X 4'	Michael Mendes		

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION **SB-05(0.25-0.5) Pest/Inorganics @ 07:30**
	LOCATION:					**SURFACE DESCRIPTION:** Grass
0					10YR(3/2)	0.0-0.5 Brown top soil with silt and sand, no odors, no staining, vegetation.
	NA	1.5	0.0		SM	
	NA				10YR(5/6)	Fine to medium sand with silts some layering appearance, heavy iron staining
2	NA				SM	present.
	NA				10YR(5/6)	Fine to medium sand with silts some layering appearance, heavy iron staining
	NA	1.5	0.0		SM	present. Dry.
	NA				10YR(5/6)	Fine to medium sand with silts some layering appearance, heavy iron staining
4	NA				SM	present. Dry.
	NA				10YR(7/4)	Fine medium and coarse sand, little to no silts present. Pebbles up to one inch
	NA	1.5	0.0		SP	diameter. Large gravels, no odors, no staining.
	NA				10YR(7/4)	Fine medium and coarse sand, little to no silts present. Pebbles up to one inch
6	NA				SP	diameter. Large gravels, no odors, no staining.
	NA				10YR(7/4)	Fine medium and coarse sand, little to no silts present. Pebbles up to one inch
	NA	1.0	0.0		SP	diameter. Large gravels, no odors, no staining.
	NA				10YR(7/4)	Fine medium and coarse sand, little to no silts present. Pebbles up to one inch
8	NA				SP	diameter. Large gravels, no odors, no staining.
	NA				10YR(6/3)	Medium to coarse sand well sorted, trace gravels, trace silts, no odors, no
	NA	2.0	0.0		SW	staining. Moist.
	NA				10YR(6/3)	Medium to coarse sand well sorted, trace gravels, trace silts, no odors, no
10	NA				SW	staining. Moist.
	NA				10YR(6/3)	Medium to coarse sand well sorted, trace gravels, trace silts, no odors, no
	NA	2.0	0.0		SW	staining. Moist.
	NA				10YR(6/3)	Medium to coarse sand well sorted, trace gravels, trace silts, no odors, no
12	NA				SW	staining. Moist.
	NA				10YR(6/4)	Medium to coarse sand, gravel and small pebbles, no odors, no staining, poorly
	NA	2.0	0.0		SP	sorted.
	NA				10YR(6/4)	Medium to coarse sand, gravel and small pebbles, no odors, no staining, poorly
14	NA				SP	sorted.
	NA				10YR(6/4)	Medium to coarse sand, gravel and small pebbles, no odors, no staining, poorly
	NA	2.0	0.0		SP	sorted.
	NA				10YR(6/4)	Well sorted fine to medium sand, trace silts, trace gravels, no odors, no
16	NA				SW	staining. Moist.
	NA				10YR(7/2)	Medium to coarse sand and gravels, little to trace silts, no odors and no staining
	NA	2.0	0.0		SP	some mottleing and stratification (laminations)
	NA				10YR(7/2)	Medium to coarse sand and gravels, little to trace silts, no odors and no staining
18	NA				SP	some mottleing and stratification (laminations)

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number SB-05

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					**SURFACE DESCRIPTION:** Grass
18	NA	2.0	0.0		10YR(7/2)	Medium to coarse sand, and gravel, moist, No groundwater- no odors, no
	NA				SP	staining, larger size gravels.
	NA				10YR(7/2)	Medium to coarse sand, and gravel, moist, No groundwater- no odors, no
20	NA				SP	staining, larger size gravels.
	NA	4.0	0.0		10YR(6/3)	Brown medium to coarse sand with some to trace gravels and trace silts. No
	NA				SP	odors and no staining. Dry
	NA				10YR(6/3)	Brown medium to coarse sand with some to trace gravels and trace silts. No
24	NA				SP	odors and no staining. Dry
	NA	3.3	0.0		10YR(5/2)	Medium to coarse sand, with trace gravels and trace silts. No odors and no
	NA				SP	staining. Dry.
	NA				10YR(5/2)	Medium to coarse sand, with trace gravels and trace silts. No odors and no
28	NA				SP	staining. Dry.
	NA	3.0	0.0		10YR(4/2)	Fine to medium sand, some coarse sand, little gravel and silts, moist, no odors
	NA				SP	no staining.
	NA				10YR(4/2)	Fine to medium sand, some coarse sand, little gravel and silts, moist, no odors
32	NA				SP	no staining.
	NA	4.0	0.0		10YR(5/4)	Fine to medium sand with some coarse sand trace gravels and rounded pebbles
	NA				SP	No odors, no staining, cor very homogenous. Moist
	NA				10YR(5/4)	Fine to medium sand with some coarse sand trace gravels and rounded pebbles
36	NA				SP	No odors, no staining, cor very homogenous. Moist
	NA	3.0	0.0		10YR(6/3)	Medium to coarse sand with some gravels, no odors, no staining, dry.
	NA				SP	
	NA				10YR(6/3)	Medium to coarse sand with some gravels, no odors, no staining, dry.
40	NA				SP	
	NA	1.5	0.0		10YR(6/3)	Medium to coarse sand some gravel and trace fine sand and silt, no odors
42	NA				SP	no staining. Dry some mottleing present.
						End of Boring

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-06

Project Name & Location	Project Number	Date & Time Started: 6/19/02 07:30		
Gabreski Airport	72708.02.01	Date & Time Completed: 6/19/02 11:40		
Drilling Company	Foreman	Sampler(s)	Sampler Hammer	Drop
Delta Well & Pump	Jim Pederson			
Drilling Equipment	Method	Elevation & Datum	Completion Depth	Rock Depth
Geoprobe	Direct Push			
Bit Size(s)	Core Barrel(s)	Geologist(s)		
2" x 4'	2" X 4'	Michael Mendes		

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION **SB-06(0.25-0.75) Pest/Inorganics @ 12:50**
	LOCATION:					**SURFACE DESCRIPTION:** Grass
0	[X]				10YR(3/2)	6 inches of top soil cover- with grass and vegetation-silt and sand.
	NA	1.5	0.0		SM	
	NA				10YR(4/6)	Rocky-sand and concrete, with dark gravelly sand. Moist
2	NA				SM	
	NA				10YR(3/2)	Silty, fine to medium sand, with trace gravels. No odors and no staining.
	NA	1.5	0.0		SM	
	NA				10YR(3/2)	Silty, fine to medium sand, with trace gravels. No odors and no staining.
4	NA				SM	
	NA				10YR(3/2)	Silty brown fine to medium sand with trace gravels. No odors, no staining,
	NA	2.0	0.0		SM	some mottleing appearace.
	NA				10YR(3/2)	Silty brown fine to medium sand with trace gravels. No odors, no staining,
6	NA				SM	some mottleing appearace.
	NA				10YR(5/6)	lighter brown silts, with fine to medium sand trace gravels. No odors and no
	NA	2.0	0.0		SM	staining. Moist.
	NA				10YR(5/6)	lighter brown silts, with fine to medium sand trace gravels. No odors and no
8	NA				SM	staining. Moist.
	NA				10YR(4/6)	lighter brown silts, with fine to medium sand trace gravels. No odors and no
	NA	2.0	0.0		SM	staining. Moist. Some mottleing present.
	NA				10YR(4/6)	lighter brown silts, with fine to medium sand trace gravels. No odors and no
10	NA				SM	staining. Moist. Some mottleing present.
	NA				10YR(4/4)	Medium sand with some coarse and fines, trace silts. No odors, no staining.
	NA	2.0	0.0		SP	
	NA				10YR(4/4)	Medium sand with some coarse and fines, trace silts. No odors, no staining.
12	NA				SP	
	NA				10YR(6/3)	Medium to coarse sand with trace silts, no odors, no staining.
	NA	2.0	0.0		SP	
	NA				10YR(6/3)	Medium to coarse sand with trace silts, no odors, no staining.
14	NA				SP	
	NA				10YR(6/3)	Medium to coarse sand with trace silts, no odors, no staining.
	NA	2.0	0.0		SP	
	NA				10YR(6/3)	Medium to coarse sand with trace silts, no odors, no staining.
16	NA				SP	
	NA				10YR(6/3)	Medium to coarse sand, sporadic gravels and rounded pebbles, no odors, no
	NA	2.0	0.0		SP	staining, moist.
	NA				10YR(6/3)	Medium to coarse sand, sporadic gravels and rounded pebbles, no odors, no
18	NA				SP	staining, moist.

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-06

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					SURFACE DESCRIPTION: Grass
18	NA	2.0	0.0		10YR(6/3)	Medium to coarse sand, some gravels ranging in size up to one inch in
	NA				SP	diameter.
	NA				10YR(6/3)	Medium to coarse sand, some gravels ranging in size up to one inch in
20	NA				SP	diameter.
	NA	2.0	0.0		10YR(4/3)	Medium to fine sand-trace gravel some mottleing present with darker brown
	NA				SP	sands and silt. Moist, no odors, no staining.
	NA				10YR(4/3)	Medium to fine sand-trace gravel some mottleing present with darker brown
22	NA				SP	sands and silt. Moist, no odors, no staining.
	NA	2.0	0.0		10YR(6/4)	fine to medium sand, trace gravel, stratification present, with iron staining
	NA				SP	present intermittently, moist, no odors, no staining.
	NA				10YR(6/4)	fine to medium sand, trace gravel, stratification present, with iron staining
24	NA				SP	present intermittently, moist, no odors, no staining.
	NA	2.0	0.0		10YR(6/4)	Medium to coarse sand with trace gravel, no odors no staining. Dry.
	NA				SP	
	NA				10YR(6/4)	Medium to coarse sand with trace gravel, no odors no staining. Dry.
26	NA				SP	
	NA	2.0	0.0		10YR(6/4)	Medium to coarse sand with trace gravel, no odors no staining. Dry.
	NA				SP	
	NA				10YR(6/4)	Medium to coarse sand with trace gravel, no odors no staining. Dry.
28	NA				SP	
	NA	2.0	0.0		10YR(6/4)	Medium to coarse sand with some gravels, no odors, no staining, dry.
	NA				SP	
	NA				10YR(6/4)	Medium to coarse sand with some gravels, no odors, no staining, dry.
32	NA				SP	
	NA	NA	NA		NA	No Sample Recovery
	NA				NA	
	NA				NA	
36	NA				NA	
						END OF BORING

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

ERM

Boring Number: SB-07

BORING LOG

Project Name & Location	Project Number	Date & Time Started: 6/20/02 07:35		
Gabreski Airport	72708.02.01	Date & Time Completed: 6/20/02 10:15		
Drilling Company	Foreman	Sampler(s)	Sampler Hammer	Drop
Delta Well & Pump	Jim Pederson			
Drilling Equipment	Method	Elevation & Datum	Completion Depth	Rock Depth
Geoprobe	Direct Push			
Bit Size(s)	Core Barrel(s)	Geologist(s)		
2" x 4'	2" X 4'	Michael Mendes		

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION **SB-07(0.25-0.75) Pest/Inorganics @ 0749**
	LOCATION:					**SURFACE DESCRIPTION:** Grass
0	[X]	2.0	0.0		10YR(2/2) SM	6 to 10 inches of top soil cover and very silty sand.
	NA					
	NA				10YR(2/2) SM	Fine to medium grained sand and trace gravel, no odors and no staining.
2	NA					
	NA	1.5	0.0		10YR(3/2) SM	Medium to coarse sand and gravel, no odors and no staining.
	NA					
	NA				10YR(3/2) SM	Medium to coarse sand and gravel, no odors and no staining.
4	NA					
	NA	2.0	0.0		10YR(3/2) SM	Fine to medium sand, fairly well sorted trace gravels, trace silts, no odors, no staining, moist.
	NA					
	NA				10YR(5/4) SP	Fine to medium sand, fairly well sorted trace gravels, trace silts, no odors, no staining, moist.
6	NA					
	NA	1.8	0.0		10YR(5/4) SP	Fine to medium sand, fairly well sorted trace gravels, trace silts, no odors, no staining, moist.
	NA					
	NA				10YR(5/4) SP	Fine to medium sand, fairly well sorted trace gravels, trace silts, no odors, no staining, moist.
8	NA					
	NA	2.0	0.0		10YR(6/4) SP	Fine to medium sand with trace of coarse sand and gravels, little to no silts, no odors and no staining.
	NA					
	NA				10YR(6/4) SP	Fine to medium sand with trace of coarse sand and gravels, little to no silts, no odors and no staining.
10	NA					
	NA	2.0	0.0		10YR(6/4) SP	Fine to medium sand with trace of coarse sand and gravels, little to no silts, no odors and no staining.
	NA					
	NA				10YR(6/4) SP	Fine to medium sand with trace of coarse sand and gravels, little to no silts, no odors and no staining.
12	NA					
	NA	2.0	0.0		10YR(6/4) SP	Fine to medium sand and trace of gravels and coarse sand, No odors, no staining, moist.
	NA					
	NA				10YR(6/4) SP	Fine to medium sand and trace of gravels and coarse sand, No odors, no staining, moist.
14	NA					
	NA	2.0	0.0		10YR(6/4) SP	Fine to medium sand and trace of gravels and coarse sand, No odors, no staining, moist.
	NA					
	NA				10YR(6/4) SP	Fine to medium sand and trace of gravels and coarse sand, No odors, no staining, moist.
16	NA					
	NA	2.0	0.0		10YR(6/4) SP	Fine to medium sand and trace of gravels and coarse sand, No odors, no staining, moist.
	NA					
	NA				10YR(6/4) SP	Fine to medium sand and trace of gravels and coarse sand, No odors, no staining, moist.
18	NA					

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number SB-07

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION **SB-07(27-28) SVOC, VOC & Tal Inorganics @09:37**
	LOCATION:					**SURFACE DESCRIPTION:** Grass
18	NA	2.0	0.0		10YR(6/4)	Medium to coarse sand and gravel with rounded pebbles. No odors, no
	NA				SP	staining, moist.
	NA				10YR(6/4)	Medium to coarse sand and gravel with rounded pebbles. No odors, no
20	NA				SP	staining, moist.
	NA	2.0	0.0		10YR(6/4)	Medium to coarse sand and gravel with trace pebbles, no odors no staining.
	NA				SP	Moist.
	NA				10YR(6/4)	Medium to coarse sand and gravel with trace pebbles, no odors no staining.
22	NA				SP	Moist.
	NA	2.0	0.0		10YR(6/4)	Medium to coarse sand and gravel with trace pebbles, no odors no staining.
	NA				SP	Moist.
	NA				10YR(6/4)	Medium to coarse sand and gravel with trace pebbles, no odors no staining.
24	NA				SP	Moist.
	NA	2.0	0.0		10YR(4/3)	Fine to medium sand, trace to no gravel, no odors, no pebbles, moist.
	NA				SW	
	NA				10YR(4/3)	Fine to medium sand, trace to no gravel, no odors, no pebbles, moist.
26	NA				SW	
	NA	2.0	0.0		10YR(5/2)	Fine to medium sand, trace to no gravel, no odors, no pebbles, moist.
	NA				SW	
	~~Sample~~				10YR(5/2)	Fine to medium sand, trace to no gravel, no odors, no pebbles, moist.
28	~~Sample~~				SW	
	NA	NS	NS		NA	No Sample Recovery
	NA				NA	
	NA				NA	No Sample Recovery
32	NA				NA	
	NA	0.5	0.0		10YR(6/4)	Medium to coarse sand and some gravel, trace rounded pebbles, no odors
	NA				SW	no staining, Ground water saturated at this depth.
	NA				10YR(6/4)	Medium to coarse sand and some gravel, trace rounded pebbles, no odors
34	NA				SW	no staining, Ground water saturated at this depth.
	NA	0.5	0.0		10YR(6/4)	Medium to coarse sand and some gravel, trace rounded pebbles, no odors
	NA				SW	no staining, Ground water saturated at this depth.
	NA				10YR(6/4)	Medium to coarse sand and some gravel, trace rounded pebbles, no odors
36	NA				SW	no staining, Ground water saturated at this depth.
						END OF BORING

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

ERM

Boring Number SB-08

BORING LOG

Project Name & Location	Project Number	Date & Time Started: 6/20/02 11:18		
Gabreski Airport	72708.02.01	Date & Time Completed: 6/20/02 14:55		
Drilling Company	Foreman	Sampler(s)	Sampler Hammer	Drop
Delta Well & Pump	Jim Pederson			
Drilling Equipment	Method	Elevation & Datum	Completion Depth	Rock Depth
Geoprobe	Direct Push			
Bit Size(s)	Core Barrel(s)	Geologist(s)		
2" x 4'	2" X 4'	Michael Mendes		

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					SURFACE DESCRIPTION: Grass
0		1.5	0.0		10YR(3/3)	6 to 9 inches of top soil cover with some vegetation, silts fine sand and silt
	NA				SM	no odors and no staining.
	NA				10YR(3/3)	Fine to medium granined sand with some silts, gravels up to one inch in
2	NA				SM	diameter.
	NA	1.5	0.0		10YR(5/6)	Fine to medium granined sand with some silts, gravels up to one inch in
	NA				SP/SM	diameter.
	NA				10YR(5/6)	Fine to medium granined sand with some silts, gravels up to one inch in
4	NA				SP/SM	diameter.
	NA	2.0	0.0		10YR(6/3)	Well graded medium sand, trace gravel and rounded pebbles. No odors and
	NA				SW	no staining-dry.
	NA				10YR(6/3)	Well graded medium sand, trace gravel and rounded pebbles. No odors and
6	NA				SW	no staining-dry.
	NA	2.0	0.0		10YR(6/3)	Well graded medium sand, trace gravel and rounded pebbles. No odors and
	NA				SW	no staining-dry.
	NA				10YR(6/3)	Well graded medium sand, trace gravel and rounded pebbles. No odors and
8	NA				SW	no staining-dry.
	NA	2.0	0.0		10YR(6/3)	Fine to medium sand, trace gravels, trace rounded pebbles, no odors, no
	NA				SW	staining, moist, stratification present with iron staining in areas.
	NA				10YR(6/3)	Fine to medium sand, trace gravels, trace rounded pebbles, no odors, no
10	NA				SW	staining, moist, stratification present with iron staining in areas.
	NA	2.0	0.0		10YR(6/3)	Fine to medium sand, trace gravels, trace rounded pebbles, no odors, no
	NA				SW	staining, moist, stratification present with iron staining in areas.
	NA				10YR(6/3)	Fine to medium sand, trace gravels, trace rounded pebbles, no odors, no
12	NA				SW	staining, moist, stratification present with iron staining in areas.
	NA	2.0	0.0		10YR(6/3)	Medium sand-with rounded pebbles-and gravels. No odors, no staining, moist
	NA				SW	
	NA				10YR(6/3)	Medium sand-with rounded pebbles-and gravels. No odors, no staining, moist
14	NA				SW	
	NA	2.0	0.0		10YR(6/3)	Medium sand-with rounded pebbles-and gravels. No odors, no staining, moist
	NA				SW	
	NA				10YR(6/3)	Medium sand-with rounded pebbles-and gravels. No odors, no staining, moist
16	NA				SW	
	NA	2.0	0.0		10YR(6/4)	Fine to medium sand, little gravel, trace of silts, no odors no staining present.
	NA				SW	Moist.
	NA				10YR(6/4)	Fine to medium sand, little gravel, trace of silts, no odors no staining present.
18	NA				SW	Moist.

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-08

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION **SB-08(35-36) SVOC, VOC & Tal Inorganics @09:37**
	LOCATION:					**SURFACE DESCRIPTION:** Grass
18	NA	2.0	0.0		10YR(6/4)	Fine to medium sand, little gravel, trace of silts, no odors no staining present.
	NA				SW	Moist.
	NA				10YR(6/4)	Fine to medium sand, little gravel, trace of silts, no odors no staining present.
20	NA				SW	Moist.
	NA	2.0	0.0		10YR(6/3)	Fine to medium sand with little to trace gravels, trace silts, no odors, no
	NA				SW	staining, moist.
	NA				10YR(6/3)	Fine to medium sand with little to trace gravels, trace silts, no odors, no
22	NA				SW	staining, moist.
	NA	2.0	0.0		10YR(6/3)	Coarse sand and gravel with trace fines, no odors and no staining moist.
	NA				SP	
	NA				10YR(6/3)	Coarse sand and gravel with trace fines, no odors and no staining moist.
24	NA				SW	
	NA	2.0	0.0		10YR(5/3)	Fine to medium sand, some very fine sand, trace coarse sand and medium to
	NA				SW	coarse sand, no odors and no staining.
	NA				10YR(5/3)	Fine to medium sand, some very fine sand, trace coarse sand and medium to
26	NA				SW	coarse sand, no odors and no staining.
	NA	1.5	0.0		10YR(5/3)	V. Fine to medium sand, some very fine sand, trace coarse sand and medium to
	NA				SW	coarse sand, no odors and no staining.
	NA				10YR(5/3)	V. Fine to medium sand, some very fine sand, trace coarse sand and medium to
28	NA				SW	coarse sand, no odors and no staining.
	NA	NS	NS		NA	No Sample Recovery
	NA				NA	
	NA				NA	No Sample Recovery
32	NA				NA	
	NA	2.0	0.0		10YR(6/3)	Fine to medium sand, some very fine sand, no odors, no staining, dry, trace
	NA				SW	gravels.
	NA				10YR(6/3)	Fine to medium sand, some very fine sand, no odors, no staining, dry, trace
34	NA				SW	gravels.
	NA	2.0	0.0		10YR(6/3)	Fine to medium sand, some very fine sand, no odors, no staining, dry, trace
	NA				SW	gravels.
	~~Sample~~				10YR(6/3)	Fine to medium sand, some very fine sand, no odors, no staining, dry, trace
36					SW	gravels.
						END OF BORING

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

ERM

Boring Number SB-09

BORING LOG

Project Name & Location	Project Number	Date & Time Started: 7/11/02 06:56		
Gabreski Airport	72708.02.01	Date & Time Completed: 7/11/02 10:55		
Drilling Company	Foreman	Sampler(s)	Sampler Hammer	Drop
Delta Well & Pump	Jim Pederson			
Drilling Equipment	Method	Elevation & Datum	Completion Depth	Rock Depth
Geoprobe	Direct Push			
Bit Size(s)	Core Barrel(s)	Geologist(s)		
2" x 4'	2" X 4'	Michael Mendes		

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					**SURFACE DESCRIPTION:** Grass
0		1.5	0.0		10YR(5/2)	Dry top soil with vegetation, rounded gravels, silty fine to medium sand, no
	NA				SM/Fill	odors, no staining.
	NA				10YR(5/3)	Dry silty fine, medium and coarse sand with gravels, no odors, no staining.
2	NA				SM/Fill	
	NA	1.5	0.0		10YR(5/4)	Dry silty fine, medium and coarse sand with gravels, no odors, no staining.
	NA				SM/Fill	
	NA				10YR(6/3)	Dry silty fine, medium and coarse sand with gravels, no odors, no staining.
4	NA				SM/Fill	
	NA	1.5	0.2		10YR(7/3)	Fine to medium sand with some coarse sand and gravels, no odors, no staining
	NA				SM/Fill	
	NA				10YR(7/3)	Fine to medium sand with trace silts, no odors, no staining, moist.
6	NA				SM/Fill	
	NA	1.5	0.0		10YR(7/3)	Fine to medium sand with trace silts, no odors, no staining moist.
	NA				SM/Fill	
	NA				10YR(7/3)	Fine to medium sand with trace silts, no odors, no staining moist.
8	NA				SM/Fill	
	NA	1.5	0.3		10YR(4/3)	Silty fine to medium sand- no staining, no odors, tiles seen in the soil.
	NA				SP/SM/Fill	
	NA				10YR(4/3)	Silty fine to medium sand- no staining, no odors, tiles seen in the soil.
10	NA				SP/SM/Fill	
	NA	1.5	0.0		10YR(4/3)	Silty fine to medium sand- no staining, no odors, tiles seen in the soil.
	NA				SP/SM/Fill	
	NA				10YR(4/3)	Silty fine to medium sand- no staining, no odors, tiles seen in the soil.
12	NA				SP/SM/Fill	
	NA	1.5	0.6		10YR(7/3)	Medium sand-with rounded pebbles-and gravels. No odors, no staining, moist
	NA				SP/SW	
	NA				10YR(7/3)	Medium sand-with rounded pebbles-and gravels. No odors, no staining, moist
14	NA				SP/SW	
	NA	1.5	0.4		10YR(7/3)	Medium sand-with rounded pebbles-and gravels. No odors, no staining, moist
	NA				SP/SW	
	NA				10YR(7/3)	Medium sand-with rounded pebbles-and gravels. No odors, no staining, moist
16	NA				SW	
	NA	1.5	0.2		10YR(6/3)	Fine to medium sand with some coarse sand and gravels, trace silts, no odors
	NA				SP	no staining, some stratification present, with greater silt content.
	NA				10YR(6/3)	Fine to medium sand with some coarse sand and gravels, trace silts, no odors
18	NA				SP	no staining, some stratification present, with greater silt content.

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-09

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION **SB-09(39-41) SVOC, VOC & Tal Inorganics @09:37**
	LOCATION:					**SURFACE DESCRIPTION:** Grass
18	NA				10YR(6/3)	Fine to medium sand with some coarse sand and gravels, trace silts, no odors
	NA	2.0	0.1		SP	no staining, some stratification present, with greater silt content.
	NA				10YR(6/3)	Fine to medium sand with some coarse sand and gravels, trace silts, no odors
20	NA				SP	no staining, some stratification present, with greater silt content.
	NA				10YR(6/4)	Fine to medium sand with trace rounded gravels and trace silts, moist with
	NA	1.5	0.2		SP	stratification, with greater silt content and iron staining. No odors no staining.
	NA				10YR(6/4)	Fine to medium sand with trace rounded gravels and trace silts, moist with
22	NA				SP	stratification, with greater silt content and iron staining. No odors no staining.
	NA				10YR(6/4)	Fine to medium sand with trace rounded gravels and trace silts, moist with
	NA	1.5	0.2		SP	stratification, with greater silt content and iron staining. No odors no staining.
	NA				10YR(6/4)	Fine to medium sand with trace rounded gravels and trace silts, moist with
24	NA				SP	stratification, with greater silt content and iron staining. No odors no staining.
	NA				10YR(6/3)	Fine to medium sand with some very fine sand and trace silts, moist with
	NA	1.0	0.4		SP	stratification, composed of finer sands and silts, iron staining present.
	NA				10YR(6/3)	Fine to medium sand with some very fine sand and trace silts, moist with
26	NA				SW	stratification, composed of finer sands and silts, iron staining present.
	NA				10YR(6/3)	Fine to medium sand with some very fine sand and trace silts, trace of rounded
	NA	1 0	0.3		SW	gravels, trace pebble and iron staining.
	NA				10YR(6/3)	Fine to medium sand with some very fine sand and trace silts, trace of rounded
28	NA				SW	gravels, trace pebble and iron staining.
	NA				10YR(6/2)	Fine to medium sand with some coarse sand and rounded gravels, some iron
	NA	2.0	0.1		SP	staining found at local intervals of one inch thick with high iron content stones.
	NA				10YR(6/2)	Fine to medium sand with some coarse sand and rounded gravels, some iron
30	NA				SP	staining found at local intervals of one inch thick with high iron content stones.
	NA				10YR(6/2)	Same as above with additional stratification present with silty and fine sand
	NA	2.0	0.2		SW	areas. No odors, no staining, moist.
	NA				10YR(6/2)	Same as above with additional stratification present with silty and fine sand
32	NA				SW	areas. No odors, no staining, moist.
	NA				10YR(6/2)	Fine to medium sand and trace coarse sand and gravels, no odors, no staining,
	NA	1.5	0.3		SW	moist, light iron staining in areas.
	NA				10YR(6/2)	Fine to medium sand and trace coarse sand and gravels, no odors, no staining,
34	NA				SW	moist, light iron staining in areas.
	NA				10YR(6/2)	Fine to medium sand and trace coarse sand and gravels, no odors, no staining,
	NA	1.5	0.3		SW	moist, light iron staining in areas.
	NA				10YR(6/2)	Fine to medium sand and trace coarse sand and gravels, no odors, no staining,
36	NA				SW	moist, light iron staining in areas.
39					10YR(6/3)	Fine to medium sand with trace rounded gravels and coarse sand, no odors
	Sample	2.0	0.3		SW	iron staining localized with siltier material,
					10YR(6/3)	GW at ~41 ft
41					SW	

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-10

Project Name & Location	Project Number	Date & Time Started: 7/11/02 11:20		
Gabreski Airport	72708.02.01	Date & Time Completed: 7/11/02 14:30		
Drilling Company	Foreman	Sampler(s)	Sampler Hammer	Drop
Delta Well & Pump	Jim Pederson			
Drilling Equipment	Method	Elevation & Datum	Completion Depth	Rock Depth
Geoprobe	Direct Push			
Bit Size(s)	Core Barrel(s)	Geologist(s)		
2" x 4'	2" X 4'	Michael Mendes		

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION **SB-10(0.0-0.5) @11:20 for TCL Pest and TAL Inorganics**
	LOCATION:					**SURFACE DESCRIPTION:** Grass
0	~~Sample~~				10YR(4/2)	Very dry brown top soil with some vegetation on the surface, loose granular
	NA	2.0	2.2		SM	fine to medium sand and silt. Trace rounded gravels, no odors, no staining.
	NA				10YR(4/2)	Silty fine to medium sand with some coarse sand and gravels, no odors, no
2	NA				SM	staining moist. Lightly iron stained.
	NA				10YR(6/3)	Silty fine to medium sand with some coarse sand and gravels, no odors, no
	NA	1.5	3.8		SM	staining moist. Lightly iron stained.
	NA				10YR(6/4)	Silty fine to medium sand with some coarse sand and gravels, no odors, no
4	NA				SP/SM	staining moist. Lightly iron stained.
	NA				10YR(6/3)	Fine to medium sand and some coarse sand with rounded and subrounded
	NA	1.5	5.5		SP	gravels, no odors evident, no staining.
	NA				10YR(6/3)	Fine to medium sand and some coarse sand with rounded and subrounded
6	NA				SP	gravels, no odors evident, no staining.
	NA				10YR(6/3)	Fine to medium sand and some coarse sand with rounded and subrounded
	NA	1.5	4.2		SP	gravels, no odors evident, no staining.
	NA				10YR(6/3)	Fine to medium sand and some coarse sand with rounded and subrounded
8	NA				SP	gravels, no odors evident, no staining.
	NA				10YR(6/3)	Fine to medium sand with some to trace coarse sand and gravels (rounded and
	NA	2.0	3.6		SM	sub rounded gravels). No odors, No staining, Moist.
	NA				10YR(6/3)	Fine to medium sand with some to trace coarse sand and gravels (rounded and
10	NA				SM	sub rounded gravels). No odors, No staining, Moist.
	NA				10YR(6/3)	Fine to medium sand, with some to trace coarse sand and gravels, No odors
	NA	1.5	3.7		SM	and no staining, mottleing present, trace silts.
	NA				10YR(6/3)	Fine to medium sand, with some to trace coarse sand and gravels, No odors
12	NA				SP	and no staining, mottleing present, trace silts.
	NA				10YR(5/4)	Fine to medium sand with some very fine sand, trace coarse sand and gravels,
	NA	1.0	2.2		SM	moist, no odors, no staining.
	NA				10YR(5/4)	Fine to medium sand with some very fine sand, trace coarse sand and gravels,
14	NA				SM	moist, no odors, no staining
	NA				10YR(5/4)	Fine to medium sand well sorted, trace coarse sand and gravels, moist no odors
	NA	1.0	1.3		SW	no staining, trace silts.
	NA				10YR(5/4)	Fine to medium sand well sorted, trace coarse sand and gravels, moist no odors
16	NA				SW	no staining, trace silts.
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravels, trace V. fine sand and
	NA	1.0	0.6		SP	silts, no odors and no staining.
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravels, trace V. fine sand and
18	NA				SP	silts, no odors and no staining.

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number SB-10

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION **SB-10(27-28) SVOC, VOC & Tal Inorganics @13:33**
	LOCATION:					**SURFACE DESCRIPTION:** Grass
18	NA	1.0	0.0		10YR(6/4)	Fine to medium sand with some coarse sand and gravels, trace V. fine sand and
	NA				SP	silts, no odors and no staining.
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravels, trace V. fine sand and
20	NA				SP	silts, no odors and no staining.
	NA	0.5	2.6		10YR(6/4)	Fine to medium sand with some coarse sand and gravels, trace V. fine sand and
	NA				SP	rounded pebbles. No odors, No staining moist.
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravels, trace V. fine sand and
22	NA				SP	rounded pebbles. No odors, No staining moist.
	NA	0.5	2.8		10YR(6/4)	Fine to medium sand with some coarse sand and gravels, trace V. fine sand and
	NA				SP	rounded pebbles. No odors, No staining moist.
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravels, trace V. fine sand and
24	NA				SP	rounded pebbles. No odors, No staining moist.
	NA	1.5	6.7		10YR(5/6)	Fine to medium sand, with trace very fine sand, trace mica and silts, some
	NA				SP	coarse sand with gravels, no odors no staining moist.
	NA				10YR(5/6)	Fine to medium sand, with trace very fine sand, trace mica and silts, some
26	NA				SP	coarse sand with gravels, no odors no staining moist.
	NA	1.5	8.9		10YR(5/6)	Fine to medium sand and gravel, with trace V. fine sand and silts, some coarse
	NA				SP	sand and gravel, no odors, no staining, moist
	NA				10YR(5/6)	Fine to medium sand and gravel, with trace V. fine sand and silts, some coarse
28	NA				SP	sand and gravel, no odors, no staining, moist.
						End Of Boring

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

ERM

Boring Number: SB-11

BORING LOG

Project Name & Location	Project Number	Date & Time Started: 7/10/02 12:08
Gabreski Airport	**72708.02.01**	Date & Time Completed: 7/11/02 15:00
Drilling Company: Delta Well & Pump	Foreman: Jim Pederson	Sampler(s) / Sampler Hammer / Drop
Drilling Equipment: Geoprobe	Method: Direct Push	Elevation & Datum / Completion Depth / Rock Depth
Bit Size(s): 2" x 4'	Core Barrel(s): 2" X 4'	Geologist(s): Michael Mendes

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION **SB-11(0.0-0.5) @12:08 for TCL Pest and TAL Inorganics**
	LOCATION:					**SURFACE DESCRIPTION:** Grass
0	~~Sample~~	1.5	1.0		10YR(6/3) SM	Fine to medium sand-and silts, very dry, no odors, no staining.
	NA					
	NA				10YR(6/3) SM	Fine to medium sand with some silts, no odors and no staining.
2	NA					
	NA	1.5	1.2		10YR(4/4) SM	Fine to medium
	NA					staining moist. Lightly iron stained.
	NA				10YR(4/4) SM	Silty fine to medium sand with some coarse sand and gravels, no odors, no
4	NA					staining moist. Lightly iron stained.
	NA	1.0	2.5		10YR(5/4) SP	Fine to medium sand and some coarse sand with rounded and subrounded
	NA					gravels, no odors evident, no staining.
	NA				10YR(5/4) SP	Fine to medium sand and some coarse sand with rounded and subrounded
6	NA					gravels, no odors evident, no staining.
	NA	1.0	2.6		10YR(5/4) SP	Fine to medium sand and some coarse sand with rounded and subrounded
	NA					gravels, no odors evident, no staining.
	NA				10YR(5/4) SP	Fine to medium sand and some coarse sand with rounded and subrounded
8	NA					gravels, no odors evident, no staining.
	NA	1.5	0.0		10YR(6/3) SP	Fine to medium sand with some to trace coarse sand and gravels (rounded and
	NA					sub rounded gravels). No odors. No staining, Moist.
	NA				10YR(6/3) SP	Fine to medium sand with some to trace coarse sand and gravels (rounded and
10	NA					sub rounded gravels). No odors, No staining, Moist.
	NA	1.5	0.0		10YR(6/3) SP	Fine to medium sand, with some to trace coarse sand and gravels, No odors
	NA					and no staining, mottleing present, trace silts.
	NA				10YR(6/3) SP	Fine to medium sand, with some to trace coarse sand and gravels, No odors
12	NA					and no staining, mottleing present, trace silts.
	NA	1.5	0.0		10YR(6/3) SP	Fine to medium sand with some very fine sand, trace coarse sand and gravels,
	NA					moist, no odors, no staining.
	NA				10YR(6/3) SP	Fine to medium sand with some very fine sand, trace coarse sand and gravels,
14	NA					moist, no odors, no staining.
	NA	1.5	0.0		10YR(6/3) SP	Fine to medium sand well sorted, trace coarse sand and gravels, moist no odors
	NA					no staining, trace silts.
	NA				10YR(6/3) SP	Fine to medium sand well sorted, trace coarse sand and gravels, moist no odors
16	NA					no staining, trace silts.
	NA	1.5	0.0		10YR(6/3) SP	Fine to medium sand with some coarse sand and gravels, trace V. fine sand and
	NA					silts, no odors and no staining.
	NA				10YR(6/3) SP	Fine to medium sand with some coarse sand and gravels, trace V. fine sand and
18	NA					silts, no odors and no staining.

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-11

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-11(27-28) SVOC, VOC & Tal Inorganics @13:30
	LOCATION:					SURFACE DESCRIPTION: Grass
18	NA	1.5	0.0		10YR(6/3)	Fine to medium sand with some coarse sand and gravels, trace V. fine sand and
	NA				SP	silts, no odors and no staining.
	NA				10YR(6/3)	Fine to medium sand with some coarse sand and gravels, trace V. fine sand and
20	NA				SP	silts, no odors and no staining.
	NA	1.5	0.0		10YR(6/3)	Fine to medium sand with some coarse sand and gravels, trace silts
	NA				SP	no odors and no staining.
	NA				10YR(6/3)	Fine to medium sand with some coarse sand and gravels, trace silts
22	NA				SP	no odors and no staining. Some stratification with greater silts.
	NA	1.5	0.0		10YR(6/3)	Fine to medium sand with some coarse sand and gravels, trace silts
	NA				SP	no odors and no staining.
	NA				10YR(6/3)	Fine to medium sand with some coarse sand and gravels, trace silts
24	NA				SP	no odors and no staining.
	NA	1.5	0.0		10YR(6/3)	Fine to medium sand with some coarse sand and gravels
	NA				SP	no odors and no staining. Moist
	NA				10YR(6/3)	Fine to medium sand with some coarse sand and gravels
26	NA				SP	no odors and no staining. Moist
	NA	1.5	0.0		10YR(6/3)	Fine to medium sand with some coarse sand and gravels
	NA				SP	no odors and no staining. Moist
	NA				10YR(6/3)	Fine to medium sand with some coarse sand and gravels
28	NA				SP	no odors and no staining. Moist
						End Of Boring

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

ERM

BORING LOG

Boring Number: SB-12

Project Name & Location	Project Number	Date & Time Started: 7/10/02 12:08		
Gabreski Airport	72708.02.01	Date & Time Completed: 7/11/02 15:00		
Drilling Company	Foreman	Sampler(s)	Sampler Hammer	Drop
Delta Well & Pump	Jim Pederson			
Drilling Equipment	Method	Elevation & Datum	Completion Depth	Rock Depth
Geoprobe	Direct Push			
Bit Size(s)	Core Barrel(s)	Geologist(s)		
2" x 4'	2" X 4'	Michael Mendes		

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION **SB-11(0.0-0.5) @11:08 for TCL Pest and TAL Inorganics**
	LOCATION:					
0	~~Sample~~				10YR(4/2)	Top 6"-9" top soil w/ some vegetation - med sand
	NA	2.0	0.0		SM	The med to coarse sand with silts and some gravel trace rounded pebbles
	NA				10YR(4/2)	Top 6"-9" top soil w/ some vegetation - med sand
2	NA				SM	The med to coarse sand with silts and some gravel trace rounded pebbles
	NA				10YR(6/4)	Med to coarse sand with silts and some gravel, no odors no staining
	NA	2.0	0.0		SM	
	NA				10YR(6/3)	Med to coarse sand with silts and some gravel, no odors no staining
4	NA				SM	
	NA				10YR(6/3)	Fine to medium coarse sand, tace gravels and small rounded pebbles
	NA	2.0	0.0		SP	No odors, no staining. Moist
	NA				10YR(6/3)	Fine to medium coarse sand, tace gravels and small rounded pebbles
6	NA				SP	No odors, no staining. Moist
	NA				10YR(6/3)	Fine to medium coarse sand, tace gravels and small rounded pebbles
	NA	2.0	0.0		SP	No odors, no staining.
	NA				10YR(6/3)	Fine to medium coarse sand, tace gravels and small rounded pebbles
8	NA				SP	No odors, no staining.
	NA				10YR(6/3)	Fine-med coarse sand, poorly sorted. Some gravels and small rounded pebbles.
	NA	2.0	0.0		SP	No odors, iron staining present at intervals
	NA				10YR(6/3)	Fine-med coarse sand, poorly sorted. Some gravels and small rounded pebbles.
10	NA				SP	No odors, iron staining present at intervals
	NA				10YR(6/3)	Fine-med coarse sand, poorly sorted. Some gravels and small rounded pebbles.
	NA	1.5	0.0		SP	No odors, iron staining present at intervals
	NA				10YR(6/3)	Fine-med coarse sand, poorly sorted. Some gravels and small rounded pebbles.
12	NA				SP	No odors, iron staining present at intervals
	NA				10YR(6/4)	Fine to medium sand, some intervals of coarse sand with gravels. Intermittent
	NA	1.5	0.0		SP	rounded pebbles up to 1 inch diameter. No odors, no staining, slight iron staining
	NA				10YR(6/4)	Fine to medium sand, some intervals of coarse sand with gravels. Intermittent
14	NA				SP	rounded pebbles up to 1 inch diameter. No odors, no staining, slight iron staining
	NA				10YR(6/4)	Fine to medium sand, some coarse sand and gravel, stratificatin and silty
	NA	1.5	0.0		SP	layers present. No odors, no staining, Moist.
	NA				10YR(6/4)	Fine to medium sand, some coarse sand and gravel, stratificatin and silty
16	NA				SP	layers present. No odors, no staining, Moist.
	NA				10YR(6/3)	Intervals of fine sand and coarse sand with gravels with intermittent
	NA	1.5	0.0		SP	small rounded pebbles, no odors, no staining. Moist.
	NA				10YR(6/3)	Intervals of fine sand and coarse sand with gravels with intermittent
18	NA				SP	small rounded pebbles, no odors, no staining. Moist.

Signature: _____ Date: 6/21/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

Boring Number: SB-12

BORING LOG

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB=12 (36-37) @ 1524 VOC, 5
	LOCATION:					SURFACE DESCRIPTION: Grass
18	NA	1.1	0.0		10YR(6/3)	Intervals of fine sand, med sand and coarse sand with gravels with intennittent
	NA				SP	small rounded pebbles, No odors No staining. Moist
	NA				10YR(6/3)	Intervals of fine sand, med sand and coarse sand with gravels with intermittent
20	NA				SP	small rounded pebbles, No odors No staining. Moist
	NA	1.0	0.0		10YR(6/3)	Fine to med sand matrix, Intervals at coarse sand and gravel encountered moist,
	NA				SP	slight iron staining
	NA				10YR(6/3)	Fine to med sand matrix, Intervals at coarse sand and gravel encountered moist,
22	NA				SP	slight iron staining
	NA	1.0	0.0		10YR(6/3)	Fine to med sand matrix, Intervals at coarse sand and gravel encountered moist,
	NA				SP	slight iron staining
	NA				10YR(6/3)	Fine to med sand matrix, Intervals at coarse sand and gravel encountered moist,
24	NA				SP	slight iron staining
	NA	2.0	0.0		10YR(6/3)	Med to coarse sand, with silts present. No odors, stratifreation, mottlery, moist
	NA				SP	
	NA				10YR(6/3)	Med to coarse sand, with silts present. No odors, stratifreation, mottlery, moist
26	NA				SP	
	NA	2.0	0.0		10YR(6/3)	Silts and fine sand high mica content. Trace coarse sand, No odors or staining
	NA				SP	
	NA				10YR(6/7)	Fine to medium sand, some silts trace gravels, trace rounded pebbles, moist
28	NA				SP	sand and gravel, no odors, no staining, moist.
	NA	2.0	0.0		10YR(6/3)	Medium to coarse sand and gravel with little to trace silts, no odors, no staining
	NA				SP	
	NA				10YR(6/3)	Very fine to fine sand and silt, trace gravel, trace rounded pebbles.
30	NA				SP	
	NA	2.0	0.0		10YR(6/3)	Medium to coarse sand and gravel with little to trace silts, no odors, no staining
	NA				SP	
	NA				10YR(6/3)	Very fine to fine sand and silt, trace gravel, trace rounded pebbles.
32	NA				SP	
	NA	1.0	0.0		10YR(6/3)	Medium to coarse sand and gravel with little to trace silts, no odors, no staining
	NA				SP	
	NA				10YR(6/3)	Very fine to fine sand and silt, trace gravel, trace rounded pebbles.
34	NA					
	NA	1.0	0.0		10YR(6/3)	Medium to coarse sand and gravel with little to trace silts, no odors, no staining
	NA					
	NA				10YR(6/3)	Very fine to fine sand and silt, trace gravel, trace rounded pebbles.
36	NA					
	NA	2.0	0.0		10YR(6/3)	Medium to coarse sand and gravel with little to trace silts, no odors, no staining
	NA					
	NA				10YR(6/3)	Very fine to fine sand and silt, trace gravel, trace rounded pebbles.
38	NA					

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-13

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					
0	~~NA~~				10YR(3/2)	Top 6"-9" are brown top soil with vegetations
	NA	1.5	0.0		SM	
	NA				10YR(3/2)	Medium to coarse sand with silts and fine sands, no odors, no staining
2	NA				SM	
	NA				10YR(5/6)	Medium to coarse sand. Some silt, trace of gravels. Small rounded pebbles
	NA	1.5	0.0		SM	
	NA				10YR(5/6)	Medium to coarse sand. Some silt, trace of gravels. Small rounded pebbles
4	NA				SM	
	NA				10YR(6/4)	Medium to coarse sand, some fines, little gravel and rounded pebbles,.
	NA	1.5	0.0		SP	No odors, no staining. Moist
	NA				10YR(6/4)	Medium to coarse sand, some fines, little gravel and rounded pebbles,.
6	NA				SP	No odors, no staining. Moist
	NA				10YR(6/4)	Medium to coarse sand, some fines, little gravel and rounded pebbles,.
	NA	1.5	0.0		SP	No odors, no staining, moist
	NA				10YR(6/4)	Medium to coarse sand, some fines, little gravel and rounded pebbles,.
8	NA				SP	No odors, no staining, moist
	NA				10YR(6/2)	Fine to medium sand, trace grave, trace silts, no odors, no staining, moist
	NA	1.5	0.0		SW	
	NA				10YR(6/2)	Fine to medium sand, trace grave, trace silts, no odors, no staining, moist
10	NA				SW	
	NA				10YR(6/2)	Fine to medium sand, trace grave, trace silts, no odors, no staining, moist
	NA	2.0	0.0		SW	
	NA				10YR(6/2)	Fine to medium sand, trace grave, trace silts, no odors, no staining, moist
12	NA				SW	
	NA				10YR(6/2)	Fine to medium sand, trace of gravel, rounded pebbles present, iron staining
	NA	1.5	0.0		SP	present, with mottlery
	NA				10YR(6/2)	Fine to medium sand, trace of gravel, rounded pebbles present, iron staining
14	NA				SP	present, with mottlery
	NA				10YR(6/2)	Fine to medium sand, trace of gravel, rounded pebbles present, iron staining
	NA	1.5	0.0		SP	present, with mottlery
	NA				10YR(6/2)	Fine to medium sand, trace of gravel, rounded pebbles present, iron staining
16	NA				SP	present, with mottlery
	NA				10YR(7/3)	Fine to medium sand, trace of gravel, iron stained areas, trace of rounded pebbles
	NA	2.0	0.0		SP	
	NA				10YR(7/3)	Fine to medium sand, trace of gravel, iron stained areas, trace of rounded pebbles
18	NA				SP	

Signature: _____ Date: 6/21/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number SB-13

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					
18	~~NA~~				10YR(7/3)	Fine to medium sand, trace of gravel, iron stained areas, trace of rounded pebbles
	NA	2.0	0.0		SP	No odors, no staining
	NA				10YR(7/3)	Fine to medium sand, trace of gravel, iron stained areas, trace of rounded pebbles
20	NA				SP	No odors, no staining, moist
	NA				10YR(6/3)	Fine to medium sand, some gravel stones, stratification, mottling present
	NA	2.0	0.0		SP	No odors, no staining, moist, iron stained 1/4 " zones.
	NA				10YR(6/3)	Fine to medium sand, some gravel stones, stratification, mottling present
22	NA				SP	No odors, no staining, moist, iron stained 1/4 " zones.
	NA				10YR(6/3)	Fine to medium sand, some gravel stones, stratification, mottling present
	NA	2.0	0.0		SP	No odors, no staining. Moist
	NA				10YR(6/3)	Fine to medium sand, some gravel stones, stratification, mottling present
24	NA				SP	No odors, no staining. Moist
	NA				10YR(6/3)	Fine to medium sand, trace gravel stratification
	NA	2.0	0.0		SW	Iron stained areas. Mottling, no odors, no staining. Moist.
	NA				10YR(6/3)	Fine to medium sand, trace gravel stratification
26	NA				SW	Iron stained areas. Mottling, no odors, no staining. Moist.
	NA				10YR(6/3)	Fine to medium sand, trace gravel stratification
	NA	2.0	0.0		SW	Iron stained areas. Mottling, no odors, no staining. Moist.
	NA				10YR(6/3)	Fine to medium sand, trace gravel stratification
28	NA				SW	Iron stained areas. Mottling, no odors, no staining. Moist.
	NA				10YR(6/3)	Fine to medium sand, trace gravel, no odors, no staining, moist, no G.W.
	NA	2.0	0.0		SW	some iron stained intervals
	NA				10YR(6/3)	Fine to medium sand, trace gravel, no odors, no staining, moist, no G.W.
30	NA				SW	some iron stained intervals
	NA				10YR(6/3)	Fine to medium sand, trace gravel, no odors, no staining, moist, no G.W.
	NA	2.0	0.0		SW	some iron stained intervals
	NA				10YR(6/3)	Fine to medium sand, trace gravel, no odors, no staining, moist, no G.W.
32	NA				SW	some iron stained intervals
	NA				10YR(6/4)	Medium to coarse sand with trace gravel, no odors, no staining, moist.
	NA	2.0	0.0		SW	present, with mottlery
	NA				10YR(6/4)	Medium to coarse sand with trace gravel, no odors, no staining, moist.
34	NA				SW	present, with mottlery
	NA				10YR(6/4)	Medium to coarse sand with trace gravel, no odors, no staining, moist.
	NA	2.0	0.0		SW	iron staining present. @ 35 feet aw encountered.
	NA				10YR(6/4)	Medium to coarse sand with trace gravel, no odors, no staining, moist.
36	NA				SW	iron staining present. @ 35 feet aw encountered.

Signature: _____ Date: 6/21/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-14

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					
0	~~NA~~				10YR(4/3)	Silt fine to medium sand with rounded pebbles
	NA	1.5	0.0		SM	trace gravels, no odors, no staining.
	NA				10YR(4/3)	Silt fine to medium sand with rounded pebbles
2	NA				SM	trace gravels, no odors, no staining.
	NA				10YR(4/3)	Silt fine to medium sand with rounded pebbles
	NA	1.5	0.0		SM	trace gravels, no odors, no staining.
	NA				10YR(4/3)	Silt fine to medium sand with rounded pebbles
4	NA				SM	trace gravels, no odors, no staining.
	NA				10YR(4/3)	Fine to medium sand with some silts, graavel and rounded pebbles present
	NA	1.5	0.0		SP	at time. No odors or staining, mottling present.
	NA				10YR(4/3)	Fine to medium sand with some silts, graavel and rounded pebbles present
6	NA				SP	at time. No odors or staining, mottling present.
	NA				10YR(4/3)	Fine to medium sand with some silts, graavel and rounded pebbles present
	NA	1.5	0.0		SP	at time. No odors or staining, mottling present.
	NA				10YR(4/3)	Fine to medium sand with some silts, graavel and rounded pebbles present
8	NA				SP	at time. No odors or staining, mottling present.
	NA				10YR(4/4)	Fine to medium and with some to frase silts, gravel and rounded pebbles
	NA	1.0	0.0		SP	present at time, no odors, no staining with mottling.
	NA				10YR(4/4)	Fine to medium and with some to frase silts, gravel and rounded pebbles
10	NA				SP	present at time, no odors, no staining with mottling.
	NA				10YR(4/4)	Fine to medium and with some to frase silts, gravel and rounded pebbles
	NA	1.0	0.0		SP	present at time, no odors, no staining with mottling.
	NA				10YR(5/4)	Fine to medium and with some to frase silts, gravel and rounded pebbles
12	NA				SP	present at time, no odors, no staining with mottling.
	NA				10YR(6/4)	Fine to medium sand, no odors, no staining, trace rounded pebbles and gravel damp
	NA	1.0	0.0		SP	
	NA				10YR(6/4)	Fine to medium sand, no odors, no staining, trace rounded pebbles and gravel damp
14	NA				SP	
	NA				10YR(6/3)	Fine to medium sand, trace gravels and rounded pebbles. No odors,
	NA	1.0	0.0		SP	no staining, damp, Not G.W
	NA				10YR(6/3)	Fine to medium sand, trace gravels and rounded pebbles. No odors,
16	NA				SP	no staining, damp, Not G.W
	NA				10YR(6/3)	Fan fine to medium sand well sother damp, no odors, no staining, trace of gravel
	NA	1.0	0.0		SW	
	NA				10YR(6/3)	Fan fine to medium sand well sother damp, no odors, no staining, trace of gravel
18	NA				SW	

Signature: _____ Date: 6/25/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

ERM

BORING LOG

Boring Number: SB-14

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-14 (39-40) @1122 for VOCs, SVOC and Total Inorganics
	LOCATION:					
18	NA	1.0	0.0		10YR(6/4)	Fan fine to medium sand well sother damp, no odors, no staining, trace of gravel
	NA				SW	
	NA				10YR(6/4)	Fan fine to medium sand well sother damp, no odors, no staining, trace of gravel
20	NA				SM	
	NA	1.5	0.0		10YR(5/4)	Fine to medium sand, with some gravel and rounded pebbles, little to no times
	NA				SP	No odors, iron staining present with mottling
	NA				10YR(5/4)	Fine to medium sand, with some gravel and rounded pebbles, little to no times
22	NA				SP	No odors, iron staining present with mottling
	NA	1.6	0.0		10YR(5/4)	Fine to medium sand with some gravel and rounded pebbles, little to no times.
	NA				SP	Some gravels. No odors no staining
	NA				10YR(5/4)	Fine to medium sand with some gravel and rounded pebbles, little to no times.
24	NA				SP	Some gravels. No odors no staining
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand with silts tracegravels, rounded pebbles.
	NA				SP	No odors, mottleing present
	NA				10YR(6/4)	Fine to medium sand with silts tracegravels, rounded pebbles.
26	NA				SP	No odors, mottleing present
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand with silts tracegravels, rounded pebbles.
	NA				SP	No odors, mottleing present
	NA				10YR(7/4)	Fine to medium sand with silts tracegravels, rounded pebbles.
28	NA				SW	No odors, mottleing present
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand well sorted moist trace to no gravel.
	NA				SW	No odors, no staining, some mottling
	NA				10YR(6/4)	Fine to medium sand well sorted moist trace to no gravel.
30	NA				SW	No odors, no staining, some mottling
	NA	1.8	0.0		10YR(6/4)	Fine to medium sand well sorted moist trace to no gravel.
	NA				SW	No odors, no staining, some mottling
	NA				10YR(6/4)	Fine to medium sand well sorted moist trace to no gravel.
32	NA				SW	No odors, no staining, some mottling
	NA	1.5	0.0		10YR(6/3)	Medium to coarse sand little to no fines. Some gravel and rounded pebbles
	NA				SP	
	NA				10YR(6/3)	Medium to coarse sand little to no fines. Some gravel and rounded pebbles
34	NA				SP	
	NA	1.5	0.0		10YR(6/3)	Fine to medium sand, trace gravels and trace rounded pebbles
	NA				SW	
	NA				10YR(6/3)	Fine to medium sand, trace gravels and trace rounded pebbles
36	NA				SW	

Signature: _____ Date: 6/25/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-14

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-14 (39-40) @1122 for VOCs, SVOC and Total Inorganics
	LOCATION:					
36	~~NA~~	1.5	0.0		10YR(6/3)	Medium to coarse sand some fines some gravels and rounded pebbles
	NA				SP	iron staining present with mottleing. Moist
	NA				10YR(6/3)	Medium to coarse sand some fines some gravels and rounded pebbles
38	NA				SP	iron staining present with mottleing. Moist
	NA	1.5	0.0		10YR(6/3)	Medium to coarse sand some fines some gravels and rounded pebbles
	NA				SP	iron staining present with mottleing. Moist
	NA				10YR(6/3)	Medium to coarse sand some fines some gravels and rounded pebbles
40	NA				SP	iron staining present with mottleing. Moist. Ground water encountered at 210 ft.

Signature: _____ Date: 6/25/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-15

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					
0	~~NA~~	1.8	0.0		10YR(4/3)	Fine to medium 2" topsoil sand with silt - trace coarse sand, some grael and
	NA				SM	rounded pebbles. No odor, no staining.
	NA				10YR(4/3)	Fine to medium 2" topsoil sand with silt - trace coarse sand, some grael and
2	NA				SM	rounded pebbles. No odor, no staining.
	NA	1.5	0.0		10YR(4/3)	Fine to medium 2" topsoil sand with silt - trace coarse sand, some grael and
	NA				SM	rounded pebbles. No odor, no staining.
	NA				10YR(4/3)	tine to madim sand, moist sand, loose sand trace gravel, no odor, no staining
4	NA				SP	
	NA	1.5	0.0		10YR(4/4)	Medium sand with some times and coarse sand traces gravel, no odor, no staining
	NA				SP	Moist, mottleing present
	NA				10YR(4/4)	Medium sand with some times and coarse sand traces gravel, no odor, no staining
6	NA				SP	Moist, mottleing present
	NA	1.5	0.0		10YR(5/3)	Medium sand well sorted- traces fines trace gravels. Stratification present with
	NA				SW	iron staining. No odors, no staining, Moist.
	NA				10YR(5/3)	Medium sand well sorted- traces fines trace gravels. Stratification present with
8	NA				SP	iron staining. No odors, no staining, Moist.
	NA	1.5	0.0		10YR(5/3)	Medium sand well sorted- traces fines trace gravels. Stratification present with
	NA				SP	iron staining. No odors, no staining, Moist.
	NA				10YR(5/3)	Medium sand well sorted- traces fines trace gravels. Stratification present with
10	NA				SP	iron staining. No odors, no staining, Moist.
	NA	1.0	0.0		10YR(5/3)	Medium sand well sorted- traces fines trace gravels. Stratification present with
	NA				SP	iron staining. No odors, no staining, Moist.
	NA				10YR(5/7)	Medium sand well sorted- traces fines trace gravels. Stratification present with
12	NA				SP	iron staining. No odors, no staining, Moist.
	NA	1.5	0.0		10YR(5/3)	Fine to medium sand and trace gravel and rounded pebbles.
	NA				SP	No odors, no staining, motleing. Very sof because of mounding.
	NA				10YR(5/3)	Fine to medium sand and trace gravel and rounded pebbles.
14	NA				SP	No odors, no staining, motleing. Very sof because of mounding.
	NA	1.5	0.0		10YR(5/3)	ot burn from - Retersion baising
	NA				SP	0-16 has all been no worked up
	NA				10YR(5/3)	ot burn from - Retersion baising
16	NA				SP	0-16 has all been no worked up
	NA	1.0	0.0		10YR(5/3)	Fine to medium sand and trace gravel and rounded pebbles.
	NA				SP	No odors, no staining, motleing. Very soft because of mounding.
	NA				10YR(5/3)	Fine to medium sand and trace gravel and rounded pebbles.
18	NA				SP	No odors, no staining, motleing. Very soft because of mounding.

Signature: _____ Date: 6/25/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-15

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-15(39-40)@
	LOCATION:					
18	~~NA~~				10YR(5/7)	Fine to medium sand and trace gravel and rounded pebbles.
	NA	1.0	0.0		SP	No odors, no staining, motleing. Very soft because of mounding.
	NA				10YR(5/3)	Fine to medium sand and trace gravel and rounded pebbles.
20	NA				SP	No odors, no staining, motleing. Very soft because of mounding.
	NA				10YR(5/3)	Fine to medium sand with silts, trace gravels and rounded pebbles
	NA	1.5	0.0		SP	no odoers, no staining.
	NA				10YR(5/3)	Fine to medium sand with silts, trace gravels and rounded pebbles
22	NA				SP	no odors, no staining.
	NA				10YR(6/4)	Fine to medium sand - trace silts and rounded pebbles, moist, native material.
	NA	1.5	0.0		SW	No odors, no staining.
	NA				10YR(6/4)	Fine to medium sand - trace silts and rounded pebbles, moist, native material.
24	NA				SW	No odors, no staining.
	NA				10YR(6/4)	Fine to medium sand layers with coarse and gravel latyers, no odors, iron staining
	NA	1.5	0.0		SP	present and stratiication of silty layers
	NA				10YR(6/4)	Fine to medium sand layers with coarse and gravel latyers, no odors, iron staining
26	NA				SP	present and stratiication of silty layers
	NA				10YR(6/4)	Fine to medium sand layers with coarse and gravel latyers, no odors, iron staining
	NA	1.0	0.0		SP	present and stratiication of silty layers - moist
	NA				10YR(6/4)	Fine to medium sand layers with coarse and gravel latyers, no odors, iron staining
28	NA				SP	present and stratiication of silty layers - moist
	NA				10YR(4/4)	Fine to medium sand and gravel
	NA	1.5	0.0		SP	No odors, no staining
	NA				10YR(6/4)	Rounded pebbles and iron staining present
30	NA				SP	
	NA				10YR(6/4)	Fine to medium sand and gravel
	NA	1.5	0.0		SP	No odors, no staining
	NA				10YR(6/4)	Rounded pebbles and iron staining present
32	NA				SP	
	NA				10YR(6/2)	Well sorted medium sand trace silts. No odors, no staining, stratification present
	NA	1.5	0.0		SW	with iron stained silts with high mica content
	NA				10YR(6/2)	
34	NA				SP	
	NA				10YR(6/4)	Medium sand with some fines and trace gravels, No odors, no staining.
	NA	1.5	0.0		SP/SN	Silty fine sand, with high muscovite and biatite contents
	NA				10YR(6/4)	no odors,no staining - high water conten
36	NA				SM	

Signature: _____ Date: 6/25/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-15

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-15(39-40)@
	LOCATION:					
36	~~NA~~	1.5	0.0		10Yr(6/3)	Medium sand with some fines and silts
	NA				SP	no odors, some iron staining. Moist
	NA				10Yr(6/3)	Medium sand with some fines and silts
38	NA				SP	no odors, some iron staining. Moist
	NA	1.5	0.0		10Yr(6/3)	Fine to medium sand with some silts
	NA				SP	no odors, no staining and trace rounded pebbles
	NA				10Yr(6/3)	Fine to medium sand with some silts
40	NA				SP	no odors, no staining and trace rounded pebbles

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520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-16

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION: SB-16(0.0-0.5)@0745 for TCL Pest and TAL Inorganic
	LOCATION:					
0	~~NA~~				10YR(4/4)	Fine to medium sand with silts and some vegetation, loose, dry, no odors
	NA	1.5	0.0		SM	no staining visibles. Fill-from mound.
	NA				10YR(4/4)	Fine to medium sand with silts and some vegetation, loose, dry, no odors
2	NA				SM	no staining visibles. Fill-from mound.
	NA				10YR(5/4)	Fine to medium sand, some silts, some gravels and rounded pebbles
	NA	1.5	2.4		SM	No odors, no staining visible. Fill from mound
	NA				10YR(5/4)	Fine to medium sand, some silts, some gravels and rounded pebbles
4	NA				SM	No odors, no staining visible. Fill from mound
	NA				10YR(5/4)	Fine to medium sand, very soft and loose. Trace to little silts, some loose sand
	NA	1.5	0.0		SP	and gravels. Some rounded pebbles. No odors, no staining visible.
	NA				10YR(5/4)	Fine to medium sand, very soft and loose. Trace to little silts, some loose sand
6	NA				SP	and gravels. Some rounded pebbles. No odors, no staining visible.
	NA				10YR(5/4)	Fine to medium sand, very soft and loose. Trace to little silts, some loose sand
	NA	2.0	0.0		SP	and gravels. Some rounded pebbles. No odors, no staining visible.
	NA				10YR(5/4)	Fine to medium sand, very soft and loose. Trace to little silts, some loose sand
8	NA				SP	and gravels. Some rounded pebbles. No odors, no staining visible. Fill from mound
	NA				10YR(7/3)	Fine medium and coarse sand with gravels, poorly sorted sand, moist. No odors
	NA	2.0	0.0		SP	or staining visible. Fill from mound
	NA				10YR(5/4)	Fine medium and coarse sand with gravels, poorly sorted sand, moist. No odors
10	NA				SP	or staining visible. Fill from mound
	NA				10YR(5/4)	Fine medium and coarse sand with gravels, poorly sorted sand, moist. No odors
	NA	2.0	0.0		SP	or staining visible. Fill from mound Iron stained sand - more orange color.
	NA				10YR(5/4)	Fine medium and coarse sand with gravels, poorly sorted sand, moist. No odors
12	NA				SP	or staining visible. Fill from mound Iron stained sand - more orange color.
	NA				10YR(4/6)	Fine to medium sand and silts. Trace gravels - no odors and no staining present
	NA	1.5	0.0		SM	Iron staining heavy. Very soft fill fill from mounding.
	NA				10YR(4/6)	Fine to medium sand and silts. Trace gravels - no odors and no staining present
14	NA				SM	Iron staining heavy. Very soft fill fill from mounding.
	NA				10YR(4/6)	Fine to medium sand and silts. Trace gravels - no odors and no staining present
	NA	1.5	0.0		SM	Iron staining heavy. Very soft fill fill from mounding.
	NA				10YR(4/6)	Fine to medium sand and silts. Trace gravels - no odors and no staining present
16	NA				SM	Iron staining heavy. Very soft fill fill from mounding.
	NA				10YR(7/4)	Fine to medium sand and gravels. Poorly sorted trace silts - native material
	NA	1.5	0.0		SP	No odors, light iron staining preent.
	NA				10YR(7/4)	Fine to medium sand and gravels. Poorly sorted trace silts - native material
18	NA				SP	No odors, light iron staining preent.

Signature: _____ Date: 7/1/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-16

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-16 (39-40) @1221 VOC, SVOC, TCL Pest, TAL Inorganic DUP070102 @0800 (VOC, SVOC, Dest, Inorganic.)
	LOCATION:					
18	NA	1.5	0.0		10YR(7/4)	Fine to medium sand and gravels. Poorly sorted trace silts - native material
	NA				SP	No odors, light iron staining preent.
	NA				10YR(7/4)	Fine to medium sand and gravels. Poorly sorted trace silts - native material
20	NA				SP	No odors, light iron staining preent.
	NA	1.5	0.0		10YR(7/4)	Medium San - well sorted, trace coarse sand with gravels, clean bed.
	NA				SW	No odors, no staining visible.
	NA				10YR(7/4)	Medium San - well sorted, trace coarse sand with gravels, clean bed.
22	NA				SW	No odors, no staining visible.
	NA	2.0	0.0		10YR(7/4)	Medium San - well sorted, trace coarse sand with gravels, clean bed.
	NA				SW	No odors, no staining visible.
	NA				10YR(7/4)	Medium San - well sorted, trace coarse sand with gravels, clean bed.
24	NA				SW	No odors, no staining visible.
	NA	2.0	0.0		10YR(6/4)	Fine medium sand with intervals of coarse mall gravels with small rounded
	NA				SP	pebbles at trace. No odors, lightly iron stained, trace silts.
	NA				10YR(6/4)	Fine medium sand with intervals of coarse mall gravels with small rounded
26	NA				SP	pebbles at trace. No odors, lightly iron stained, trace silts.
	NA	2.0	0.0		10YR(6/4)	Fine medium sand with intervals of coarse small gravels and rounded pebbles.
	NA				SP	no odors, no taining - trace silts
	NA				10YR(6/4)	Fine medium sand with intervals of coarse small gravels and rounded pebbles.
28	NA				SP	no odors, no taining - trace silts
	NA	2.0	0.0		10YR(4/4)	Fine to medium sand, trace gravels some very fine sand trace silts.
	NA				SP	
	NA				10YR(6/4)	Very fine to fine sand and silts, no odors, no staining
30	NA				SM	
	NA	2.0	0.0		10YR(6/4)	Fine to medium sand, trace gravels, some very fine sand trace silts. Some
	NA				SM	stratification with silts and micas (biotis musaute)
	NA				10YR(6/4)	Fine to medium sand, trace gravels and silts, some very fine sands
32	NA				SP	
	NA	2.0	0.0		10YR(6/4)	Fine to medium sand and gcoarse sand and gravel, trace silts.
	NA				SP	
	NA				10YR(6/4)	Fine to medium sand and gcoarse sand and gravel, trace silts.
34	NA				SP	
	NA	2.0	0.0		10YR(3/3)	1 cm thick lense of very moisty clumpy organics. No odors related with this
	NA				SP	lense of material.
	NA				10YR(6/4)	1 cm thick lense of very moisty clumpy organics. No odors related with this
36	NA				SP	lense of material.

Signature: _____ Date: 7/2/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number SB-16

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-16 (39-40) @1221 VOC, SVOC, TCL Pest, TAL Inorganic DUP070102 @0800 (VOC, SVOC, Dest, Inorganic.)
	LOCATION:					
36	~~NA~~	2.0	0.0		10YR(4/6) SP	Fine to medium sand with trace gravels. No odors and no staining. Trace silts.
	NA					
	NA				10YR(6/4) SP	Fine to medium sand with trace gravels. No odors and no staining. Trace silts.
38	NA					
	NA	1.0	0.0		10YR(6/4) SP	Fine to medium sand with trace gravels. No odors and no staining. Trace silts.
	NA					
	NA				10YR(6/4) SP	Fine to medium sand with trace gravels. No odors and no staining. Trace silts.
40	NA					GW at bottom of Core

Signature: _____ Date: 7/2/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-17

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION **SB-17(0.0-0.5) @ 0750 for TCL Pests, TAL Inorganics** DUPO62802 @ 0800 for TCL Pests, TAL Inorganics
	LOCATION:					
0	~~NA~~	2.0	1.1		10YR(6/4) SM	Fine to medium sand and silts, trace rounded pebbles, no odors no staining
	NA					
	NA				10YR(6/4) SM	Fine to medium sand and silts, trace rounded pebbles, no odors no staining
2	NA					
	NA	2.0	3.0		10YR(6/4) SM	Dry fine to medium sand and silts, trace rounded pebbles, no odors no staining
	NA					
	NA				10YR(6/2) SM	Dry fine to medium sand and silts, trace rounded pebbles, no odors no staining
4	NA					
	NA	1.5	0.5		10YR(5/4) SP	Fine to medium sand, with silts and trace rounded pebbles, no odors, slight Pio hits, probably moisture.
	NA					
	NA				10YR(6/4) SP	Fine to medium sand, with silts and trace rounded pebbles, no odors, slight Pio hits, probably moisture.
6	NA					
	NA	1.5	0.7		10YR(5/4) SM	Find to medium sand with silts and trace rounded pebbles. Some coarse sand present at intervals.
	NA					
	NA				10YR(5/4) SM	Find to medium sand with silts and trace rounded pebbles. Some coarse sand present at intervals.
8	NA					
	NA	1.5	0.8		10YR(5/4) SP	Fine to medium sand with some coarse sand and gravel silts present. Rounded Pebbles, no odor, no staining
	NA					
	NA				10YR(5/4) SP	Fine to medium sand with some coarse sand and gravel silts present. Rounded Pebbles, no odor, no staining
10	NA					
	NA	1.5	1.2		10YR(5/4) SP	Fine to medium sand with some coarse gravely layers present. Some stratification. No odors, higher silt content @ stratification
	NA					
	NA				10YR(5/6) SP	Fine to medium sand with some coarse gravely layers present. Some stratification. No odors, higher silt content @ stratification
12	NA					
	NA	1.5	0.4		10YR(4/4) SP	Medium to coarse sand and rounded gravels, no odors, no staining trace to some silty
	NA					
	NA				10YR(6/6) SP	Medium to coarse sand and rounded gravels, no odors, no staining trace to some silty
14	NA					
	NA	1.5	0.5		10YR(6/6) SP	Medium to coarse sand and rounded gravels, no odors, no staining trace to some silty
	NA					
	NA				10YR(6/6) SP	Medium to coarse sand and rounded gravels, no odors, no staining trace to some silty
16	NA					
	NA	1.5	0.3		10YR(6/2) SP	Fine to medium sand unsorted - with gravels, coarse sand and rounded pebbles, some stratification with iron staining.
	NA					
	NA				10YR(6/5) SP	Fine to medium sand unsorted - with gravels, coarse sand and rounded pebbles, some stratification with iron staining.
18	NA					

Signature: _____ Date: 6/25/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-17

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-17 (35-36) @VOC and SIOC @1127
	LOCATION:					
18	~~NA~~	1.5	0.0		10YR(6/4)	Fine to medium sand unsorted - with gravels, coarse sand and rounded pebbles,
	NA				SP	some stratification with iron staining.
	NA				10YR(6/4)	Fine to medium sand unsorted - with gravels, coarse sand and rounded pebbles,
20	NA				SP	some stratification with iron staining.
	NA	2.0	0.7		10YR(6/4)	Fine to medium sand, trae gravels, no odors, small rounded pebbles
	NA				SP	some stratification - iron staining
	NA				10YR(6/4)	Fine to medium sand, trae gravels, no odors, small rounded pebbles
22	NA				SP	some stratification - iron staining
	NA	2.0	1.2		10YR(6/4)	Fine medium and coarse sands, some gravels, rounded pebbles
	NA				SP	No odors, no staining
	NA				10YR(6/3)	Fine medium and coarse sands, some gravels, rounded pebbles
24	NA				SP	No odors, no staining
	NA	2.0	0.2		10YR(6/3)	Fine to medium to coarse sand with gravel poorly sorted. Low silts
	NA				SP	No odors, no staining some stratification
	NA				10YR(6/3)	Fine to medium to coarse sand with gravel poorly sorted. Low silts
26	NA				SP	No odors, no staining some stratification
	NA	1.0	0.4		10YR(6/3)	Fine to medium to coarse sand with gravel poorly sorted. Low silts
	NA				SP	No odors, no staining, some stratification, moist
	NA				10YR(6/3)	Fine to medium to coarse sand with gravel poorly sorted. Low silts
28	NA				SP	No odors, no staining, some stratification, moist
	NA	1.5	0.0		10YR(6/3)	Medium to coarse sand and gravel, rounded pebbles, trace silts
	NA				SP	some iron staining
	NA				10YR(6/3)	Medium to coarse sand and gravel, rounded pebbles, trace silts
30	NA				SP	some iron staining
	NA	1.5	0.0		10YR(6/3)	Medium to coarse sand and gravel, rounded pebbles.
	NA				SP	No odor, no staining, moist
	NA				10YR(6/3)	Medium to coarse sand and grave., rounded pebbles
32	NA				SP	No odor, no staining, moist
	NA	1.0	0.0		10YR(6/3)	Medium to coarse sand and gravel. Small rounded pebbles - trace silts no odors
	NA				SP	
	NA				10YR(6/3)	Medium to coarse sand and gravel. Small rounded pebbles - trace silts no odors
34	NA				SP	
	NA	1.0	0.0		10YR(6/3)	Medium to coarse sand and gravel, small rounded pebbles.
	NA				SP	No odors or staining. GW encountered @ 35 feet
	NA				10YR(6/3)	
36	NA				SP	End of Boring @ 36 feet

Signature: _____ Date: 7/2/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-18

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					
0	~~NA~~				10YR(6/4)	Dry loose silty fine to medium sand with some rounded pebbles and gravels.
	NA	1.5	0.0		SM	No odors, no staining
	NA				10YR(6/4)	Dry loose silty fine to medium sand with some rounded pebbles and gravels.
2	NA				SM	No odors, no staining
	NA				10YR(4/4)	Moist brown, hard packed silty, fine to medium sand, some gravels and
	NA	1.5	0.0		SM	rounded pebbles, trace silts. No odors, no staining.
	NA				10YR(4/4)	Moist brown, hard packed silty, fine to medium sand, some gravels and
4	NA				SM	rounded pebbles, trace silts. No odors, no staining.
	NA				10YR(5/4)	Fine to medium sand with some gravels and rounded pebbles, trace silts.
	NA	2.0	0.0		SP	No odors and no staining present - moist.
	NA				10YR(6/4)	Fine to medium sand with some gravels and rounded pebbles, trace silts.
6	NA				SP	No odors and no staining present - moist.
	NA				10YR(5/4)	Fine to medium sand with some gravels and rounded pebbles, trace silts.
	NA	2.0	0.0		SP	No odors and no staining present - moist.
	NA				10YR(5/4)	Fine to medium sand with some gravels and rounded pebbles, trace silts.
8	NA				SP	No odors and no staining present - moist.
	NA				10YR(6/4)	Fine to medium sand, lightly iron stained coarse sand and rounded gravels
	NA	2.0	0.0		SP	present. Trace silt. No odor no staining present
	NA				10YR(6/4)	Fine to medium sand, lightly iron stained coarse sand and rounded gravels
10	NA				SP	present. Trace silt. No odor no staining present
	NA				10YR(6/4)	Fine to medium sand, lightly iron stained coarse sand and rounded gravels
	NA	2.0	0.0		SP	present. Trace silt. No odor no staining present
	NA				10YR(6/4)	Fine to medium sand, lightly iron stained coarse sand and rounded gravels
12	NA				SP	present. Trace silt. No odor no staining present
	NA				10YR(6/3)	Fine to medium sand and gravels, rounded pebbles. No odors, no staining.
	NA	2.0	0.0		SP	Light iron staining locally
	NA				10YR(6/3)	Fine to medium sand and gravels, rounded pebbles. No odors, no staining.
14	NA				SP	Light iron staining locally
	NA				10YR(6/3)	Fine to medium sand with intervals at very fine sand with trace silts.
	NA	2.0	0.0		SP	Rounded gravels present.
	NA				10YR(6/3)	Fine to medium sand with intervals at very fine sand with trace silts.
16	NA				SP	Rouned gravels present.
	NA				10YR(6/3)	Fine to medium sand with some rounded gravels, Some coarse sand present.
	NA	2.0	0.0		SP	Iron staining, no odors. Moist. Motteling also present.
	NA				10YR(6/3)	Fine to medium sand with some rounded gravels, Some coarse sand present.
18	NA				SP	Iron staining, no odors. Moist. Motteling also present.

Signature: _____ Date: 6/28/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-18

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-18(33-34) @1514 for VOC's
	LOCATION:					
18	~~NA~~				10YR(6/3)	Fine to medium sand with some rounded gravels, Some coarse sand present.
	NA	2.0	0.0		SP	Iron staining, no odors. Moist. Motteling also present.
	NA				10YR(6/3)	Fine to medium sand with some rounded gravels, Some coarse sand present.
20	NA				SP	Iron staining, no odors. Moist. Motteling also present.
	NA				10YR(6/3)	Fine to medium sand with coarse sand and gravels, trace silts.
	NA	2.0	0.0		SP	No odors, no staining.
	NA				10YR(6/3)	Fine to medium sand with coarse sand and gravels, trace silts.
22	NA				SP	No odors, no staining.
	NA				10YR(6/3)	Fine to medium sand with coarse sand and gravels, trace silts.
	NA	2.0	0.0		SP	No odors, some iron staining
	NA				10YR(6/3)	Fine to medium sand with coarse sand and gravels, trace silts.
24	NA				SP	No odors, some iron staining
	NA				10YR(6/4)	Fine to medium sand and silt, no odors, no staining, trace pebbles and coarse sand
	NA	2.0	0.0		SP	
	NA				10YR(6/4)	Fine to medium sand and silt, no odors, no staining, trace pebbles and coarse sand
26	NA				SP	
	NA				10YR(6/4)	Fine to medium sand, some very fine sand and silty with high mica content.
	NA	2.0	0.0		SP	Stratification with light iron staining present
	NA				10YR(6/4)	Fine to medium sand, some very fine sand and silty with high mica content.
28	NA				SP	Stratification with light iron staining present
	NA				10YR(6/3)	Fine to medium sand, with some gravel and runded pebbles, moist.
	NA	2.0	0.0		SP	No odors, no staining.
	NA				10YR(6/3)	Fine to medium sand, with some gravel and runded pebbles, moist.
30	NA				SP	No odors, no staining.
	NA				10YR(6/4)	Very fine to fine sand and silts. Trace at coarse sand and gravel.
	NA	2.0	0.0		SP	No odors, no staining.
	NA				10YR(6/4)	Very fine to fine sand and silts. Trace at coarse sand and gravel.
32	NA				SP	No odors, no staining.
	NA				10YR(6/3)	Medium to coarse sand with trace fines, some rounded pebbles.
	NA	1.0	0.0		SP	No odors, no staining. GW @ 34 Feet.
	NA				10YR(6/3)	Medium to coarse sand with trace fines, some rounded pebbles.
34	NA				SP	No odors, no staining. GW @ 34 Feet.
	NA				10YR(6/3)	Saturated medium to coarse sand and gravel with rounded pebbles.
	NA	1.0	0.0		SP	No odors, no staining.
	NA				10YR(6/3)	Saturated medium to coarse sand and gravel with rounded pebbles.
36	NA				SP	No odors, no staining.

Signature: _____ Date: 6/28/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-19

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-19(15'-16') @ 0716 for VOCs
	LOCATION:					
0	~~NA~~	1.5	0.0		10YR(4/3)	Top 6" with green vegetation. Very dry loose silts soil with fine to medium sand
	NA				SM	No odors, no staining.
	NA				10YR(4/3)	Top 6" with green vegetation. Very dry loose silts soil with fine to medium sand
2	NA				SM	No odors, no staining.
	NA	2.0	0.0		10YR(5/8)	Damp heavily iron stained silty fine to medium sand.
	NA				SM	Trace coarse sands and gravels. No odors
	NA				10YR(5/8)	Damp heavily iron stained silty fine to medium sand.
4	NA				SM	Trace coarse sands and gravels. No odors
	NA	2.0	0.0		10YR(5/4)	Fine to medium sand with some coarse sands and gravels, no odors, no staining
	NA				SM	trace of silt.
	NA				10YR(7/4)	Fine to medium sand with some coarse sands and gravels, no odors, no staining
6	NA				SP	trace of silt.
	NA	2.0	0.0		10YR(7/4)	Fine to medium sand with some coarse sands and gravels, no odors, no staining
	NA				SP	trace of silt.
	NA				10YR(7/4)	Fine to medium sand with some coarse sands and gravels, no odors, no staining
8	NA				SP	trace of silt.
	NA	2.0	1.4		10YR(6/4)	Mix of fine to very fine, medium and coarse sand intervals - some intervals with
	NA				SP	high gravel and pebbles content. No odors or staining visible.
	NA				10YR(6/4)	Mix of fine to very fine, medium and coarse sand intervals - some intervals with
10	NA				SP	high gravel and pebbles content. No odors or staining visible.
	NA	2.0	1.2		10YR(6/4)	Mix of fine to very fine, medium and coarse sand intervals - some intervals with
	NA				SP	high gravel and pebbles content. No odors or staining visible.
	NA				10YR(6/4)	Mix of fine to very fine, medium and coarse sand intervals - some intervals with
12	NA				SP	high gravel and pebbles content. No odors or staining visible.
	NA	2.0	1.2		10YR(6/4)	Mix of fine to very fine, medium and coarse sand intervals - some intervals with
	NA				SP	high gravel and pebbles content. No odors or staining visible.
	NA				10YR(6/4)	Mix of fine to very fine, medium and coarse sand intervals - some intervals with
14	NA				SP	high gravel and pebbles content. No odors or staining visible.
	NA	2.0	4.8		10YR(6/4)	Medium to coarse sand and gravel interval high gravel and small pebbles.
	NA				SP	No staining visible, no distinct odor evident.
	NA				10YR(6/4)	Medium to coarse sand and gravel interval high gravel and small pebbles.
16	NA				SP	No staining visible, no distinct odor evident.
	NA	2.0	0.5		10YR(6/4)	Medium to coarse sand and gravel interval high gravel and small pebbles.
	NA				SP	No staining visible, no distinct odor evident.
	NA				10YR(6/4)	Mix of fine to medium sand and gravels - dry no odors no staining
18	NA				SP	

Signature: _____ Date: 6/28/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-19

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					
18	~~NA~~				10YR(6/4)	Medium to coarse sand and gravel interval high gravel and small pebbles.
	NA	2.0	0.7		SP	No staining visible, no distinct odor evident.
	NA				10YR(6/4)	Mix of fine to medium sand and gravels - dry no odors no staining
20	NA				SP	
	NA				10YR(6/4)	Fine to medium sand. Very fine and fine sand, trace gravels and rounded pebbles
	NA	2.0	0.0		SP	No odors, no staining - damp
	NA				10YR(6/4)	Fine to medium sand. Very fine and fine sand, trace gravels and rounded pebbles
22	NA				SP	No odors, no staining - damp
	NA				10YR(6/4)	Fine to medium sand. Very fine sand intervals,fine sand, trace gravels, rounded pebbles
	NA	2.0	0.0		SP	Siltier, stratification darker and iron stained silts and fine sands.
	NA				10YR(6/4)	Fine to medium sand. Very fine sand intervals,fine sand, trace gravels, rounded pebbles
24	NA				SP	Siltier, stratification darker and iron stained silts and fine sands.
	NA				10YR(6/4)	Fine to medium sand - with silts. No odors, no staining.
	NA	1.5	0.0		SP	Very fine to fine sand with some coarse sand of gravel - interbedded.
	NA				10YR(6/4)	Fine to medium sand - with silts. No odors, no staining.
26	NA				SP	Very fine to fine sand with some coarse sand of gravel - interbedded.
	NA				10YR(6/4)	Thin lense of iron stained silts and fine sand. No odors, no staining evident, moist
	NA	1.5	0.0		SP	
	NA				10YR(6/4)	Thin lense of iron stained silts and fine sand. No odors, no staining evident, moist
28	NA				SP	
	NA				10YR(6/4)	Fine to medium sand and gravels, moist, no odors, no staining.
	NA	1.0	0.0		SP	
	NA				10YR(6/4)	Fine to medium sand and gravels, moist, no odors, no staining.
30	NA				SP	
	NA				10YR(6/4)	Fine to medium sand and gravels, moist, no odors, no staining.
	NA	1.0	0.0		SP	
	NA				10YR(4/4)	Fine to medium sand and gravels, moist, no odors, no staining.
32	NA				SP	GW encountered
						End of Boring

Signature: _____ Date: 7/2/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number SB-20

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					
0	~~NA~~				10YR(5/3)	Top soil 6" with vegetation - loose silty fine sand with rounded pebbles.
	NA	2.0	0.0		SM fill	No odors, no staining
	NA				10YR(5/3)	Top soil 6" with vegetation - loose silty fine sand with rounded pebbles.
2	NA				SM fill	No odors, no staining
	NA				10YR(5/2)	Fine to medium sand, less silts, trace gravels. No odors, no staining.
	NA	2.0	0.0		SM fill	Iron stained finet to medium sand and silts
	NA				10YR(4/6)	Fine to medium sand, less silts, trace gravels. No odors, no staining.
4	NA				SM fill	Iron stained finet to medium sand and silts
	NA				10YR(4/6)	Fine to medium sand, less silts, angular gravels, coarse sand, no odors, no staining
	NA	2.0	0.0		SP fill	Iron stained finet to medium sand and silts
	NA				10YR(4/6)	Fine to medium sand, less silts, angular gravels, coarse sand, no odors, no staining
6	NA				SP	Iron stained finet to medium sand and silts
	NA				10YR(6/6)	Fine to medium sands - with sparadic rounded pebbles. Poorly sorted sand
	NA	2.0	0.0		SP	with some iron staining. No odors, moist.
	NA				10YR(6/6)	Fine to medium sands - with sparadic rounded pebbles. Poorly sorted sand
8	NA				SP	with some iron staining. No odors, moist.
	NA				10YR(6/4)	Fine to medium sand with some coarse sand. Little gravel and rounded pebbles,
	NA	2.0	0.0		SP	damp. No odors or visible staining present
	NA				10YR(6/4)	Fine to medium sand with some coarse sand. Little gravel and rounded pebbles,
10	NA				SP	damp. No odors or visible staining present
	NA				10YR(6/4)	Fine to medium sand with some coarse sand. Little gravel and rounded pebbles,
	NA	2.0	0.0		SP	damp. No odors or visible staining present
	NA				10YR(6/4)	Fine to medium sand with some coarse sand. Little gravel and rounded pebbles,
12	NA				SP	damp. No odors or visible staining present
	NA				10YR(6/4)	Fine to medium sand and rounded pebbles. Little to no silts, damp. Some
	NA	2.0	0.0		SP	coarse sand, damp. No odors, no staining.
	NA				10YR(6/4)	Fine to medium sand and rounded pebbles. Little to no silts, damp. Some
14	NA				SP	coarse sand, damp. No odors, no staining.
	NA				10YR(6/4)	Fine to medium sand and rounded pebbles. Little to no silts, damp. Some
	NA	2.0	0.0		SP	coarse sand, damp. No odors, no staining.
	NA				10YR(6/4)	Fine to medium sand and rounded pebbles. Little to no silts, damp. Some
16	NA				SP	coarse sand, damp. No odors, no staining.
	NA				10YR(6/4)	Fine to medium sand with trace silts some coarse sand and gravels present @
	NA	2.0	0.0		SP	intervals. No odors or staining visible
	NA				10YR(6/4)	Fine to medium sand with trace silts some coarse sand and gravels present @
18	NA				SP	intervals. No odors or staining visible

Signature: _____ Date: 7/2/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-20

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					
18	~~NA~~				10YR(6/4)	Fine,medium, coarse sand and gravels present @ intervals. No odors or staining visible.
	NA	2.0	0.0		SP	Stratification present with greater silt content. Laminations of silts of mica - fine sands.
	NA				10YR(6/4)	Fine,medium, coarse sand and gravels present @ intervals. No odors or staining visible.
20	NA				SP	Stratification present with greater silt content. Laminations of silts of mica - fine sands.
	NA				10YR(5/4)	Very fine, fine - medium sand. Stratification - with greater silt content
	NA	2.0	0.0		SP	present in these laminations.
	NA				10YR(5/4)	Very fine, fine - medium sand. Stratification - with greater silt content
22	NA				SP	present in these laminations.
	NA				10YR(6/4)	Very fine, fine - medium sand. Stratification - with greater silt content
	NA	2.0	0.0		SP	present in these laminations. No odors, no staining
	NA				10YR(5/4)	Very fine, fine - medium sand. Stratification - with greater silt content
24	NA				SP	present in these laminations. No odors, no staining
	NA				10YR(5/3)	Very fine to fine sand and silts with high mica content. No odors, no staining - moist
	NA	2.0	0.0		SP	
	NA				10YR(5/3)	Very fine to fine sand and silts with high mica content. No odors, no staining - moist
26	NA				SP	
	NA				10YR(5/3)	Fine to medium sand with some coarse and gravels, rounded pebbles - moist
	NA	2.0	0.0		SP	No odors, no staining
	NA				10YR(5/3)	Fine to medium sand with some coarse and gravels, rounded pebbles - moist
28	NA				SP	No odors, no staining
	NA				10YR(5/3)	Fine to medium sand with some coarse and gravels, rounded pebbles - moist
	NA	1"	0.0		SP	No odors, no staining
	NA				10YR(5/3)	Fine to medium sand with some coarse and gravels, rounded pebbles - moist
30	NA				SP	No odors, no staining
	NA				10YR(5/3)	Fine to medium sand with some coarse and gravels, rounded pebbles - moist
	NA	1"	0.0		SP	No odors, no staining. Saturated @ 32
	NA				10YR(5/3)	Fine to medium sand with some coarse and gravels, rounded pebbles - moist
32	NA				SP	No odors, no staining. Saturated @ 32
						End of Boring

Signature: _____ Date: 7/2/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-21

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					
0	~~NA~~	1.0	0.0		10YR(2/1)	6" Blacktop (asphalt) and subbase.
	NA					
	NA				10YR(4/1)	Darker medium sand and gravel with silts. No odors or staining visible
2	NA				SP	
	NA	1.5	0.0		10YR(5/6)	Fine to medium sand and silts with trace coarse sand and gravels.
	NA				SP	No odors, no staining, moist. Heavily iron stained.
	NA				10YR(5/6)	Fine to medium sand and silts with trace coarse sand and gravels.
4	NA				SP	No odors, no staining, moist. Heavily iron stained.
	NA	1.5	0.0		10YR(6/8)	Poorly sorted coarse sand and gravel with trace of fine sand and silts.
	NA				SP	No odors, heavily iron stained - moist.
	NA				10YR(6/8)	Poorly sorted coarse sand and gravel with trace of fine sand and silts.
6	NA				SP	No odors, heavily iron stained - moist.
	NA	1.5	0.0		10YR(6/6)	Medium to coarse sand and gravel with fine sand little to no silts. Iron staining
	NA				SP	lightening, no odors evident.
	NA				10YR(6/4)	Medium to coarse sand and gravel with fine sand little to no silts. Iron staining
8	NA				SP	lightening, no odors evident.
	NA	1.5	0.0		10YR(6/4)	Medium to coarse sand with trace gravels some very fine and fine sand
	NA				SP	No odors, no staining - moist.
	NA				10YR(6/4)	Medium to coarse sand with trace gravels some very fine and fine sand
10	NA				SP	No odors, no staining - moist.
	NA	1.5	0.0		10YR(6/4)	Medium to coarse sand with trace gravels some very fine and fine sand
	NA				SP	No odors, no staining - moist.
	NA				10YR(6/4)	Medium to coarse sand with trace gravels some very fine and fine sand
12	NA				SP	No odors, no staining - moist.
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand, trace gravels and coarse sand. No odors no staining
	NA				SW	
	NA				10YR(6/4)	Medium to coarse sand with some gravels trace fmes. No odors, no staining.
14	NA				SP	
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand, trace gravels and coarse sand. No odors no staining
	NA				SP	
	NA				10YR(6/4)	Fine to medium sand with trace coarse sand fmes No odors, no staining
16	NA				SP	
	NA	2.0	0.0		10YR(6/4)	Fine to medium sand with trace coarse sand and gravels. Little to no silts. Fine
	NA				SW	to medium sand with gravels and coarse sand. No odors, no staining.
	NA				10YR(6/4)	Fine to medium sand with trace coarse sand and gravels. Little to no silts. Fine
18	NA				SP	to medium sand with gravels and coarse sand. No odors, no staining.

Signature: _____ Date: 7/10/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-21

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					
18	~~NA~~	2.0	0.0		10YR(6/4)	Fine to medium sand and very fine sand. Trace gravels and silts
	NA				SW	No odors, no staining
	NA				10YR(6/4)	Medium sand with gravels and rounded pebbles. No odors, no staining
20	NA				SP	
	NA	1.0	0.0		10YR(6/4)	Fine to medium sand wth some gravels and rounded pebbles
	NA				SP	No odors, no staining - moist.
	NA				10YR(6/4)	Fine to medium sand wth some gravels and rounded pebbles
22	NA				SP	No odors, no staining - moist.
	NA	1.0	0.0		10YR(6/4)	Fine to medium sand and gravel with rounded pebbles
	NA				SP	No odors, no staining - moist.
	NA				10YR(6/4)	Fine to medium sand and gravel with rounded pebbles
24	NA				SP	No odors, no staining - moist.
	NA	2.0	1.0		10YR(6/4)	Fine to medium sand and gravels and arounded pebbles.
	NA				SP	No odors, no staining - moist, maybe just moisture
	NA				10YR(6/4)	Fine to medium sand and gravels and arounded pebbles.
26	NA				SP	No odors, no staining - moist, maybe just moisture
	NA	2.0	0.7		10YR(6/4)	Fine to medium sand and gravels and arounded pebbles.
	NA				SP	No odors, no staining - moist
	NA				10YR(6/4)	Fine to medium sand and gravels and arounded pebbles.
28	NA				SP	No odors, no staining - moist
	NA	2.0	0.8		10YR(6/4)	Fine to medium sand and gravels.
	NA				SP	No odors, no staining -moist. Trace silts
	NA				10YR(6/4)	Fine to medium sand and gravels.
30	NA				SP	No odors, no staining - moist. Trace silts
	NA	2.0	1.0		10YR(6/4)	Fine to medium sand and gravels.
	NA				SP	No odors, no staining - moist. Trace silts
	NA				10YR(6/4)	Fine to medium sand and gravels.
32	NA				SP	No odors, no staining - moist. Trace silts GW encountered @ 32 ft
						End of Boring

Signature: _____ Date: 7/10/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-22

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-22(6'-8') @0911 FOR VOCS (MS/MSD)
	LOCATION:					
0	~~NA~~	1.5	3.0		10YR(2/1)	6" of ashphalt and subbage
	NA				SP	
	NA				10YR(4/1)	Fine to medium sand with trace gravels.
2	NA				SM	No odors. (PAH's from asphalt)
	NA	1.5	1.2		10YR(5/4)	Silty Fine to medium sand and gravels
	NA				SM	No odors and no staining present
	NA				10YR(5/8)	Silty fine to medium sand with rounded gravels and pebbles.
4	NA				SM	Heavily iron stained.
	NA	1.0	2.8		10YR(5/8)	Fine to medium sand with some silts, and some gravels.
	NA				SM	No odors and no staining
	NA				10YR(5/8)	Fine to medium sand with some silts, and some gravels.
6	NA				SP	No odors and no staining
	NA	1.0	3.5		10YR(6/6)	Fine to medium sand and rounded gravels and pebbles, trace silts and
	NA				SP	very fine sand. No odors, , light iron staining.
	NA				10YR(6/4)	Fine to medium sand and rounded gravels and pebbles, trace silts and
8	NA				SP	very fine sand. No odors, , light iron staining.
	NA	2.0	1.2		10YR(6/4)	Fine to medium sand with some coarse sand and gravels. Trace silts, light
	NA				SP	iron staining present. No odors.
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravels. Trace silts, light
10	NA				SP	iron staining present. No odors.
	NA	2.0	1.3		10YR(6/4)	Fine to medium sand with some coarse sand and gravels, trace silts, light
	NA				SP	iron staining present. No odors - moist
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravels, trace silts, light
12	NA				SP	iron staining present. No odors - moist
	NA	1.0	1.0		10YR(6/4)	Fine to medium sand with trace coarse sand. Some gravels and rounded pebbles.
	NA				SP	No odors, no staining.
	NA				10YR(6/4)	Fine to medium sand with trace coarse sand. Some gravels and rounded pebbles.
14	NA				SP	No odors, no staining.
	NA	1.0	1.0		10YR(6/4)	Fine to medium sand with trace coarse sand. Some gravels and rounded pebbles.
	NA				SP	No odors, no staining.
	NA				10YR(6/4)	Fine to medium sand with trace coarse sand. Some gravels and rounded pebbles.
16	NA				SP	No odors, no staining.
	NA	2.0	0.0		10YR(6/4)	Fine to medium sand with some coarse sand and gravel, trace silts.
	NA				SP	No odors, no staining.
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravel, trace silts.
18	NA				SP	No odors, no staining.

Signature: _____ Date: 7/10/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-22

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					
18	~~NA~~				10YR(6/4)	Fine to medium sand with some coarse sand and gravels, trace silts.
	NA	2.0	0.0		SP	No odors, no staining
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravels, trace silts.
20	NA				SP	No odors, no staining.
	NA				10YR(6/4)	Medium to coarse sand and gravel with trace silts,
	NA	1.5	0.0		SP	No odors, no staining evident - moist
	NA				10YR(6/4)	Medium to coarse sand and gravel with trace silts,
22	NA				SP	No odors, no staining evident - moist
	NA				10YR(6/4)	Medium to coarse sand and gravel with trace silts,
	NA	1.5	0.0		SP	No odors, no staining evident - moist
	NA				10YR(6/4)	Medium to coarse sand and gravel with trace silts,
24	NA				SP	No odors, no staining evident - moist
	NA				10YR(6/4)	Fine to medium sand - with rounded gravels and pebbles.
	NA	1.5	0.0		SW	No odors, no staining - trace silts
	NA				10YR(6/4)	Fine to medium sand - with rounded gravels and pebbles.
26	NA				SW	No odors, no staining - trace silts.
	NA				10YR(6/4)	Fine to medium sand with gravels and rounded pebbles, light iron staining
	NA	1.5	0.0		SP	Mottling present as well as stratification with higher silt content @ intervals.
	NA				10YR(6/4)	Fine to medium sand with gravels and rounded pebbles, light iron staining
28	NA				SP/SM	Mottling present as well as stratification with higher silt content @ intervals.
	NA				10YR(6/4)	Fine to medium sand and some coarse sand. Trace rounded gravels
	NA	3"	0.0		SP	Moist, no odors, no staining
	NA				10YR(6/4)	Fine to medium sand and some coarse sand. Trace rounded gravels
30	NA				SP	Moist, no odors, no staining
	NA				10YR(6/4)	Fient to medium sand and some coarse sand. Trace rounded gravels
	NA	3"	0.0		SP	Moist, no odors, no staining
	NA				10YR(6/4)	Fine to medium sand and some coarse sand. Trace rounded gravels
32	NA				SP	Moist, no odors, no staining GW encountered in shoe of core at 30 ft
						End of Boring

Signature: _____ Date: 7/10/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-23

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					
0	~~NA~~	1.5	0.0		10YR(5/8)	Subbase and asphalt
	NA				SM	
	NA				10YR(5/8)	Fine to medium sand and silts with trace to some rounded gravels
2	NA				SM	
	NA	1.5	1.1		10YR(5/8)	Fine to medium sand and silts with trace to some rounded gravels
	NA				SM	No odors, no staining - some mottling present
	NA				10YR(5/8)	Fine to medium sand and silts with trace to some rounded gravels
4	NA				SM	No odors, no staining - some mottling present
	NA	1.5	0.0		10YR(5/8)	Fine to medium sand and silts trace coarse sand and gravels
	NA				SM	No odors, no staining
	NA				10YR(6/6)	Fine to medium sand and silts trace coarse sand and gravels
6	NA				SM	No odors, no staining
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand and rounded gravels and small pebbles
	NA				SP	No odors, no staining
	NA				10YR(6/4)	Fine to medium sand and rounded gravels and small pebbles
8	NA				SP	No odors, no staining
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand and gravels. Trace to little silt present.
	NA				SP	No odors, no staining - moist
	NA				10YR(6/4)	Fine to medium sand and gravels. Trace to little silt present.
10	NA				SP	No odors, no staining - moist
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand and gravels.
	NA				SP	Moist, no odors, no staining
	NA				10YR(6/4)	Fine to medium sand and gravels.
12	NA				SP	Moist, no odors, no staining
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand, trace silts. Some coarse sand and gravels present.
	NA				SP	No odors, no staining
	NA				10YR(6/4)	Fine to medium sand, trace silts. Some coarse sand and gravels present.
14	NA				SP	No odors, no staining
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand, trace silts. Some coarse sand and gravels present.
	NA				SP	No odors, no staining
	NA				10YR(6/4)	Fine to medium sand, trace silts. Some coarse sand and gravels present.
16	NA				SP	No odors, no staining
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand and silts, some gravels and rounded pebbles with light
	NA				SP	iron staining - no odors, no staining
	NA				10YR(6/4)	Fine to medium sand and silts, some gravels and rounded pebbles with light
18	NA				SP	iron staining - no odors, no staining

Signature: _____ Date: 7/8/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-23

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-23 (31-32) @ 1503 for VOCs
	LOCATION:					
18	~~NA~~				10YR(6/3)	Fine to medium sand and silts, some gravels and rounded pebbles with light
	NA	1.5	0.0		SP	iron staining - no odors, no staining
	NA				10YR(6/4)	Fine to medium sand and silts, some gravels and rounded pebbles with light
20	NA				SP	iron staining - no odors, no staining
	NA				10YR(6/3)	Fine to medium sand and silts, with some coarse sand and gravels. Intervals
	NA	1.5	0.0		SP	of very fine sand and silt. No odors, no staining
	NA				10YR(6/3)	Fine to medium sand and silts, with some coarse sand and gravels. Intervals
22	NA				SP	of very fine sand and silt. No odors, no staining
	NA				10YR(6/3)	Fine to medium sand and silts, with some coarse sand and gravels. Intervals
	NA	1.5	0.0		SP	of very fine sand and silt. No odors, no staining
	NA				10YR(6/3)	Fine to medium sand and silts, with some coarse sand and gravels. Intervals
24	NA				SP	of very fine sand and silt. No odors, no staining
	NA				10YR(6/4)	Fine to medium sand with silts and gravels. No odors, no staining
	NA	1.5	0.0		SP	poory sorted dry sand.
	NA				10YR(6/4)	Fine to medium sand with silts and gravels. No odors, no staining
26	NA				SP	poory sorted dry sand.
	NA				10YR(6/4)	Fine to medium sand with silts and gravels. No odors, no staining
	NA	1.5	0.0		SP	poory sorted dry sand.
	NA				10YR(6/4)	Fine to medium sand with silts and gravels. No odors, no staining
28	NA				SP	poory sorted dry sand.
	NA				10YR(6/4)	Fine to medium sand with some very fine sand. Coarse sand and gravels present
	NA	1.0	0.0		SP	at trace. No odors, no staining
	NA				10YR(6/4)	Fine to medium sand with some very fine sand. Coarse sand and gravels present
30	NA				SP	at trace. No odors, no staining
	NA				10YR(6/4)	Fine to medium sand with some very fine sand and gravels - trace silts
	NA	1.0	0.0		SP	No odors, no staining - GW encountered at 32 ft
	NA				10YR(6/4)	Fine to medium sand with some very fine sand and gravels - trace silts
32	NA				SP	No odors, no staining - GW encountered at 32 ft
						End of Boring

Signature: _____ Date: 7/8/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-24

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION **SB-24 (8'-9') for VOCs and SVOCs @0759**
	LOCATION:					
0	~~NA~~	1.2	0.0		10YR(5/1)	6" of Black top and subbase
	NA				SM	
	NA				10YR(5/4)	Fine to medium moist sand and silts with gravels. No odors, no staining
2	NA				SM	
	NA	1.2	1.2		10YR(5/8)	Fine to medium sand and silts, very moist and iron stained.
	NA				SM	No odors, no staining
	NA				10YR(5/8)	Fine to medium sand and silts, very moist and iron stained.
4	NA				SM	No odors, no staining
	NA	1.5	1.6		10YR(5/8)	Fine, medium to coarse sand and gravels, with some s. HS. Iron stained
	NA				SM	
	NA				10YR(6/4)	Medium to coarse sand with rounded pebbles and gravels
6	NA				SP	No odors, no staining
	NA	1.5	1.8		10YR(6/4)	Fine, medium to coarse sand and gravels, with some s. HS. Iron stained
	NA				SP	
	NA				10YR(6/4)	Medium to coarse sand with rounded pebbles and gravels
8	NA				SP	No odors, no staining
	NA	1.5	3.1		10YR(6/4)	Medium to coarse sand with gravels trace silts, moist
	NA				SP	No odors, no staining
	NA				10YR(6/4)	Medium to coarse sand with gravels trace silts, moist
10	NA				SP	No odors, no staining
	NA	1.5	1.2		10YR(6/3)	Medium to coarse sand with gravels trace silts, moist
	NA				SP	No odors, no staining
	NA				10YR(6/3)	Medium to coarse sand with gravels trace silts, moist
12	NA				SP	No odors, no staining
	NA	1.5	0.0		10YR(6/3)	Fine, medium and coarse sand mixes slightly iron stained no odors, traces of
	NA				SP	rounded gravels - moist.
	NA				10YR(6/3)	Fine, medium and coarse sand mixes slightly iron stained no odors, traces of
14	NA				SP	rounded gravels - moist.
	NA	1.5	0.0		10YR(6/3)	Fine, medium and coarse sand mixes slightly iron stained no odors, traces of
	NA				SP	rounded gravels - moist.
	NA				10YR(6/3)	Fine, medium and coarse sand mixes slightly iron stained no odors, traces of
16	NA				SP	rounded gravels - moist.
	NA	1.5	0.0		10YR(6/3)	Fine to medium sand and rounded gravels, stratification with iron stained and
	NA				SP	higher content intervals. No odors or staining visible
	NA				10YR(6/3)	Fine to medium sand and rounded gravels, stratification with iron stained and
18	NA				SP	higher content intervals. No odors or staining visible

Signature: _____ Date: 7/8/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-24

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					
18	~~NA~~	1.5	0.0		10YR(6/2) SP	Fine to medium sand and rounded gravels, stratification with iron stained and higher content intervals. No odors or staining visible
	NA					
	NA				10YR(6/3) SP	Fine to medium sand and rounded gravels, stratification with iron stained and higher content intervals. No odors or staining visible
20	NA					
	NA	1.5	0.0		10YR(6/4) SP	Fine, medium and coarse sand intervals. Moist, iron stained in areas, some mottling appearances. No odors, no staining.
	NA					
	NA				10YR(6/4) SP	Fine, medium and coarse sand intervals. Moist, iron stained in areas, some mottling appearances. No odors, no staining.
22	NA					
	NA	1.5	0.0		10YR(6/4) SP	Fine, medium and coarse sand intervals. Moist, iron stained in areas, some mottling appearances. No odors, no staining.
	NA					
	NA				10YR(6/4) SP	Fine, medium and coarse sand intervals. Moist, iron stained in areas, some mottling appearances. No odors, no staining.
24	NA					
	NA	1.5	0.0		10YR(6/4) SP	Fine to medium sand with some coarse sand and gravel. Trace silts, light iron stained intervals with higher silt content. No odors
	NA					
	NA				10YR(6/4) SP	Fine to medium sand with some coarse sand and gravel. Trace silts, light iron stained intervals with higher silt content. No odors
26	NA					
	NA	1.5	0.0		10YR(6/4) SP	Fine to medium sand with some coarse sand and gravel. Trace silts, light iron stained intervals with higher silt content. No odors
	NA					
	NA				10YR(6/4) SP	Fine to medium sand with some coarse sand and gravel. Trace silts, light iron stained intervals with higher silt content. No odors
28	NA					
	NA	1.5	0.0		10YR(6/4) SP	Fine to medium sand and gravels - trace silts, some stratification present with iron stained intervals with higher silt content.
	NA					
	NA				10YR(6/4) SP	Fine to medium sand and gravels - trace silts, some stratification present with iron stained intervals with higher silt content.
30	NA					
	NA	1.5	0.0		10YR(6/4) SP	Fine to medium sand and gravels - trace silts, some stratification present with iron stained intervals with higher silt content. GW encountered @ 30 ft
	NA					
	NA				10YR(6/4) SP	Fine to medium sand and gravels - trace silts, some stratification present with iron stained intervals with higher silt content. GW encountered @ 30 ft
32	NA					
						End of Boring

Signature: _____ Date: 7/8/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-25

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-25 (11'-13') @ 0656 for VOC
	LOCATION:					
0	~~NA~~				Asphalt	6" of Asphalt - dark PAH odors from asphalt.
	NA	2.0	0.0			Subbase and angular gravels.
	NA				10YR(3/1)	Silty gravels and coarse sand
2	NA				SM	
	NA				10YR(5/6)	Heavily iron stained silty fine sand and rounded gravels - moist
	NA	2.0	0.0		SM	
	NA				10YR(5/6)	Heavily iron stained silty fine sand and rounded gravels - moist
4	NA				SM	
	NA				10YR(6/4)	Fine, medium and coarse sand with gravels. Subangular trace silts present
	NA	2.0	1.2		SP	trace odor of asphalt, no staining.
	NA				10YR(6/4)	Fine, medium and coarse sand with gravels. Subangular trace silts present
6	NA				SP	trace odor of asphalt, no staining.
	NA				10YR(6/4)	Fine, medium and coarse sand with gravels. Subangular trace silts present
	NA	2.0	1.2		SP	trace odor of asphalt, no staining.
	NA				10YR(6/4)	Fine, medium and coarse sand with gravels. Subangular trace silts present
8	NA				SP	trace odor of asphalt, no staining.
	NA				10YR(6/4)	Fine, medium and coarse sand with some gravels and trace silts - some odors
	NA	2.0	5.2		SP	present from this depth from asphalt.
	NA				10YR(6/4)	Fine, medium and coarse sand with some gravels and trace silts - some odors
10	NA				SP	present from this depth from asphalt.
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravels, trace silts and very fine
	NA	2.0	10.0		SP	sand, light odor, no staining present.
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravels, trace silts and very fine
12	NA				SP	sand, light odor, no staining present.
	NA				10YR(6/3)	Fine to medium well sorted sand - no gravel or coarse sand. Trace silts
	NA	2.0	3.1		SW	No odors or visible staining present.
	NA				10YR(6/3)	Fine to medium well sorted sand - no gravel or coarse sand. Trace silts
14	NA				SP	No odors or visible staining present.
	NA				10YR(6/3)	Fine to medium well sorted sand - no gravel or coarse sand. Trace silts
	NA	2.0	2.4		SP	No odors or visible staining present.
	NA				10YR(6/3)	Fine to medium well sorted sand - no gravel or coarse sand. Trace silts
16	NA				SP	No odors or visible staining present.
	NA				10YR(6/4)	Medium to coarse sand with some fine sand and gravel, trace silts, no visible staining
	NA	2.0	0.9		SP	no odors detected by alfactory, some stratification of iron staining.
	NA				10YR(6/4)	Medium to coarse sand with some fine sand and gravel, trace silts, no visible staining
18	NA				SP	no odors detected by alfactory, some stratification of iron staining.

Signature: _____ Date: 7/3/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-25

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					
18	~~NA~~				10YR(6/4)	Medium to more coarse sand with some fine sand and gravels. Stratification
	NA	2.0	0.2		SP	present with darker silts and greater silt content. No odors, no staining visible.
	NA				10YR(6/4)	Medium to more coarse sand with some fine sand and gravels. Stratification
20	NA				SP	present with darker silts and greater silt content. No odors, no staining visible.
	NA				10YR(6/4)	Fine to medium sand with some coarse sands and rounded gravels.
	NA	2.0	0.0		SP	NO odors, NO staining present.
	NA				10YR(6/4)	Fine to medium sand with some coarse sands and rounded gravels.
22	NA				SP	NO odors, NO staining present.
	NA				10YR(6/4)	Fine to medium sand with some silts with iron staining laminations of alternating
	NA	2.0	0.0		SP	iron stained and greater silt content intervals.
	NA				10YR(6/4)	Fine to medium sand with some silts with iron staining laminations of alternating
24	NA				SP	iron stained and greater silt content intervals.
	NA				10YR(6/4)	Fine medium sand with some coarse sand and gravel intervals. Trace silts present.
	NA	2.0	0.0		SP	Rounded pebbles. No odors, light iron staining.
	NA				10YR(6/4)	Fine medium sand with some coarse sand and gravel intervals. Trace silts present.
26	NA				SP	Rounded pebbles. No odors, light iron staining.
	NA				10YR(6/4)	Fine medium sand with some coarse sand and gravel intervals. Trace silts present.
	NA	1.5	0.0		SP	Rounded pebbles. No odors, light iron staining.
	NA				10YR(6/4)	Fine medium sand with some coarse sand and gravel intervals. Trace silts present.
28	NA				SP	Rounded pebbles. No odors, light iron staining.
	NA				10YR(6/4)	Fine to medium sand, some silts and very fine sand trace rounded pebbles
	NA	1.5	0.0		SP	No odors, no staining.
	NA				10YR(6/4)	Fine to medium sand, some silts and very fine sand trace rounded pebbles
30	NA				SP	No odors, no staining.
	NA				10YR(6/4)	Fine to medium sand, some silts and very fine sand -laminations
	NA	1.5	0.0		SP	with higher silt content and iron staining. GW encountered @ 32 ft
	NA				10YR(6/4)	Fine to medium sand, some silts and very fine sand -laminations
32	NA				SP	with higher silt content and iron staining. GW encountered @ 32 ft
						End of Boring

Signature: _____ Date: 7/3/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-26

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					
0	~~NA~~	1.5	2.3		Asphalt	6"-8' of asphalt and subbase.
	NA					odors from asphalt.
	NA				10YR(6/4)	Fine to medium sand and silt.
2	NA				SM	No odors, no staining
	NA	1.5	0.9		10YR(6/4)	Fine to medium sand and silt with rounded pebbles - no odors no staining
	NA				SM	
	NA				10YR(6/4)	Fine to medium sand and silt with rounded pebbles - no odors no staining
4	NA				SM	with mottling of darker and iron stained colors.
	NA	1.5	0.0		10YR(5/8)	Fine to medium sand with silts and rounded gravels, no odors, no staining - damp
	NA				SP	Very iron stained
	NA				10YR(5/8)	Fine to medium sand with silts and rounded gravels, no odors, no staining - damp
6	NA				SP	Very iron stained
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand with silts and rounded gravels. No odors, no staining
	NA				SP	
	NA				10YR(6/4)	Fine to medium sand with silts and rounded gravels. No odors, no staining
8	NA				SP	
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand with some coarse sand and gravel intervals, some very fine
	NA				SP	and silty areas. No odors and no staining
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravel intervals, some very fine
10	NA				SP	and silty areas. No odors and no staining
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand with some coarse sand and gravels, trace silts
	NA				SP	No odors, light iron staining
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravels, trace silts
12	NA				SP	No odors, light iron staining
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand with coarse sand and gravels. No odors and no staining
	NA				SP	trace silts present.
	NA				10YR(6/4)	Fine to medium sand with coarse sand and gravels. No odors and no staining
14	NA				SP	trace silts present.
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand with coarse sand and gravels. No odors and no staining
	NA				SP	trace silts present.
	NA				10YR(6/4)	Fine to medium sand with coarse sand and gravels. No odors and no staining
16	NA				SP	trace silts present.
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand with trace pebbles and coarse sand, and silts.
	NA				SP	No odors, no staining
	NA				10YR(6/4)	Fine to medium sand with trace pebbles and coarse sand, and silts.
18	NA				SP	No odors, no staining

Signature: _____ Date: 7/3/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-26

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-26 (31'-32') @111.5 for VOC and SVOC
	LOCATION:					
18	~~NA~~				10YR(6/4)	Very fine, fine and medium sand, with little to no coarse sand, trace rounded
	NA	1.5	0.0		SP	gravels. No odors, light iron staining
	NA				10YR(6/4)	Very fine, fine and medium sand, with little to no coarse sand, trace rounded
20	NA				SP	gravels. No odors, light iron staining
	NA				10YR(6/4)	Fine to medium sand with some to trace gravels, and silts.
	NA	1.5	0.0		SP	Moist, no odors, no staining
	NA				10YR(6/3)	Fine to medium sand with some to trace gravels, and silts.
22	NA				SP	Moist, no odors, no staining
	NA				10YR(6/3)	Fine to medium sand with some to trace gravels, and silts.
	NA	1.5	0.0		SP	Moist, no odors, no staining
	NA				10YR(6/3)	Fine to medium sand with some to trace gravels, and silts.
24	NA				SP	Moist, no odors, no staining
	NA				10YR(6/4)	Fine to medium sand with some to trace gravels, and silts.
	NA	1.5	0.0		SP	Rounded pebbles, some mottling present, no odors, no staining, moist.
	NA				10YR(6/3)	Fine to medium sand with some to trace gravels, and silts.
26	NA				SP	Rounded pebbles, some mottling present, no odors, no staining, moist.
	NA				10YR(6/3)	Fine to medium sand with some to trace gravels, and silts.
	NA	1.5	0.0		SP	Rounded pebbles, some mottling present, no odors, no staining, moist.
	NA				10YR(6/3)	Fine to medium sand with some to trace gravels, and silts.
28	NA				SP	Rounded pebbles, some mottling present, no odors, no staining, moist.
	NA				10YR(6/3)	Fine to medium sand and gravels - trace silts and rounded pebbles.
	NA	1.5	0.0		SP	No odors, and no staining visible
	NA				10YR(6/3)	Fine to medium sand and gravels - trace silts and rounded pebbles.
30	NA				SP	No odors, and no staining visible
	NA				10YR(6/3)	Fine to medium sand and gravels - trace silts and rounded pebbles.
	NA	1.5	0.0		SP	Moist, no odors, no staining
	NA				10YR(6/3)	Fine to medium sand and gravels - trace silts and rounded pebbles.
32	NA				SP	Moist, no odors, no staining
	NA				10YR(6/3)	Fine to medium sand with gravels and silt
	NA	2"	0.0		SP	completely saturated @ 32 ft
	NA				10YR(6/3)	Fine to medium sand with gravels and silt
34	NA				SP	completely saturated @ 32 ft
	NA				10YR(6/3)	Fine to medium sand with gravels and silt
	NA	2"	0.0		SP	completely saturated @ 32 ft
	NA				10YR(6/3)	Fine to medium sand with gravels and silt
36	NA				SP	completely saturated @ 32 ft

Signature: _____ Date: 7/3/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-27

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					
0	~~NA~~	1.5	0.0		10YR(4/4)	Fine to medium sand and silts. Trace of gravels and rounded pebbles.
	NA				SM	Moist - no odors, no staining
	NA				10YR(4/4)	Fine to medium sand and silts. Trace of gravels and rounded pebbles.
2	NA				SM	Moist - no odors, no staining
	NA	1.5	0.0		10YR(4/4)	Fine to medium sand and silts, trace of gravels and rounded pebbles
	NA				SM	No odors, no staining.
	NA				10YR(4/4)	Fine to medium sand and silts, trace of gravels and rounded pebbles
4	NA				SM	No odors, no staining.
	NA	1.5	0.0		10YR(4/4)	Fine to medium sand, with some silt. Trace gravels and rounded pebbles
	NA				SM	No odors, high iron staining present
	NA				10YR(6/8)	Fine to medium sand, with some silt. Trace gravels and rounded pebbles
6	NA				SM	No odors, high iron staining present
	NA	1.5	0.0		10YR(6/8)	Fine to medium sand, with some silt. Trace gravels and rounded pebbles
	NA				SM	No odors, high iron staining present
	NA				10YR(6/4)	Medium sand with silts, trace gravels and rounded pebbles
8	NA				SM	No odors
	NA	1.0	0.0		10YR(6/6)	Fine sand, grading into coarser sands with gravel, less iron staining than above
	NA				SP	No odors, no staining.
	NA				10YR(6/6)	Fine sand, grading into coarser sands with gravel, less iron staining than above
10	NA				SP	No odors, no staining.
	NA	1.0	0.0		10YR(6/6)	Fine sand, grading into coarser sands with gravel, less iron staining than above
	NA				SP	Moist - no odors, no staining
	NA				10YR(6/6)	Fine sand, grading into coarser sands with gravel, less iron staining than above
12	NA				SP	Moist - no odors, no staining
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand with rounded gravels, trace silts, no odors, no staining - moist
	NA				SP	
	NA				10YR(6/4)	Fine to medium sand with rounded gravels, trace silts, no odors, no staining - moist
14	NA				SP	
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand with rounded gravels, trace silts, no odors, no staining - moist
	NA				SP	
	NA				10YR(6/4)	Fine to medium sand with rounded gravels, trace silts, no odors, no staining - moist
16	NA				SP	
	NA	1.0	0.0		10YR(6/4)	Fine to medium sand with some coarse sand, gravel present with rounded pebbles
	NA				SP	No odors or staining
	NA				10YR(6/4)	Fine to medium sand with some coarse sand, gravel present with rounded pebbles
18	NA				SP	No odors or staining

Signature: _____ Date: 6/27/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-27

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-27 (28'-29') @1420 VOC, SVOC and TAX Inorganics
	LOCATION:					
18	NA	1.0	0.0		10YR(6/4) SP	Medium to coarse sand with gravel layers moist, some locally iron stained intervals. No odors
	NA					
20	NA				10YR(6/4) SP	Medium to coarse sand with gravel layers moist, some locally iron stained intervals. No odors
	NA					
22	NA	1.5	0.0		10YR(6/4) SP	Fine to medium sand - traces of gravel with rounded pebbles. Some coarse sand No odors. Some mottling present with darker silts
	NA					
24	NA	1.0	0.0		10YR(6/4) SP	Fine to medium sand - traces of gravel with rounded pebbles. Some coarse sand Moist, no odors, no staining
	NA					
26	NA	2.0	0.0		10YR(6/4) SP	Fine to medium sand with trace coarse sand and gravel. Some stratification present with higher silt content and mica. No odors, no staining present.
	NA					
28	NA	1.5	0.0		10YR(6/4) SP	Fine to medium sand with trace coarse sand and gravel. Some stratification present with higher silt content and mica. No odors, no staining present.
	NA					
30	NA	1.0	0.0		10YR(6/4) SP	Coarse sand with some medium sand and silts. No odors, no staining GW encountered @ 29 ft
	NA					
32	NA	1.0	0.0		10YR(6/4) SP	Coarse sand and gravel with some medium sand. Trace silts No odors, no staining.
	NA					
						End of Boring

Signature: _____ Date: 6/27/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-28

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					
0	~~NA~~				10YR(4/2)	Ground and subbage ~6"
	NA	1.0	0.0		SM	
	NA				10YR(5/8)	Dry fine to medium sand and gravels, some silts
2	NA				SM	No odors, no staining
	NA				10YR(5/8)	Moist, heavily iron stained sand and silt. Fine to medium sand with trace gravels.
	NA	1.0	0.0		SM	No odors, no staining
	NA				10YR(5/8)	Moist, heavily iron stained sand and silt. Fine to medium sand with trace gravels.
4	NA				SM	No odors, no staining
	NA				10YR(5/8)	Fine to medium sand with rounded gravels, some coarse sand, moist
	NA	1.5	0.0		SM	light iron staining, no odors
	NA				10YR(6/4)	Fine to medium sand with rounded gravels, some coarse sand, moist
6	NA				SP	light iron staining, no odors
	NA				10YR(6/4)	Fine to medium sand, poorly sorted with pebbles angular and sub rounded gravels
	NA	1.5	0.0		SP	No odors, light iron staining
	NA				10YR(6/4)	Fine to medium sand, poorly sorted with pebbles angular and sub rounded gravels
8	NA				SP	No odors, light iron staining
	NA				10YR(6/4)	Fine to medium sand, with some gravel and coarse sand, trace silts and fine sand
	NA	1.5	0.0		SP	No odors, no staining
	NA				10YR(6/4)	Fine to medium sand, with some gravel and coarse sand, trace silts and fine sand
10	NA				SP	No odors, no staining
	NA				10YR(6/4)	Fine to medium sand, with some gravel and coarse sand, trace silts and fine sand
	NA	1.5	0.0		SP	No odors, no staining
	NA				10YR(6/4)	Fine to medium sand, with some gravel and coarse sand, trace silts and fine sand
12	NA				SP	No odors, no staining
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravels, pebbles are rounded to
	NA	1.5	0.0		SP	subrounded. No odors or staining visible
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravels, pebbles are rounded to
14	NA				SP	subrounded. No odors or staining visible
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravels, pebbles are rounded to
	NA	1.5	0.0		SP	subrounded. No odors or staining visible
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravels, pebbles are rounded to
16	NA				SP	subrounded. No odors or staining visible
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravels, moist, trace silts
	NA	1.5	0.0		SP	No odors, no staining
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravels, moist, trace silts
18	NA				SP	No odors, no staining

Signature: _____ Date: 7/2/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-28

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-27 (28'-29') @1420 VOC, SVOC and TAX Inorganics
	LOCATION:					
18	~~NA~~				10YR(6/4)	Fine to medium sand with some coarse sand and gravels, moist, trace silts
	NA	1.5	0.0		SP	No odors, no staining
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravels, moist, trace silts
20	NA				SP	No odors, no staining
	NA				10YR(6/4)	Fine to medium sand and gravels with some coarse sand, trace very fine and silts.
	NA	1.5	0.0		SP	No odors, no staining
	NA				10YR(6/4)	Fine to medium sand and gravels with some coarse sand, trace very fine and silts.
22	NA				SP	No odors, no staining
	NA				10YR(6/4)	Fine to medium sand and gravels with some coarse sand, trace very fine and silts.
	NA	1.5	0.0		SP	No odors, no staining
	NA				10YR(6/4)	Fine to medium sand and gravels with some coarse sand, trace very fine and silts.
24	NA				SP	No odors, no staining
	NA				10YR(6/3)	Fine to medium sand, with some coarse sand and gravel, trace of silts and fine sand.
	NA	1.5	0.0		SP	No odors, no staining
	NA				10YR(6/3)	Fine to medium sand, with some coarse sand and gravel, trace of silts and fine sand.
26	NA				SP	No odors, no staining
	NA				10YR(6/3)	Fine to medium sand, with some coarse sand and gravel, trace of silts and fine sand.
	NA	1.5	0.0		SP	No odors, no staining
	NA				10YR(6/3)	Fine to medium sand, with some coarse sand and gravel, trace of silts and fine sand.
28	NA				SP	No odors, no staining
						End of Boring

Signature: _____ Date: 6/27/2002

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-29

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					
0	~~NA~~		3.0			Asphalt - 6" Thick
	NA	1.5				
	NA				10YR(2/1)	Coarse sand and gravel subbase
2	NA		2.1			No odors, fill.
	NA		.9		10YR(4/3)	Fill, mottled fine medium and coarse sand.
	NA	1.5			SP	No odors, no staining, damp.
	NA				10YR(4/3)	Fill, mottled fine medium and coarse sand.
4	NA		.3		SP	No odors, no staining, damp.
	NA				10YR(5/6)	Medium to coarse sand - with gravels and rounded pebbles, iron stained
	NA	1.5	0.0		SP	No odors, damp.
	NA				10YR(5/6)	Medium to coarse sand - with gravels and rounded pebbles, iron stained
6	NA				SP	No odors, damp.
	NA				10YR(5/6)	Medium to coarse sand - with gravels and rounded pebbles, iron stained
	NA	1.5	0.0		SP	No odors, damp.
	NA				10YR(5/6)	Medium to coarse sand - with gravels and rounded pebbles, iron stained
8	NA				SP	No odors, damp.
	NA				10YR(5/3)	Fine to medium sand wth some gravel intervals, trace rounded pebbles
	NA	2.0	0.0		SP	No odors, iron staining, moist.
	NA				10YR(5/4)	Fine to medium sand wth some gravel intervals, trace rounded pebbles
10	NA				SP	No odors, iron staining, moist.
	NA				10YR(6/4)	Fine to medium sand, trace gravels and rounded pebbles.
	NA	2.0	0.0		SP	No odors, no staining, moist
	NA				10YR(6/4)	Fine to medium sand, trace gravels and rounded pebbles.
12	NA				SP	No odors, no staining, moist
	NA				10YR(6/4)	Fine to medium sand, some coarse sand and gravel intervals, trace rounded
	NA	1.5	0.0		SP	pebbles, no odors, light iron staining, damp
	NA				10YR(6/4)	Fine to medium sand, some coarse sand and gravel intervals, trace rounded
14	NA				SP	pebbles, no odors, light iron staining, damp
	NA				10YR(6/4)	Fine to medium sand, some coarse sand and gravel intervals, trace rounded
	NA	1.5	0.0		SP	pebbles, no odors, light iron staining, damp
	NA				10YR(6/4)	Fine to medium sand, some coarse sand and gravel intervals, trace rounded
16	NA				SP	pebbles, no odors, light iron staining, damp
	NA				10YR(6/4)	Fine, medium and coarse sand with some rounded pebbles and gravel
	NA	1.5	0.0		SP	No odors, iron staining localized by small iron rien stones.
	NA				10YR(6/4)	Fine, medium and coarse sand with some rounded pebbles and gravel
18	NA				SP	No odors, iron staining localized by small iron rien stones.

Signature: _____ Date: 6/26/02

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-29

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-29 (31-32) @ 1500, VOC, SVOC, Pesticides
	LOCATION:					
18	~~NA~~	1.5	0.0		10YR(6/4)	Fine, medium and coarse sand with some rounded pebbles and gravel
	NA				SP	No odors, iron staining localized by small iron rien stones.
	NA				10YR(6/4)	Fine, medium and coarse sand with some rounded pebbles and gravel
20	NA				SP	No odors, iron staining localized by small iron rien stones.
	NA	1.5	0.0		10YR(6/3)	Fine to medium sand matrix with high silt content, stratification present
	NA				SM	with higher silt content. No odors, no staining, moist.
	NA				10YR(6/3)	Fine to medium sand matrix with high silt content, stratification present
22	NA				SM	with higher silt content. No odors, no staining, moist.
	NA	1.5	0.0		10YR(6/3)	Fine to medium sand matrix with high silt content, stratification present
	NA				SM	with higher silt content. No odors, no staining, moist.
	NA				10YR(6/3)	Fine to medium sand matrix with high silt content, stratification present
24	NA				SM	with higher silt content. No odors, no staining, moist.
	NA	1.5	0.0		10YR(6/6)	Fine to medium sand, with some silts, trace gravels and rounded pebbles.
	NA				SP	No odors, no staining, some stratification, moist.
	NA				10YR(6/4)	Fine to medium sand, with some silts, trace gravels and rounded pebbles.
26	NA				SP	No odors, no staining, some stratification, moist.
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand, with some silts, trace gravels and rounded pebbles.
	NA				SP	No odors, no staining, some stratification, moist.
	NA				10YR(6/4)	Fine to medium sand, with some silts, trace gravels and rounded pebbles.
28	NA				SP	No odors, no staining, some stratification, moist.
	NA	1.5	0.0		10YR(6/3)	Pale brown - fine to medium sand, trace coarse sand and gravel - small rounded
	NA				SP	pebbles, no odors, no staining.
	NA				10YR(6/3)	Pale brown - fine to medium sand, trace coarse sand and gravel - small rounded
30	NA				SP	pebbles, no odors, no staining.
	NA	1.5	0.0		10YR(6/3)	Pale brown - fine to medium sand, trace coarse sand and gravel.
	NA				SP	No odors, no staining, GW encountered @ 32 ft at the bottom
	NA				10YR(6/3)	Pale brown - fine to medium sand, trace coarse sand and gravel.
32	NA				SP	No odors, no staining GW encountered @ 32 ft at the bottom
						End of Boring

Signature: _____ Date: 6/26/02

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number SB-30

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					
0	~~NA~~				10YR(5/6)	Dark grey gravel and wet silty top soil.
	NA	1.5	0.0		SP	
	NA				10YR(5/6)	Fine to medium sand with trace gravels and silts. No odors, no staining
2	NA				SP	
	NA				10YR(5/6)	Fine to medium sand with trace gravels and silts. No odors, no staining
	NA	1.5	0.0		SP	
	NA				10YR(5/6)	Fine to medium sand with trace gravels and silts. No odors, no staining
4	NA				SP	
	NA				10YR(7/6)	Fine to medium sand and gravels, trace rounded pebbles, No odors or staining
	NA	1.5	0.0		SP	
	NA				10YR(7/6)	Fine to medium sand and gravels, trace rounded pebbles, No odors or staining
6	NA				SP	
	NA				10YR(7/6)	Fine to medium sand and gravels, trace rounded pebbles, No odors or staining
	NA	1.5	0.0		SP	
	NA				10YR(7/6)	Fine to medium sand and gravels, trace rounded pebbles, No odors or staining
8	NA				SP	
	NA				10YR(7/4)	Coarse sand, some medium sand and gravel, some rounded pebbles.
	NA	1.5	0.0		SP	No odors, no staining
	NA				10YR(7/4)	Coarse sand, some medium sand and gravel, some rounded pebbles.
10	NA				SP	No odors, no staining
	NA				10YR(7/4)	Unsorted coarse sand, some medium sand and gravel, some rounded pebbles.
	NA	1.5	0.0		SP	No odors, no staining
	NA				10YR(7/4)	Unsorted coarse sand, some medium sand and gravel, some rounded pebbles.
12	NA				SP	No odors, no staining
	NA				10YR(7/4)	Medium sand and coarse sand, some gravels, trace silts, no odors, no staining
	NA	1.5	0.0		SP	
	NA				10YR(7/4)	Medium sand and coarse sand, some gravels, trace silts, no odors, no staining
14	NA				SP	
	NA				10YR(7/4)	Medium sand and coarse sand, some gravels, trace silts, no odors, no staining
	NA	1.5	0.0		SP	
	NA				10YR(7/4)	Medium sand and coarse sand, some gravels, trace silts, no odors, no staining
16	NA				SP	
	NA				NR	No Depth Recovery
	NA	Fall Back	Fall Back		NR	
	NA				NR	No Depth Recovery
18	NA				NR	

Signature: _____ Date: 6/27/02

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number SB-30

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-30 (30-31) @1023 for VOC and Pesticides ms/msd collected for pests only.
	LOCATION:					
18	~~NA~~	Fall Back	Fall Back		NR	No Depth Recovery
	NA				NR	
	NA				NR	No Depth Recovery
20	NA				NR	
	NA	0.5	0.0		10YR(7/4)	Medium to coarse sand and gravel with rounded pebbles. No odors, no staining
	NA				SP	
	NA				10YR(7/7)	Medium to coarse sand and gravel with rounded pebbles. No odors, no staining
22	NA				SP	
	NA	0.5	0.0		10YR(7/4)	Medium to coarse sand and gravel with rounded pebbles. No odors, no staining
	NA				SP	
	NA				10YR(7/4)	Medium to coarse sand and gravel with rounded pebbles. No odors, no staining
24	NA				SP	
	NA	1.5	0.0		10YR(7/4)	Fine to medium sand with some coarse sand and gravel, trace silts, stratification
	NA				SP	present with iron staining higher silt content with micas.
	NA				10YR(7/4)	Fine to medium sand with some coarse sand and gravel, trace silts, stratification
26	NA				SP	present with iron staining higher silt content with micas.
	NA	1.5	0.0		10YR(8/4)	Fine to medium sand with some coarse sand and gravel, trace silts, stratification
	NA				SP	present with iron staining higher silt content with micas - moist
	NA				10YR(7/4)	Fine to medium sand with some coarse sand and gravel, trace silts, stratification
28	NA				JP	present with iron staining higher silt content with micas - moist
	NA	1.0	0.0		10YR(6/3)	Medium to fine sand, trace gravel little to no silts, no odor, no staining
	NA				SP	
	NA				10YR(6/3)	Medium to fine sand, trace gravel little to no silts, no odor, no staining
30	NA				SP	
	NA	1.0	0.0		10YR(6/3)	GW encountered @ 31 ft. Fine to medium sand, trace gravel, no odor, no staining
	NA				SP	
	NA				10YR(6/3)	GW encountered @ 31 ft. Fine to medium sand, trace gravel, no odor, no staining
32	NA				SP	
						End of Boring

Signature: _____ Date: 6/27/02

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number SB-31

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-31 (0.0-0.5) @ 0810 for pests and inorganics
	LOCATION:					
0	NA	1.5	0.8		10YR(4/3)	.6" topsoil - fine to medium sand and trace coarse sand and gravel.
	NA				SM	No odors, no staining, silts.
	NA				10YR(4/3)	.6" topsoil - fine to medium sand and trace coarse sand and gravel.
2	NA				SM	No odors, no staining, silts.
	NA	1.5	1.6		10YR(4/3)	Fine to medium coarse sand and gravel with rounded pebbles
	NA				SM	No odors, no staining.
	NA				10YR(5/6)	Fine to medium coarse sand and gravel with rounded pebbles
4	NA				SP	No odors, no staining.
	NA	1.5	2.5		10YR(5/8)	Fine to medium sand, trace rounded pebbles. No odors, no staining, and silts.
	NA				SP	
	NA				10YR(5/6)	Fine to medium sand, trace rounded pebbles. No odors, no staining, and silts.
6	NA				SP	
	NA	1.5	0.0		10YR(5/6)	Moist, Fine to medium sand, trace rounded pebbles. No odors, no staining and silts
	NA				SP	
	NA				10YR(5/6)	Moist, Fine to medium sand, trace rounded pebbles. No odors, no staining and silts
8	NA				SP	
	NA	1.5	0.0		10YR(5/6)	Moist, Fine to medium sand, trace rounded pebbles. No odors, no staining and silts
	NA				SP	
	NA				10YR(6/4)	Moist, Fine to medium sand, trace rounded pebbles. No odors, no staining and silts
10	NA				SP	
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand, trace silts with mottling - trace rounded pebbles.
	NA				SP	
	NA				10YR(6/4)	Fine to medium sand, trace silts with mottling - trace rounded pebbles.
12	NA				SP	
	NA	2.0	0.0		10YR(6/4)	Fine to medium sand with trace silts and trace gravels and rounded pebbles
	NA				SP	
	NA				10YR(6/4)	Fine to medium sand with trace silts and trace gravels and rounded pebbles
14	NA				SP	
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand with trace silts and trace gravels and rounded pebbles
	NA				SP	No odors, no staining
	NA				10YR(6/4)	Fine to medium sand with trace silts and trace gravels and rounded pebbles
16	NA				SP	No odors, no staining
	NA	2.0	0.0		10YR(6/6)	Medium sand and gravels, trace silts andfine sands, iron staining present.
	NA				SP	Silty layers of stratification. No odors, no staining.
	NA				10YR(6/6)	Medium sand and gravels, trace silts andfine sands, iron staining present.
18	NA				SP	Silty layers of stratification. No odors, no staining.

Signature: _____ Date: 6/26/02

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number SB-31

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-31(27-28) @ 1059 for VOCs, SVOC, TAL Inorganics
	LOCATION:					
18	~~NA~~				10YR(6/6)	Medium sand and gravels, trace silts andfine sands, iron staining present.
	NA	2.0	0.0		SP	Silty layers of stratification. No odors, no staining.
	NA				10YR(6/6)	Medium sand and gravels, trace silts andfine sands, iron staining present.
20	NA				SP	Silty layers of stratification. No odors, no staining.
	NA				10YR(7/3)	Fine sand with trace silts, no odors, no staining - well sorted moist
	NA	2.0	0.0		SW	
	NA				10YR(7/3)	Fine sand with trace silts, no odors, no staining - well sorted moist
22	NA				SW	
	NA				10YR(7/3)	Fine sand with trace silts, no odors, no staining - well sorted moist
	NA	2.0	0.0		SW	
	NA				10YR(7/3)	Fine sand with trace silts, no odors, no staining - well sorted moist
24	NA				SW	
	NA				10YR(7/2)	Fine to medium sand - no silts, well sorted, no odors, no staining, trace rounded
	NA	2.0	0.0		SW	pebbles, damp.
	NA				10YR(7/2)	Fine to medium sand - no silts, well sorted, no odors, no staining, trace rounded
26	NA				SW	pebbles, damp.
	NA				10YR(7/2)	Fine to medium sand - no silts, well sorted, no odors, no staining, trace rounded
	NA	1.5	0.0		SW	pebbles, damp.
	NA				10YR(7/2)	Fine to medium sand - no silts, well sorted, no odors, no staining, trace rounded
28	NA				SW	pebbles, damp.
	NA				NR	No Recovery - GW @ 31 bgs.
	NA	NR	NR		NR	
	NA				NR	No Recovery - GW @ 31 bgs.
30	NA				NR	
						End of Boring

Signature: _____ Date: 6/26/02

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number SB-32

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION
	LOCATION:					
0	~~NA~~				10YR(3/3)	Gravely surface followed by silty dark brown silty fine to medium sand.
	NA	1.8	0.0		SM	No odors, no staining, with mottling.
	NA				10YR(3/3)	Gravely surface followed by silty dark brown silty fine to medium sand.
2	NA				SM	No odors, no staining, with mottling.
	NA				10YR(4/3)	Lighter brown silty fine to medium sand with gravel and some coarse sand.
	NA	1.8	0.0		SM	No odors, no staining
	NA				10YR(4/3)	Lighter brown silty fine to medium sand with gravel and some coarse sand.
4	NA				SM	No odors, no staining
	NA				10YR(4/3)	Fine to medium sand and gravel. No odors, no staining.
	NA	2.0	0.0		SM	
	NA				10YR(4/3)	Fine to medium sand and gravel. No odors, no staining.
6	NA				SM	
	NA				10YR(4/2)	Fine to medium sand and gravels. Small rounded pebbles. No odors, no staining
	NA	1.8	0.0		SP	
	NA				10YR(4/2)	Fine to medium sand and gravels. Small rounded pebbles. No odors, no staining
8	NA				SP	
	NA				10YR(4/2)	Fine to medium to coarse sand, trace gravels, some silts, trace rounded pebbles.
	NA	1.8	0.0		SP	
	NA				10YR(4/2)	Fine to medium to coarse sand, trace gravels, some silts, trace rounded pebbles.
10	NA				SP	
	NA				10YR(6/6)	Fine to medium to coarse sand, trace gravels, some silts, trace rounded pebbles.
	NA	2.2	0.0		SP	
	NA				10YR(6/5)	Fine to medium to coarse sand, trace gravels, some silts, trace rounded pebbles.
12	NA				SP	
	NA				10YR(6/4)	Medium sand with some coarse to gravely sand. No odors, no staining. Trace silts
	NA	2.0	0.0		SP	
	NA				10YR(4/3)	Medium sand with some coarse to gravely sand. No odors, no staining. Trace silts
14	NA				SP	
	NA				10YR(4/3)	Medium sand with some coarse to gravely sand. No odors, no staining. Trace silts
	NA	2.0	0.0		SP	
	NA				10YR(6/4)	Medium sand with some coarse to gravely sand. No odors, no staining. Trace silts
16	NA				SP	
	NA				10YR(3/3)	Trace medium sand with trace fines, trace coarse and rounded pebbles.
	NA	2.0	0.0		SP	No odors, no staining.
	NA				10YR(5/3)	Trace medium sand with trace fines, trace coarse and rounded pebbles.
18	NA				SP	No odors, no staining

Signature: _____ Date: 6/24/02

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number SB-32

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-32 (30-31) @1529 for VOC and TAL Inorganics DUP062402 @0800 for VOC only
	LOCATION:					
18	~~NA~~	2.0	0.0		10YR(5/3)	Trace medium sand with trace fines, trace coarse and rounded pebbles.
	NA				SP	No odors, no staining.
	NA				10YR(5/3)	Trace medium sand with trace fines, trace coarse and rounded pebbles.
20	NA				SP	No odors, no staining.
	NA	1.5	0.0		10YR(6/3)	Fine to medium sand, trace gravel, trace coarse sand, trace silts.
	NA				SW	No odors, no staining, moist.
	NA				10YR(6/3)	Fine to medium sand, trace gravel, trace coarse sand, trace silts.
22	NA				SP	No odors, no staining, moist.
	NA	1.5	0.0		10YR(6/3)	Fine to medium sand, trace gravel, trace coarse sand, trace silts.
	NA				SP	No odors, no staining, moist.
	NA				10YR(6/6)	Fine to medium sand, trace gravel, trace coarse sand, trace silts.
24	NA				SW	No odors, no staining, moist.
	NA	1.5	0.0		10YR(6/3)	Medium to coarse sand, some fine sand, trace rounded pebbles.
	NA				SP	No odors, no staining, mottling with some iron staining.
	NA				10YR(6/3)	Medium to coarse sand, some fine sand, trace rounded pebbles.
26	NA				SW	No odors, no staining, mottling with some iron staining.
	NA	1.5	0.0		10YR(5/2)	Medium to coarse sand, some fine sand, more rounded pebbles.
	NA				SP	No odors, no staining, mottling with some iron staining.
	NA				10YR(5/2)	Medium to coarse sand, some fine sand, more rounded pebbles.
28	NA				SP	No odors, no staining, mottling with some iron staining.
	NA	1.5	0.0		10YR(5/3)	Medium to coarse sand and some gravel trace silts. No odors, no staining
	NA				SP	
	NA				10YR(5/3)	Medium to coarse sand and some gravel trace silts. No odors, no staining
30	NA				SP	
	NA	1.5	0.0		10YR(5/3)	Medium to coarse sand and some gravel trace silts. No odors, no staining
	NA				SP	GW encountered @ 31 ft
	NA				10YR(5/5)	Medium to coarse sand and some gravel trace silts. No odors, no staining
32	NA				SW	GW encountered @ 31 ft
						End of Boring

Signature: _____ Date: 6/24/02

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number SB-33

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-33(0.0-0.5) ms/msd @0813 - Pests, Inorganics
	LOCATION:					
0	~~NA~~	1.5	1.6		10YR(4/2)	Silty 6" to 9" of silty soil with medium to fine sand, vegetation.
	NA				SM	No odors, no staining, trace gravels
	NA				10YR(4/2)	Silty 6" to 9" of silty soil with medium to fine sand, vegetation.
2	NA				SM	No odors, no staining, trace gravels
	NA	1.5	1.2		10YR(4/1)	Silty 6" to 9" of silty soil with medium to fine sand, vegetation.
	NA				SM	No odors, no staining, trace gravels
	NA				10YR(4/2)	Silty 6" to 9" of silty soil with medium to fine sand, vegetation.
4	NA				SM	No odors, no staining, trace gravels
	NA	1.5	0.0		10YR(6/6)	Medium to coarse sand with trace gravel and trace silts.
	NA				SP	No odors, no staining, mostly dry
	NA				10YR(6/6)	Medium to coarse sand with trace gravel and trace silts.
6	NA				SP	No odors, no staining, mostly dry
	NA	1.5	0.0		10YR(6/4)	Medium to coarse sand with trace rounded pebbles and gravel, no odors, no staining
	NA				SP	
	NA				10YR(6/4)	Medium to coarse sand with trace rounded pebbles and gravel, no odors, no staining
8	NA				SP	
	NA	1.5	0.0		10YR(6/6)	Medium to coarse sand with trace rounded pebbles and gravel, no odors, no staining
	NA				SP	Moist
	NA				10YR(6/6)	Medium to coarse sand with trace rounded pebbles and gravel, no odors, no staining
10	NA				SP	Moist
	NA	1.5	0.0		10YR(6/6)	Medium to coarse sand with trace rounded pebbles and gravel, no odors, no staining
	NA				SP	Moist
	NA				10YR(6/6)	Medium to coarse sand with trace rounded pebbles and gravel, no odors, no staining
12	NA				SP	Moist
	NA	2.0	0.0		10YR(6/4)	Medium to coarse sand with some gravel, trace pebbles, some stratification
	NA				SP	Iron staining, no odors or staining
	NA				10YR(6/4)	Medium to coarse sand with some gravel, trace pebbles, some stratification
14	NA				SP	Iron staining, no odors or staining
	NA	2.0	0.0		10YR(6/4)	Medium to coarse sand with some gravel, trace pebbles, some stratification
	NA				SP	Iron staining, no odors, or staining - moist
	NA				10YR(6/4)	Medium to coarse sand with some gravel, trace pebbles, some stratification
16	NA				SP	Iron staining, no odors, or staining - moist
	NA	2.0	0.0		10YR(6/3)	Medium to fine sand, some coarse sand and gravel layers with stratification
	NA				SP	and mottling. Iron staining present.
	NA				10YR(6/3)	Medium to fine sand, some coarse sand and gravel layers with stratification
18	NA				SP	and mottling. Iron staining present.

Signature: _____ Date: _____

ERM NE

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-33

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)	FID/ PID (ppm)	Blow Counts	USCS/ MUNSELL COLOR CHART	SOIL DESCRIPTION SB-33 (27-28) VOC, SVOC, TCL Pests
	LOCATION:					
18	~~NA~~	2.0	0.0		10YR(6/3)	Medium to fine sand, some coarse sand and gravel layers with stratification
	NA				SP	and mottling. Iron staining present.
	NA				10YR(6/3)	Medium to fine sand, some coarse sand and gravel layers with stratification
20	NA				SP	and mottling. Iron staining present.
	NA	1.0	0.0		10YR(7/3)	Fine to medium sand, well sorted. Trace of large rounded gravels.
	NA				SW	No odors, no staining.
	NA				10YR(7/3)	Fine to medium sand, well sorted. Trace of large rounded gravels.
22	NA				SW	No odors, no staining.
	NA	1.0	0.0		10YR(7/3)	Fine to medium sand, well sorted. Trace of large rounded gravels.
	NA				SW	No odors, no staining.
	NA				10YR(7/3)	Fine to medium sand, well sorted. Trace of large rounded gravels.
24	NA				SW	No odors, no staining.
	NA	1.5	0.0		10YR(6/3)	Fine to medium sand, trace gravels, trace silts, no odors, no staining
	NA				SP	Trace small rounded pebbles.
	NA				10YR(6/3)	Fine to medium sand, trace gravels, trace silts, no odors, no staining
26	NA				SW	Trace small rounded pebbles.
	NA	1.5	0.0		10YR(6/3)	Fine to medium sand, trace gravels, trace silts, no odors, no staining
	NA				SP	Trace small rounded pebbles. Measured DTW in Peizo-5 DTW - 31.6' Below
	NA				10YR(5/2)	ground surface.
28	NA				SP	
	NA	1.0	0.0		NR	No Recovery
	NA				NR	
	NA				NR	No Recovery
30	NA				NR	
	NA	0.0	0.0		NR	No Recovery
	NA				NR	
	NA				NR	No Recovery
32	NA				NR	
						End of Boring

Signature: _____ Date: _____

Appendix B

Well Construction Logs

ERM-Northeast

WELL : ERM-01

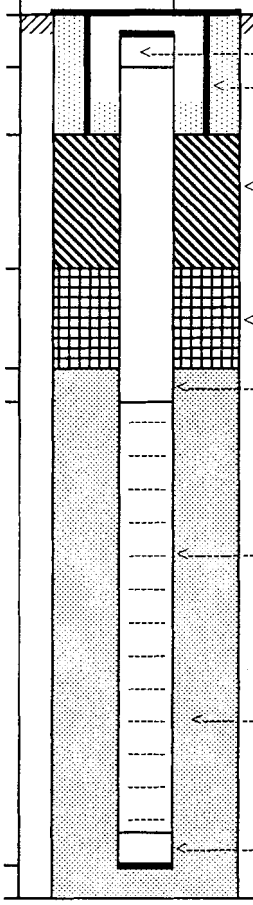
520 Broad Hollow Road, Suite 210, Melville, NY, 11747

MONITORING WELL CONSTRUCTION LOG

Project Name & Location	Project No.	Water Level(s) (ft below top of PVC casing)			Site Elevation Datum (feet)
Gabreski Airport, NYSDEC					
Drilling Company	*Foreman*			Level	*Ground Elevation (feet)*
Delta Well & Pump	Conrad Strebel	Date	Time	(feet)	
Surveyor		7/1/2002	15:44	32.3	*Top of Protective Steel Cap Elevation (feet)*
Date and Time of Completion	*Geologist*				*Top of Riser Pipe Elevation (feet)*
6/20/02 (12:30)	Jake Elder				

Generalized Soil Description	*Elevation	**Depth
	0.00	0.0
0-42 ft Below grade	0.00	0.0
Light Brown, medium to coarse loose sand and gravel trace silts, and very fine sand	-1.50	1.5
	-23.00	23.0
	-25.00	25.00
	-26.69	26.69
	-41.69	41.69
	-42.00	42.00

CONSTRUCTION DETAILS



PROTECTIVE STEEL CAP FLUSH WITH GROUND

GROUND SURFACE

WATER TIGHT CAP WITH LOCK

PROTECTIVE STEEL CASING CEMENTED IN PLACE

CEMENT GROUT

Portland Grade Grout

BENTONITE SEAL

RISER

DIAMETER: 2 inch

MATERIAL: PVC

WELL SCREEN

SLOT SIZE: 0.02

DIAMETER: 2 inch

MATERIAL: PVC

SAND PACK

TYPE: Morie # 1

BOTTOM CAP

BOTTOM OF BOREHOLE

REMARKS See Geologic log for monitoring well split spoon sampling descriptions and PID headspace data.

Located on Asphalt at the North end of the South Central Block.

* Elevation (feet) above mean sea level unless noted

** Depth in feet below ground surface

ERM-Northeast

WELL : ERM-02

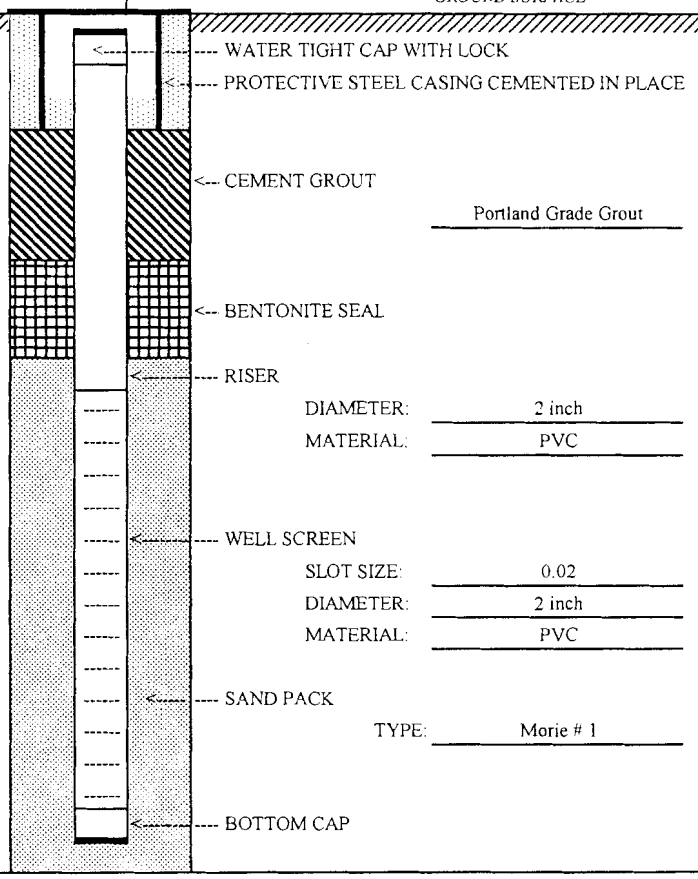
520 Broad Hollow Road, Suite 210, Melville, NY, 11747

MONITORING WELL CONSTRUCTION LOG

Project Name & Location	Project No.	Water Level(s) (ft below top of PVC casing)			Site Elevation Datum (feet)
Gabreski Airport, NYSDEC					
Drilling Company	*Foreman*	Date	Time	Level (feet)	*Ground Elevation (feet)*
Delta Well & Pump	Conrad Strebel				
Surveyor		7/1/2002	15 52	38.64	*Top of Protective Steel Cap Elevation (feet)*
Date and Time of Completion	*Geologist*				*Top of Riser Pipe Elevation (feet)*
6/19/2002 (12:15)	Jake Elder				

Generalized Soil Description	*Elevation	**Depth
	0.00	0.0
0-48 ft Below grade	0.00	0.0
Light Brown, medium to coarse loose sand and gravel trace silts, and very fine sand	-1.50	1.5
	-29.86	29.86
	-31.36	31.36
	-32.86	32.86
	-47.86	47.86
	-48.00	48.00

CONSTRUCTION DETAILS



REMARKS See Geologic log for monitoring well split spoon sampling descriptions and PID headspace data.

Located in the grass field at the North end of the South Eastern Block across from the Terracotta business.

* Elevation (feet) above mean sea level unless noted

** Depth in feet below ground surface

ERM-Northeast

520 Broad Hollow Road, Suite 210, Melville, NY, 11747

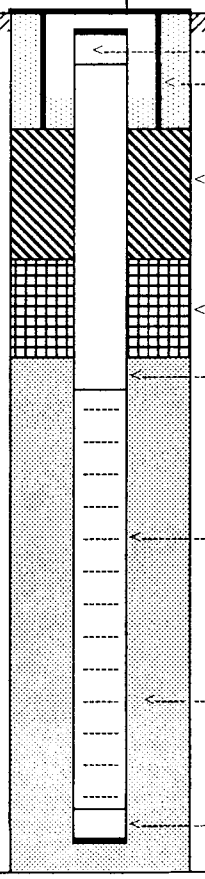
WELL : ERM-03

MONITORING WELL CONSTRUCTION LOG

Project Name & Location	Project No.	Water Level(s) (ft below top of PVC casing)			Site Elevation Datum (feet)
Gabreski Airport, NYSDEC					
Drilling Company	*Foreman*	Date	Time	Level (feet)	*Ground Elevation (feet)*
Delta Well & Pump	Conrad Strebel				
Surveyor		7/1/2002	16:06	38.75	*Top of Protective Steel Cap Elevation (feet)*
Date and Time of Completion	*Geologist*				*Top of Riser Pipe Elevation (feet)*
6/24/02 11:30)	Jake Elder				

Generalized Soil Description	*Elevation	**Depth
	0.00	0.0
0-52 ft Below grade	0.00	0.0
Light Brown, medium to coarse loose sand and gravel trace silts, and very fine sand	-1.50	1.5
	-34.40	34.40
	-35.90	35.90
	-37.40	37.40
	-52.40	52.40
	-52.00	52.00

CONSTRUCTION DETAILS



PROTECTIVE STEEL CAP FLUSH WITH GROUND

GROUND SURFACE

WATER TIGHT CAP WITH LOCK

PROTECTIVE STEEL CASING CEMENTED IN PLACE

CEMENT GROUT

Portland Grade Grout

BENTONITE SEAL

RISER

DIAMETER: 2 inch

MATERIAL: PVC

WELL SCREEN

SLOT SIZE: 0.02

DIAMETER: 2 inch

MATERIAL: PVC

SAND PACK

TYPE: Morie # 1

BOTTOM CAP

BOTTOM OF BOREHOLE

REMARKS See Geologic log for monitoring well split spoon sampling descriptions and PID headspace data.

Located on the top of the burm on the western side of the South Central Block.

* Elevation (feet) above mean sea level unless noted

** Depth in feet below ground surface

ERM-Northeast

WELL : ERM-04

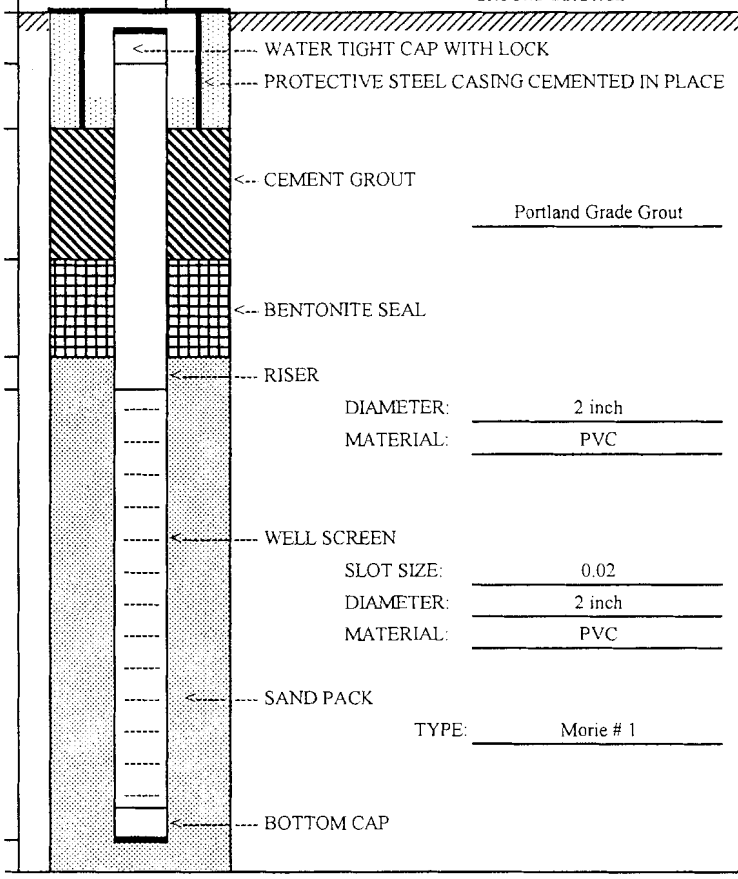
520 Broad Hollow Road, Suite 210, Melville, NY, 11747

MONITORING WELL CONSTRUCTION LOG

Project Name & Location	Project No.	Water Level(s) (ft below top of PVC casing)			Site Elevation Datum (feet)
Gabreski Airport, NYSDEC					
Drilling Company	Foreman	Date	Time	Level (feet)	Ground Elevation (feet)
Delta Well & Pump	Conrad Strebel				
Surveyor		7/1/2002	15:58	36.6	Top of Protective Steel Cap Elevation (feet)
Date and Time of Completion	Geologist				Top of Riser Pipe Elevation (feet)
6/25/02 (11:30)	G. Gabay/J. Elder				

Generalized Soil Description	*Elevation	**Depth
	0.00	0.0
0-47 ft Below grade	0.00	0.0
Light Brown, medium to coarse loose sand and gravel trace silts, and very fine sand	-1.50	1.5
	-29.09	29.09
	-30.59	30.59
	-32.09	32.09
	-47.09	47.09
	-47.00	47.00

CONSTRUCTION DETAILS



REMARKS See Geologic log for monitoring well split spoon sampling descriptions and PID headspace data.

Located in the grass field in the central portion of the South Eastern Block.

* Elevation (feet) above mean sea level unless noted

** Depth in feet below ground surface

ERM-Northeast

WELL : ERM-05

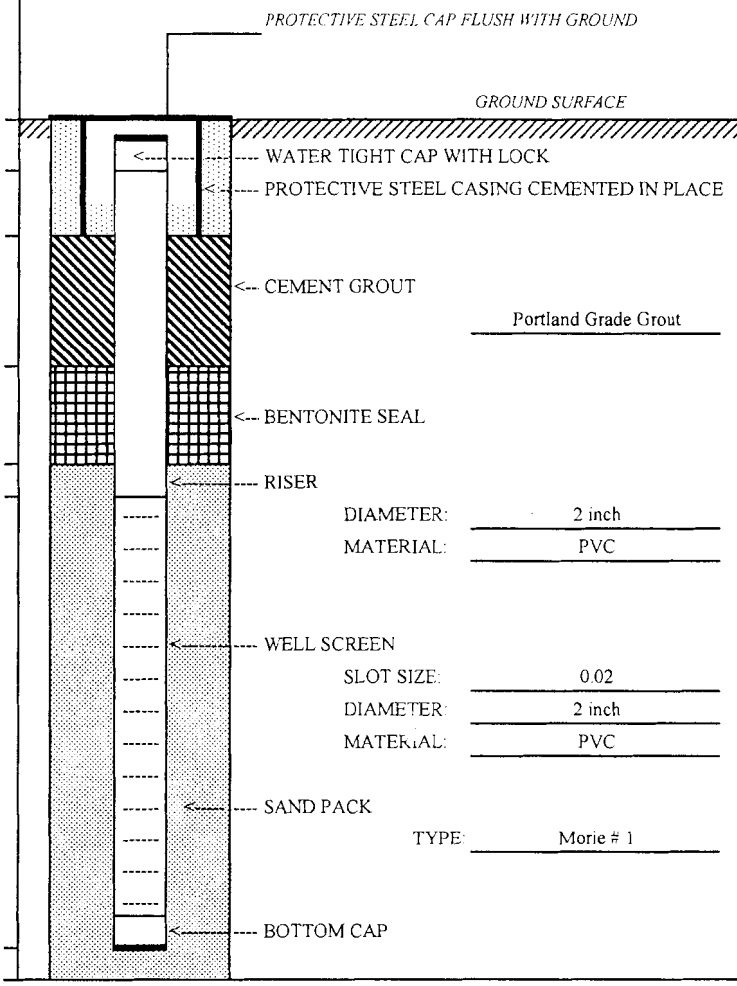
520 Broad Hollow Road, Suite 210, Melville, NY, 11747

MONITORING WELL CONSTRUCTION LOG

Project Name & Location	Project No.	Water Level(s) (ft below top of PVC casing)			Site Elevation Datum (feet)
Gabreski Airport, NYSDEC					
Drilling Company	*Foreman*			Level	*Ground Elevation (feet)*
Delta Well & Pump	Conrad Strebel	Date	Time	(feet)	
Surveyor		7/1/2002	16:12	43.87	*Top of Protective Steel Cap Elevation (feet)*
Date and Time of Completion	*Geologist*				*Top of Riser Pipe Elevation (feet)*
6/26/02 (11:00)	Jake Elder				

Generalized Soil Description	*Elevation	**Depth
	0.00	0.0
0-53 ft Below grade	0.00	0.0
Light Brown, medium to coarse loose sand and gravel trace silts, and very fine sand	-1.50	1.5
	-35.03	35.03
	-36.53	36.53
	-38.03	38.03
	-53.03	53.03
	-53.00	53.00

CONSTRUCTION DETAILS



REMARKS See Geologic log for monitoring well split spoon sampling descriptions and PID headspace data.

Located in the parking lot for the AHRC Building at the southern most area of the South Western Block.

* Elevation (feet) above mean sea level unless noted

** Depth in feet below ground surface

ERM-Northeast

WELL : ERM-06

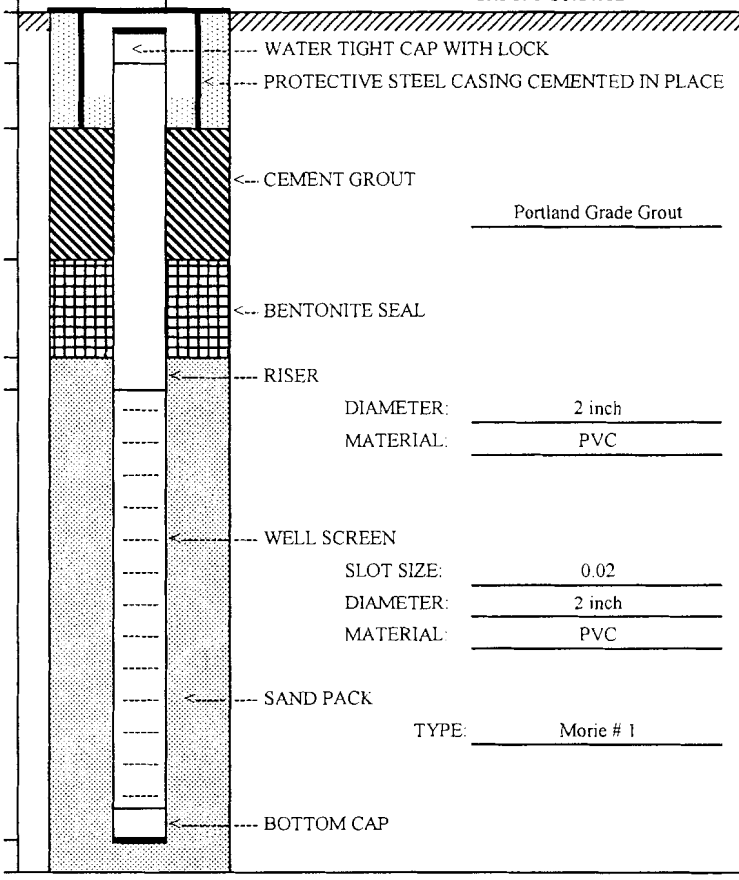
520 Broad Hollow Road, Suite 210, Melville, NY, 11747

MONITORING WELL CONSTRUCTION LOG

Project Name & Location	Project No.	Water Level(s) (ft below top of PVC casing)			Site Elevation Datum (feet)
Gabreski Airport, NYSDEC					
Drilling Company	Foreman	Date	Time	Level (feet)	Ground Elevation (feet)
Delta Well & Pump	Conrad Strebel				
Surveyor		7/1/2002	16:19	39.65	Top of Protective Steel Cap Elevation (feet)
Date and Time of Completion	Geologist				Top of Riser Pipe Elevation (feet)
6/27/02 (11:00)	J. Elder/G. Gabay				

Generalized Soil Description	*Elevation	**Depth
	0.00	0.0
0-53 ft Below grade	0.00	0.0
Light Brown, medium to coarse loose sand and gravel trace silts, and very fine sand	-1.50	1.5
	-35.35	35.35
	-33.85	33.85
	-35.35	35.35
	-50.35	50.35
	-50.00	50.00

CONSTRUCTION DETAILS



REMARKS See Geologic log for monitoring well split spoon sampling descriptions and PID headspace data.

Located on the southern burm of the South Central Block

* Elevation (feet) above mean sea level unless noted

** Depth in feet below ground surface

ERM-Northeast

WELL : ERM-07

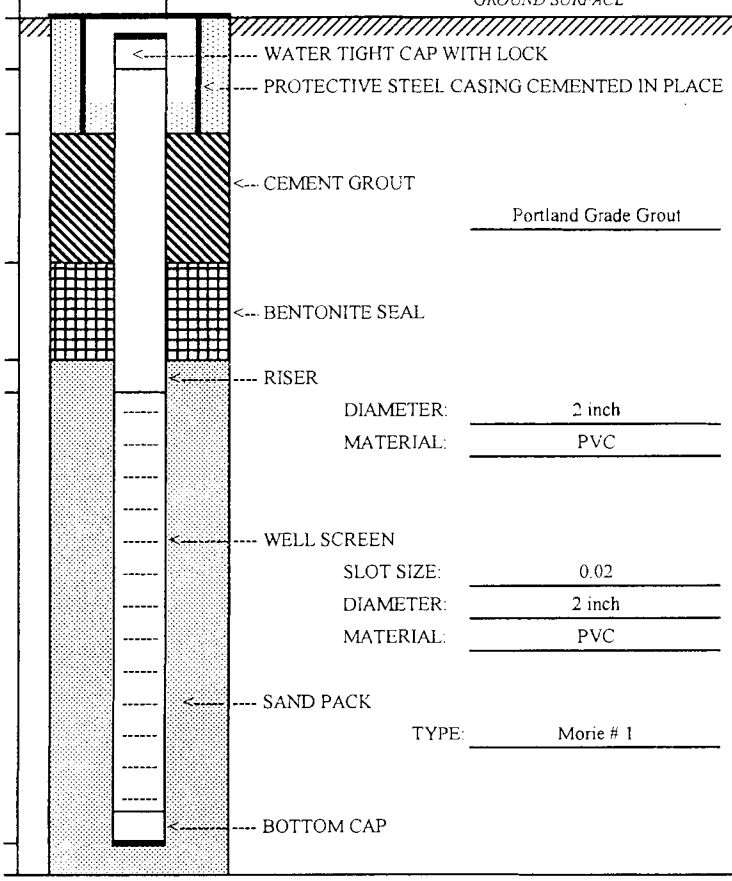
520 Broad Hollow Road, Suite 210, Melville, NY, 11747

MONITORING WELL CONSTRUCTION LOG

Project Name & Location	*Project No.*	*Water Level(s)* (ft below top of PVC casing)			*Site Elevation Datum (feet)*
Gabreski Airport, NYSDEC					
Drilling Company	*Foreman*	Date	Time	Level (feet)	*Ground Elevation (feet)*
Delta Well & Pump	Conrad Strebel				
Surveyor		7/1/2002	16:25	30.75	*Top of Protective Steel Cap Elevation (feet)*
Date and Time of Completion	*Geologist*				*Top of Riser Pipe Elevation (feet)*
6/28/02 (13:00)	Gene Gabay				

Generalized Soil Description	*Elevation	**Depth
	0.00	0.0
0-53 ft Below grade	0.00	0.0
Light Brown, medium to coarse loose sand and gravel trace silts, and very fine sand	-1.50	1.5
	-23.98	23.98
	-25.48	25.48
	-26.98	26.98
	-41.98	41.98
	-42.00	42.00

CONSTRUCTION DETAILS



REMARKS See Geologic log for monitoring well split spoon sampling descriptions and PID headspace data.

Located on the southern burm of the South Central Block

* Elevation (feet) above mean sea level unless noted

** Depth in feet below ground surface

Appendix C

Well Development Data

MONITORING WELL DEVELOPMENT RECORD

SITE Gabreski Airport, NYSDEC DATE 6 / 25 /2002

WELL ID: ERM-01 Time On-site: Time Offsite:

SAMPLER: Jake Elder 6:45

Depth of well (from top of casing) ..... 45.25 Time: 9:12

Static water level (from top of casing) ..... 36.05 Time: 9:10

Water level after purging (from top of casing) ..... 36.12 Time: 10:05

Purging Method:

____ Airlift ____ Centrifugal

____ Bailer ____ Pos. Displ.

____ Submersible ____ Ded. Pump

Well Volume Calculation: 1 volume 5 volumes

2 in. well: 9.2 ft. of water x 0.16 = 1.5 gal. x 5 = 7.5 gal.

Volume of water removed:

9 gal. >3 volumes: yes X no __ purged dry? yes ____ no X

Field Tests:

Units	pH	Cond.	Turb.	D.O.	Temp.	ORP
Initial	5.9	221	295		18.9	167
1 Volume	6	113	171		17.5	171
2 Volumes	6.2	170	74		16.6	168
3 Volumes	6.2	160	34		16.2	167
4 Volumes	6.1	149	11		16.4	167
5 Volumes	6	146	4.5		15.8	169
6 Volumes	5.9	148	1.7		15.4	170
7 Volumes						
8 Volumes						

Observations

Weather/Temperature: 75 F, Hazy, West Wind 0-5 MPH

Sample Description:

Free Product? yes __ no X describe

Sheen? yes __ no X describe

Odor? yes __ no X describe

Comments:

Hach Model 2100P Turbidity Meter

Hanna Water Instruments ph, ORP, Temperature meter- Calibrated using 4 & 7 ph

MONITORING WELL DEVELOPMENT RECORD

SITE Gabreski Airport, NYSDEC DATE 6 / 25 /2002

WELL ID: ERM-02 Time On-site: Time Offsite:

SAMPLER: Jake Elder 6:45

Depth of well (from top of casing) ..... 50.06 Time: 10:27

Static water level (from top of casing) ..... 41.05 Time: 10:25

Water level after purging (from top of casing) ..... Time:

Purging Method:

____ Airlift ____ Centrifugal

____ Bailer ____ Pos. Displ.

X Submersible ____ Ded. Pump

Well Volume Calculation:

1 volume 5 volumes

2 in. well: 9 ft. of water x 0.16 = 1.44 gal. x 5 = 7.2 gal.

Volume of water removed:

9 gal. >3 volumes: yes ___ no ___ purged dry? yes ____ no X

Field Tests:

Units	pH	Cond.	Turb.	D.O.	Temp.	ORP
Initial	5.7	68	423		18.5	181
1 Volume	5.7	113	51.5		16.6	178
2 Volumes	5.7	70	14.9		16	177
3 Volumes	5.6	3	3.97		15.7	176
4 Volumes	5.5	171	1.05		15.5	176
5 Volumes	5.5	168	0.79		15.6	175
6 Volumes	5.6	94	0.64		15	174
7 Volumes	5.6	173	0.39		15.2	173
8 Volumes	5.6	170	0.28		15	173

Observations

Weather/Temperature: 75 F, Hazy, West Wind 0-5 MPH

Sample Description:

Free Product? yes ___ no X describe

Sheen? yes ___ no X describe

Odor? yes ___ no X describe

Comments:

TOC to gs= 1.98'

MONITORING WELL DEVELOPMENT RECORD

SITE Gabreski Airport, NYSDEC DATE 6 / 26 /2002

WELL ID: ERM-03 Time On-site: Time Offsite:

SAMPLER: Jamie Malcolm 6:45

Depth of well (from top of casing) ..... 55.32 Time: 12:30

Static water level (from top of casing) ..... 41.62 Time: 12:32

Water level after purging (from top of casing) ..... Time:

Purging Method:

____ Airlift ____ Centrifugal

____ Bailer ____ Pos. Displ.

X Submersible ____ Ded. Pump

Well Volume Calculation: 1 volume 5 volumes

2 in. well: ____ ft. of water x 0.16 = 2.19 gal. x 5 = 10.96 gal.

Volume of water removed:

____ gal. >3 volumes: yes ____ no ____ purged dry? yes ____ no X

Field Tests:

Units	pH	Cond.	Turb.	D.O.	Temp.	ORP
Initial	9.9	150	236		22.2	75
1 Volume	9.5	234	70.9		20.9	100
2 Volumes	10.2	233	10.5		19.8	125
3 Volumes	11.2	232	2.78		19.6	135
4 Volumes	11.2	164	1.14		19.5	150
5 Volumes	11	148	1.17		18.8	156
6 Volumes	10	277	0.92		18.3	160
7 Volumes	9.5	304	0.53		18	166
8 Volumes	8.3	298	0.63		17.5	169

Observations

Weather/Temperature: ____

Sample Description: ____

Free Product? yes ____ no X describe ____

Sheen? yes ____ no X describe ____

Odor? yes ____ no X describe ____

Comments:

TOC to gs= 2.44'

MONITORING WELL DEVELOPMENT RECORD

SITE Gabreski Airport, NYSDEC DATE 6 / 25 /2002

WELL ID: ERM-04 Time On-site: Time Offsite:

SAMPLER: Jamie Malcolm

Depth of well (from top of casing) ..... 50.3 Time: 12:56

Static water level (from top of casing) ..... 39.48 Time: 12:58

Water level after purging (from top of casing) ..... 39.48 Time: 14:00

Purging Method:

____ Airlift ____ Centrifugal

____ Bailer ____ Pos. Displ.

X Submersible ____ Ded. Pump

Well Volume Calculation: 1 volume 5 volumes

2 in. well: # ____ ft. of water x 0.16 = 1.73 gal. x 5 = 8.6 gal.

Volume of water removed:

16 gal. >3 volumes: yes ____ no ____ purged dry? yes ____ no X

Field Tests:

Units	pH	Cond.	Turb.	D.O.	Temp.	ORP
Initial	5.9	275	665		20.4	182
1 Volume	5.9	384	60.1		19.3	173
2 Volumes	6	396	7.95		19.5	169
3 Volumes	6	367	2.09		19.1	166
4 Volumes	6	241	1.51		18.9	169
5 Volumes	6	263	1.13		18.7	167
6 Volumes	6	383	1.36		18.8	166
7 Volumes	6	196	1.05		18.6	168
8 Volumes	5.9	291	0.96		18.4	182
9 Volumes	5.9	310	0.91		18.2	178

Observations

Weather/Temperature:

Sample Description:

Free Product? yes ____ no X describe

Sheen? yes ____ no X describe

yes no X describe

Comments:

TOC to gs= 42.30'

MONITORING WELL DEVELOPMENT RECORD

SITE Gabreski Airport, NYSDEC DATE 6 / 27 /2002

WELL ID: ERM-05 Time On-site: Time Offsite:

SAMPLER: Jamie Malcolm

Depth of well (from top of casing) ..... 55 Time: 15:25

Static water level (from top of casing)..... 46.06 Time: 15:25

Water level after purging (from top of casing)..... Time:

Purging Method:

____ Airlift ____ Centrifugal

____ Bailer ____ Pos. Displ.

X Submersible ____ Ded. Pump

Well Volume Calculation:

2 in. well: 11 ft. of water x 0.16 = 1.75 gal. 1 volume x 5 = 8.75 gal. 5 volumes

Volume of water removed:

25 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests:

Units	pH	Cond.	Turb.	D.O.	Temp.	ORP
Initial						
1 Volume	10.1	330	5.5		23	159
2 Volumes			3.48		20.6	
3 Volumes			2.37			
4 Volumes			1.68			
5 Volumes						
6 Volumes						
7 Volumes						
8 Volumes						
9 Volumes						

Observations

Weather/Temperature:

Sample Description:

Free Product? yes ____ n X describe

Sheen? yes ____ n X describe

yes ____ n X describe

Comments:

Unable to obtain readings for pH, Cond., D.O., Temp, or ORP due to malfunctioning equipment.

TOC to gs= 42.30'

MONITORING WELL DEVELOPMENT RECORD

SITE Gabreski Airport, NYSDEC DATE 6 / 28 /2002

WELL ID: ERM-06 Time On-site: Time Offsite:

SAMPLER: Eugene Gabay 7:00

Depth of well (from top of casing) ..... 44.39 Time: 11:50

Static water level (from top of casing) ..... 55.05 Time: 11:51

Water level after purging (from top of casing) ..... Time:

Purging Method:

	Airlift		Centrifugal
	Bailer		Pos. Displ.
X	Submersible		Ded. Pump

Well Volume Calculation: 1 volume 5 volumes

2 in. well: 11 ft. of water x 0.16 = 1.71 gal. x 5 = 8.53 gal.

Volume of water removed:

gal. >3 volumes: yes X no purged dry? yes no X

Field Tests:

Units	pH	Cond.	Turb.	D.O.	Temp.	ORP
Initial	6.5		1000			
1 Volume	6.5		543			
2 Volumes	6.3		40.6			230
3 Volumes	6.3		535			249
4 Volumes	6.2		444			255
5 Volumes	6.2		19.2			215
6 Volumes	6.2		11.6			245
7 Volumes	6.1		9.04			254
8 Volumes						
9 Volumes						

Observations

Weather/Temperature: 80F, Clear sky, 0-5 MPH wind

Sample Description:

Free Product? yes n X describe

Sheen? yes n X describe

yes n X describe

Comments:

MONITORING WELL DEVELOPMENT RECORD

SITE Gabreski Airport, NYSDEC DATE 6 / 28 /2002

WELL ID: ERM-07 Time On-site: Time Offsite:

SAMPLER: 7:00

Depth of well (from top of casing) ..... 41.97 Time:

Static water level (from top of casing) ..... 30.75 Time:

Water level after purging (from top of casing)..... Time:

Purging Method:

	Airlift		Centrifugal
	Bailer		Pos. Displ.
X	Submersible		Ded. Pump

Well Volume Calculation: 1 volume 5 volumes

2 in. well: 11 ft. of water x 0.16 = 1.79 gal. x 5 = 8.98 gal.

Volume of water removed: 160 gal. >3 volumes: yes X no purged dry? yes no X

Field Tests:

Units	pH	Cond.	Turb.	D.O.	Temp.	ORP
Initial	6.9	851	71000		18.1	-80
1 Volume	6	889	3.94		16.4	-171
2 Volumes	5.9	878	13.9		16.4	-148
3 Volumes	5.9	868	27.8		17.2	-117
4 Volumes	5.7	898	3.28		16.7	-111
5 Volumes	5.7	904	1.28		16.7	-111
6 Volumes	5.8	901	0.91		16.7	-58
7 Volumes						
8 Volumes						
9 Volumes						

Observations

Weather/Temperature:

Sample Description:

Free Product? yes n X describe

Sheen? yes n X describe

yes n X describe

Comments:

Appendix D

Well Sampling Logs

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 7/8/2002

SAMPLE ID : ERM-01 (MS/MSD)

WELL ID : ERM-01 (MS/MSD)

SAMPLERS : Gene Gabay

		Time Onsite:	Time Offsite:
		9:30	
PID reading			
Depth of well (from top of casing)		47.75	Time: 10:34
DNAPL Level (from top of casing)		None	Time: 10:35
Static water level (from top of casing)		30.37	Time: 10:35
Water level after purging (from top of casing)		30.40	Time: 11:39
Water level before sampling (from top of casing)		30.40	Time: 11:39

Purging Method:

_ Peristaltic _ Centrifugal
_ Bailer _ Pos. Displ.
X Submersible _ Ded. Pump

Well Volume Calculation:

			1 volume		3 volumes
2 in. well:	17.38	ft. of water x 0.16 =	2.78	gal. x 3 =	8.34 gal.
4 in. well:		ft. of water x 0.65 =		gal. x 3 =	gal.
6 in. well:		ft. of water x 1.47 =		gal. x 3 =	gal.

Depth of Pump: 40' Purge Start Time: 11:07 (hrs) Purge Duration: 29 (min)

Purge End Time: 11:42 (hrs) Purge Flow Rate: 0.29 (Gpm)

Volume of water removed: 8 gal. >3 volumes: yes X no ___ purged dry? yes ___ no X

Field Tests:

	PH	COND	Turb	D.O.	Temp	ORP	D.T.W.
units		mS/cm	NTU	mg/l	°C	mV	Ft.
Initial	5.05	0.374	181.0	7.27	17.83	222	30.37
11:09	5.22	0.375	99.4	6.86	19.16	186	30.38
11:15	5.29	0.372	27.7	6.81	19.67	201	30.38
11:25	5.31	0.371	9.3	6.72	19.4	209	30.40
11:35	5.35	0.37	8.1	6.72	19.31	210	30.40
11:38	5.37	0.366	5.9	6.72	18.95	210	30.40
After Sample	5.89	0.371	5.0	7.10	20.08	198	30.41

Sampling:

Time readings stabilized: 11:25

Sample Start Time: 11:40 Chain of Custody sample time: 11:40

Sample End Time: 11:55 Duration of sample time: 15 min

Collection Method:

_ Stainless steel bailer
_ Teflon bailer
_ Pos. Disp. Pump
X Disposable bailer
_ Dedicated pump
X Other: Submersible

Analyses:

X VOCs - 602 ___ 503 ___ Other ___
X SVOCs TCL VOCs
X Metals TCL SVOCs
X PCB/Pest TAL Inorganics and CN
___ Physical Pesticides/PCBs
___ Other

Observations

Weather/Temperature: 80 F, Clear Sky, SE Wind 0-5 MPH

Sample Description: Turbidity: (circle one) HIGH MODERATE (LOW)

Free Product? yes ___ no x describe ___

Sheen? yes ___ no x describe ___

Odor? yes ___ no x describe ___

Comments:

Calibrated Hach Turbidity Meter 00047 and Pine Env. Horiba 01046

Con Phenathroline Method: Control= 0.0 Sample= 1.7 Mg/l

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 7/9/2002

SAMPLE ID : ERM-02
WELL ID : ERM-02
SAMPLERS : Gene Gabay

		Time Onsite:	Time Offsite:
		6:30	
PID reading.....			
Depth of well (from top of casing)	47.95	Time:	8:00
DNAPL Level (from top of casing).....	None	Time:	8:00
Static water level (from top of casing)	38.70	Time:	8:00
Water level after purging (from top of casing)	38.70	Time:	8:57
Water level before sampling (from top of casing)	38.70	Time:	8:57

Purging Method:

	Peristaltic		Centrifugal	2 in. well:	9.25	ft. of water x 0.16 =	1.49	gal.	x 3 =	4.5 gal.
	Bailer		Pos. Displ.	4 in. well:		ft. of water x 0.65 =		gal.	x 3 =	gal.
X	Submersible		Ded. Pump	6 in. well:		ft. of water x 1.47 =		gal.	x 3 =	gal.

Well Volume Calculation: 1 volume 3 volumes

Depth of Pump: 45' Purge Start Time: 8:09 (hrs) Purge Duration: 46 (min)
Purge End Time: 8:55 (hrs) Purge Flow Rate: 0.304 (Gpm)

Volume of water removed: 14 gal. >3 volumes: yes X no ___ purged dry? yes ___ no X

Field Tests:

	PH	COND	Turb	D.O.	Temp	ORP	D.T.W.
units		mS/cm	NTU	mg/l	^{O}C	mV	Ft.
Initial							
8:10	4.70	0.245	184.0	10.76	16.15	248	38.72
8:20	4.87	0.241	141.0	7.68	19.14	214	38.72
8:30	5.24	0.239	130.0	7.08	21.25	186	38.71
8:40	5.00	0.236	5.0	7.87	16.9	202	38.70
8:43	4.98	0.237	10.0	7.89	16.65	206	38.71
8:46	4.92	0.237		7.75	16.32	208	38.71
8:55	4.93	0.243	8.0	7.86	16.12	213	38.71
After Sample	4.95	0.244	5.0	7.81	16.07	215	38.71

Sampling: Time readings stabilized: 8:43
Sample Start Time: 9:00 Chain of Custody sample time: 9:00
Sample End Time: 9:05 Duration of sample time: 5 min

Collection Method:		Analyses:		Analytical Method:	
	Stainless steel bailer	X	VOCs -	602 ___ 503 ___	Other ___
	Teflon bailer	X	SVOCs	TCL VOCs	
	Pos. Disp. Pump	X	Metals	TCL SVOCs	
X	Disposable bailer	X	PCB/Pest	TAL Inorganics and CN	
	Dedicated pump		Physical	Pesticides/PCBs	
X	Other: Submersible		Other		

Observations

Weather/Temperature: 75 F, Overcast, Southerly Wind 5-10 MPH
Sample Description: Turbidity: (circle one) HIGH MODERATE (LOW)
Free Product? yes ___ no X describe ___
Sheen? yes ___ no X describe ___
Odor? yes ___ no X describe ___

Comments:
07:00- Calibrated Hach Turbidity Meter 00047 and Pine Env. Horiba 01046

Iron Phenathroline Method: Control= 0.0 Sample= .3 Mg/l

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 7/9/2002

SAMPLE ID : ERM-03

WELL ID : ERM-03

SAMPLERS : Gene Gabay

		Time Onsite:	Time Offsite:
		6:30	
PID reading			
Depth of well (from top of casing)	49.50	Time:	9:50
DNAPL Level (from top of casing)	None	Time:	9:50
Static water level (from top of casing)	38.80	Time:	9:50
Water level after purging (from top of casing)	38.82	Time:	10:38
Water level before sampling (from top of casing)	38.82	Time:	10:38

Purging Method:

____ Peristaltic ____ Centrifugal

____ Bailer ____ Pos. Displ.

X Submersible ____ Ded. Pump

Well Volume Calculation: 1 volume 3 volumes

2 in. well 10.70 ft. of water x 0.16 = 1.71 gal. x 3 = 5.13 gal.

4 in. well: ____ ft. of water x 0.65 = ____ gal. x 3 = ____ gal.

6 in well: ____ ft. of water x 1.47 = ____ gal. x 3 = ____ gal.

Depth of Pump: 46.5 Purge Start Time: 9:51 (hrs) Purge Duration: 44 (min)

Purge End Time: 10:35 (hrs) Purge Flow Rate: 0.284 (Gpm)

Volume of water removed: 12.5 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests:

	PH	COND	Turb	D.O.	Temp	ORP	D.T.W.
units		mS/cm	NTU	mg/l	°C	mV	Ft.
Initial							
9:52	5.27	0.211	207.0	10.86	16.28	214	38.81
10:02	4.90	0.188	270.0	7.62	16.69	198	38.82
10:10	4.88	0.214	63.0	7.40	16.8	207	38.82
10:18	5.08	0.215	22.0	7.21	16.86	209	38.82
10:25	5.09	0.212	11.0	7.12	16.96	213	38.82
10:30	5.18	0.214	5.0	7.23	16.85	213	38.82
10:35	5.22	0.214	4.0	7.23	16.87	215	38.82
After Sample	4.95	0.244	5.0	7.81	16.07	215	38.71

Sampling:

Time readings stabilized: 10:25

Sample Start Time: 10:40 Chain of Custody sample time: 10:40

Sample End Time: 10:50 Duration of sample time: 10 min

Collection Method:

____ Stainless steel bailer

____ Teflon bailer

____ Pos. Disp. Pump

X Disposable bailer

____ Dedicated pump

X Other: Submersible

Analyses:

X VOCs -

X SVOCs

X Metals

____ PCB/Pest

____ Physical

____ Other

Analytical Method:

602 ____ 503 ____ Other ____

TCL VOCs

TCL SVOCs

TAL Inorganics and CN

Observations

Weather/Temperature: 78 F, Partly Cloudy, Southerly Wind 5-10 MPH

Sample Description: Turbidity: (circle one) HIGH MODERATE (LOW)

Free Product? yes ____ no x describe ____

Sheen? yes ____ no x describe ____

Odor? yes ____ no x describe ____

Comments:

07:00- Calibrated Hach Turbidity Meter 00047 and Pine Env. Horiba 01046

Iron Phenathroline Method: Control= 0.0 Sample= .4 Mg/l

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 7/9/2002

SAMPLE ID : ERM-04
WELL ID : ERM-04
SAMPLERS : Gene Gabay

	Time Onsite:	Time Offsite:
	6:30	
PID reading.....		
Depth of well (from top of casing)	46.94	Time: 11:10
DNAPL Level (from top of casing).....	None	Time: 11:10
Static water level (from top of casing)	36.65	Time: 11:10
Water level after purging (from top of casing)	36.68	Time: 12:10
Water level before sampling (from top of casing)	36.68	Time: 12:10

Purging Method:

					1 volume	3 volumes
____ Peristaltic	____ Centrifugal	2 in. well:	10.29	ft. of water x 0.16 =	1.65 gal.	x 3 = 4.95 gal.
____ Bailer	____ Pos. Displ.	4 in. well:		ft. of water x 0.65 =	____ gal.	x 3 = ____ gal.
X Submersible	____ Ded. Pump	6 in. well:		ft. of water x 1.47 =	____ gal.	x 3 = ____ gal.

Well Volume Calculation:

Depth of Pump: 43' Purge Start Time: 11:27 (hrs) Purge Duration: 41 (min)
Purge End Time: 12:08 (hrs) Purge Flow Rate: 0.366 (Gpm)

Volume of water removed: 15 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests:

	PH	COND	Turb	D.O.	Temp	ORP	D.T.W.
units		mS/cm	NTU	mg/l	°C	mV	Ft.
Initial							
11:28	4.67	0.18	230.0	12.21	16.62	232	36.69
11:38	5.62	0.182	168.0	9.10	17.07	192	36.69
11:48	5.40	0.186	55.0	8.90	16.81	193	36.68
11:58	5.58	0.194	8.0	8.78	17.07	197	36.68
12:04	5.63	0.193	5.0	8.76	17.08	201	36.68
12:08	5.43	0.195	2.0	8.68	17.12	203	36.68
After Sample	5.36	0.194	1.0	8.73	16.84	206	36.68

Sampling:

Time readings stabilized: 11:58
Sample Start Time: 12:11
Sample End Time: 12:17
Chain of Custody sample time: 12:11
Duration of sample time: 6 min

Collection Method:

- ____ Stainless steel bailer
- ____ Teflon bailer
- ____ Pos. Disp. Pump
- X Disposable bailer
- ____ Dedicated pump
- X Other: Submersible

Analyses:

- X VOCs - TCL VOCs
- X SVOCs - TCL SVOCs
- X Metals - TAL Inorganics and CN
- X PCB/Pest - Pesticides/PCBs
- ____ Physical
- ____ Other

Analytical Method: 602 ____ 503 ____ Other ____

Observations

Weather/Temperature: 80 F, Overcast, Southerly Wind 5-10 MPH

Sample Description: Turbidity: (circle one) HIGH MODERATE (LOW)

Free Product? yes ____ no x describe ____
Sheen? yes ____ no x describe ____
Odor? yes ____ no x describe ____

Comments:
07:00- Calibrated Hach Turbidity Meter 00047 and Pine Env. Horiba 01046

Iron Phenathroline Method: Control= 0.0 Sample= .6 Mg/l

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 7/10/2002

SAMPLE ID : ERM-05 DUP071002

WELL ID : ERM-05 DUP071002 Time Onsite: Time Offsite:

SAMPLERS : Gene Gabay 7:30

PID reading.....

Depth of well (from top of casing) ..... 53.16 Time: 8:02

DNAPL Level (from top of casing)..... None Time: 8:02

Static water level (from top of casing) ..... 43.94 Time: 8:02

Water level after purging (from top of casing) ..... 43.93 Time: 8:42

Water level before sampling (from top of casing) ..... 43.93 Time: 8:42

Purging Method: Well Volume Calculation: 1 volume 3 volumes

___	Peristaltic	___	Centrifugal	2 in. well:	9.22	ft. of water x 0.16 =	1.5 gal.	x 3 =	4.5 gal
___	Bailer	___	Pos. Displ.	4 in. well:	___	ft. of water x 0.65 =	___ gal.	x 3 =	___ gal.
X	Submersible	___	Ded. Pump	6 in. well:	___	ft. of water x 1.47 =	___ gal.	x 3 =	___ gal.

Depth of Pump: 50' Purge Start Time: 8:10 (hrs) Purge Duration: 29 (min)

Purge End Time: 8:39 (hrs) Purge Flow Rate: 0.414 (Gpm)

Volume of water removed: 12 gal. >3 volumes: yes X no ___ purged dry? yes ___ no X

Field Tests:

	PH	COND	Turb	D.O.	Temp	ORP	D.T.W.
units		mS/cm	NTU	mg/l	°C	mV	Ft.
Initial							
8:11	4.77	0.678	82.0	10.93	17.74	249	43.93
8:20	5.26	0.597	22.0	7.29	18.99	193	43.94
8:30	5.39	0.565	11.0	7.35	19.31	187	43.93
8:35	5.40	0.548	7.0	7.26	19.45	187	43.93
8:39	5.41	0.546	3.0	7.23	19.56	188	43.93
After Sample	5.46	0.524	3.0	7.01	19.56	190	43.93

Sampling: Time readings stabilized: 8:30

Sample Start Time: 8:45 Chain of Custody sample time: 8:45

Sample End Time: 8:55 Duration of sample time: 10 min

Collection Method:		Analyses:		Analytical Method:	
___	Stainless steel bailer	X	VOCs -	602 ___ 503 ___	Other ___
___	Teflon bailer	X	SVOCs	TCL VOCs	
___	Pos. Disp. Pump	X	Metals	TCL SVOCs	
X	Disposable bailer	X	PCB/Pest	TAL Inorganics and CN	
___	Dedicated pump	___	Physical	Pesticides/PCBs	
X	Other: Submersible	___	Other		

Observations

Weather/Temperature: 74 F, Partly Cloudy, Northerly Wind 0-5 MPH

Sample Description: Turbidity: (circle one) HIGH MODERATE (LOW)

Free Product? yes ___ no x describe ___

Sheen? yes ___ no x describe ___

Odor? yes ___ no x describe ___

Comments:

07:00- Calibrated Hach Turbidity Meter 00047 and Pine Env. Horiba 01046

on Phenathroline Method: Control= 0.0 Sample= .2 Mg/l

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 7/10/2002

SAMPLE ID : ERM-06
WELL ID : ERM-06
SAMPLERS : Gene Gabay

		Time Onsite:	Time Offsite:
		7:30	
PID reading.....			
Depth of well (from top of casing)	50.38	Time:	9:48
DNAPL Level (from top of casing).....	None	Time:	9:48
Static water level (from top of casing)	39.71	Time:	9:48
Water level after purging (from top of casing)	39.75	Time:	10:43
Water level before sampling (from top of casing)	39.75	Time:	10:43

Purging Method:

	Peristaltic		Centrifugal	Well Volume Calculation:			1 volume		3 volumes	
	Bailer		Pos. Displ.	2 in. well:	10.67	ft. of water x 0.16 =	1.7	gal. x 3 =	5.1	gal.
X	Submersible		Ded. Pump	4 in. well:		ft. of water x 0.65 =		gal. x 3 =		gal.
				6 in. well:		ft. of water x 1.47 =		gal. x 3 =		gal.

Depth of Pump: 45' Purge Start Time: 9:54 (hrs) Purge Duration: 46 (min)
Purge End Time: 10:40 (hrs) Purge Flow Rate: 0.326 (Gpm)

Volume of water removed: 15 gal. >3 volumes: yes X no ___ purged dry? yes ___ no X

Field Tests:

	PH	COND	Turb	D.O.	Temp	ORP	D.T.W.
units		mS/cm	NTU	mg/l	°C	mV	Ft.
Initial							
9:56	5.25	0.257	363.0	10.35	17.13	207	39.75
10:05	5.69	0.229	244.0	7.59	17.82	174	39.75
10:15	5.69	0.216	51.0	7.16	17.98	176	39.75
10:25	5.61	0.208	24.0	7.05	17.83	186	39.75
10:30	5.68	0.205	15.0	6.97	17.86	181	39.75
10:35	5.63	0.206	9.0	6.90	17.92	183	39.75
10:40	5.62	0.204	7.0	6.86	17.94	187	39.75
After Sample	5.58	0.202	4.0	6.73	17.72	190	39.75

Sampling:

Time readings stabilized: 10:30
Sample Start Time: 10:47 Chain of Custody sample time: 10:47
Sample End Time: 11:00 Duration of sample time: 3 min

Collection Method:		Analyses:		Analytical Method:	
	Stainless steel bailer	X	VOCs -	602 ___ 503 ___	Other ___
	Teflon bailer	X	SVOCs	TCL VOCs	
	Pos. Disp. Pump	X	Metals	TCL SVOCs	
X	Disposable bailer		PCB/Pest	TAL Inorganics and CN	
	Dedicated pump		Physical		
X	Other: Submersible		Other		

Observations

Weather/Temperature: 74 F, Partly Cloudy, Northerly Wind 0-5 MPH
Sample Description: Turbidity: (circle one) HIGH MODERATE (LOW)
Free Product? yes ___ no x describe ___
Sheen? yes ___ no x describe ___
Odor? yes ___ no x describe ___

Comments:
07:00- Calibrated Hach Turbidity Meter 00047 and Pine Env. Horiba 01046

Iron Phenathroline Method: Control= 0.0 Sample= .7 Mg/l

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 7/10/2002

SAMPLE ID : ERM-07

WELL ID : ERM-07 Time Onsite: Time Offsite:

SAMPLERS : Gene Gabay 7:30

PID reading.....

Depth of well (from top of casing) ..... 42.00 Time: 12:01

DNAPL Level (from top of casing)..... None Time: 12:01

Static water level (from top of casing) ..... 30.75 Time: 12:01

Water level after purging (from top of casing) ..... 30.84 Time: 12:40

Water level before sampling (from top of casing) ..... 30.84 Time: 12:40

Purging Method:

____ Peristaltic ____ Centrifugal

____ Bailer ____ Pos. Displ.

X Submersible ____ Ded. Pump

Well Volume Calculation: 1 volume 3 volumes

2 in. well: 11.25 ft. of water x 0.16 = 1.81 gal. x 3 = 5.43 gal.

4 in. well: ____ ft. of water x 0.65 = ____ gal. x 3 = ____ gal.

6 in. well: ____ ft. of water x 1.47 = ____ gal. x 3 = ____ gal.

Depth of Pump: 40 Purge Start Time: 12:06 (hrs) Purge Duration: 30 (min)

Purge End Time: 12:36 (hrs) Purge Flow Rate: 0.5 (Gpm)

Volume of water removed: 15 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests:

	PH	COND	Turb	D.O.	Temp	ORP	D.T.W.
units		mS/cm	NTU	mg/l	°C	mV	Ft.
Initial							
12:07	6.34	0.287	166.0	4.74	16.78	-3	30.84
12:20	6.07	0.357	10.0	1.65	17.06	-23	30.84
12:30	6.11	0.362	3.0	1.62	17.08	-32	30.84
12:33	6.18	0.364	1.0	1.68	17.04	-33	30.84
12:36	6.20	0.364	1.0	1.67	17.06	-34	30.84
After Sample	6.17	0.366	1.0	1.72	16.97	-36	30.84

Sampling: Time readings stabilized: 12:30

Sample Start Time: 12:42 Chain of Custody sample time: 12:42

Sample End Time: 12:50 Duration of sample time: 8 min

Collection Method:

____ Stainless steel bailer

____ Teflon bailer

____ Pos. Disp. Pump

X Disposable bailer

____ Dedicated pump

X Other: Submersible

Analyses:

X VOCs -

X SVOCs

X Metals

____ PCB/Pest

____ Physical

____ Other

Analytical Method:

602 ____ 503 ____ Other ____

TCL VOCs

TCL SVOCs

TAL Inorganics and CN

Observations

Weather/Temperature: 80 F, Clear Sky, Northerly Wind 0-5 MPH

Sample Description: Turbidity: (circle one) HIGH MODERATE (LOW)

Free Product? yes ____ no x describe ____

Sheen? yes ____ no x describe ____

Odor? yes ____ no x describe ____

Comments:

07:00- Calibrated Hach Turbidity Meter 00047 and Pine Env. Horiba 01046

...on Phenathroline Method: Control= 0.0 Sample= 11 Mg/l with dilution method and 17 Mg/l with 1:4 parts sample water to DI water.

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 7/9/2002

SAMPLE ID : ERM-02
WELL ID :
SAMPLERS : Gene Gabay

		Time Onsite:	Time Offsite:
		6:30	
PID reading			
Depth of well (from top of casing)		47.95	Time: 8:00
DNAPL Level (from top of casing)		None	Time: 8:00
Static water level (from top of casing)		38.70	Time: 8:00
Water level after purging (from top of casing)		38.70	Time: 8:57
Water level before sampling (from top of casing)		38.70	Time: 8:57

Purging Method:

____ Peristaltic ____ Centrifugal
____ Bailer ____ Pos. Displ.
X Submersible ____ Ded. Pump

Well Volume Calculation:

			1 volume	3 volumes
2 in. well:	9.25	ft. of water x 0.16 =	1.49 gal.	x 3 = 4.5 gal.
4 in. well:		ft. of water x 0.65 =	gal.	x 3 = gal.
6 in. well:		ft. of water x 1.47 =	gal.	x 3 = gal.

Depth of Pump: 45' Purge Start Time: 8:09:00 (hrs) Purge Duration: 46 (min)
Purge End Time: 8:55 (hrs) Purge Flow Rate: 0.304 (Gpm)

Volume of water removed: 14 gal. >3 volumes: yes X no ___ purged dry? yes ___ no X

Field Tests:

	PH	COND	Turb	D.O.	Temp	ORP	D.T.W.
units		mS/cm	NTU	mg/l	°C	mV	Ft.
Initial							
8:10	4.70	0.245	184.0	10.76	16.15	248	38.72
8:20	4.87	0.241	141.0	7.68	19.14	214	38.72
8:30	5.24	0.239	130.0	7.08	21.25	186	38.71
8:40	5.00	0.236	5.0	7.87	16.9	202	38.70
8:43	4.98	0.237	10.0	7.89	16.65	206	38.71
8:46	4.92	0.237		7.75	16.32	208	38.71
8:55	4.93	0.243	8.0	7.86	16.12	213	38.71
After Sample	4.95	0.244	5.0	7.81	16.07	215	38.71

Sampling: Time readings stabilized: 8:43
Sample Start Time: 9:00 Chain of Custody sample time: 9:00
Sample End Time: 9:05 Duration of sample time: 5 min

Collection Method:
____ Stainless steel bailer
____ Teflon bailer
____ Pos. Disp. Pump
X Disposable bailer
____ Dedicated pump
X Other: Submersible

Analyses:
X VOCs -
X SVOCs
X Metals
____ PCB/Pest
____ Physical
____ Other

Analytical Method:
602 ____ 503 ____ Other ____
TCL VOCs
TCL SVOCs
TAL Inorganics and CN

Observations

Weather/Temperature: 75 F, Overcast, Southerly Wind 5-10 MPH
Sample Description: Turbidity: (circle one) HIGH MODERATE (LOW)
Free Product? yes ___ no x describe
Sheen? yes ___ no x describe
Odor? yes ___ no x describe

Comments:
07:00- Calibrated Hach Turbidity Meter 00047 and Pine Env. Horiba 01046

Iron Phenathroline Method: Control= 0.0 Sample= .3 Mg/l

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 7/8/2002

SAMPLE ID : ERM-01 (MS/MSD)

WELL ID : ERM-01 (MS/MSD) Time Onsite: Time Offsite:

SAMPLERS : Gene Gabay 9:30

PID reading.....

Depth of well (from top of casing) ..... 47.75 Time: 10:34

DNAPL Level (from top of casing)..... None Time: 10:35

Static water level (from top of casing) ..... 30.37 Time: 10:35

Water level after purging (from top of casing) ..... 30.40 Time: 11:39

Water level before sampling (from top of casing) ..... 30.40 Time: 11:39

Purging Method:

____ Peristaltic ____ Centrifugal

____ Bailer ____ Pos. Displ.

X Submersible ____ Ded. Pump

Well Volume Calculation: 1 volume 3 volumes

2 in. well: 17.38 ft. of water x 0.16 = 2.78 gal. x 3 = 8.34 gal.

4 in. well: ____ ft. of water x 0.65 = ____ gal. x 3 = ____ gal.

6 in. well: ____ ft. of water x 1.47 = ____ gal. x 3 = ____ gal.

Depth of Pump: 40' Purge Start Time: 11:07 (hrs) Purge Duration: 29 (min)

Purge End Time: 11:42 (hrs) Purge Flow Rate: 0.29 (Gpm)

Volume of water removed: 8 gal. >3 volumes: yes X no ___ purged dry? yes ____ no X

Field Tests:

	PH	COND	Turb	D.O.	Temp	ORP	D.T.W.
units		mS/cm	NTU	mg/l	oC	mV	Ft.
Initial	5.05	0.374	181.0	7.27	17.83	222	30.37
11:09	5.22	0.375	99.4	6.86	19.16	186	30.38
11:15	5.29	0.372	27.7	6.81	19.67	201	30.38
11:25	5.31	0.371	9.3	6.72	19.4	209	30.40
11:35	5.35	0.37	8.1	6.72	19.31	210	30.40
11:38	5.37	0.366	5.9	6.72	18.95	210	30.40
After Sample	5.89	0.371	5.0	7.10	20.08	198	30.41

Sampling:

Time readings stabilized: 11:25

Sample Start Time: 11:40 Chain of Custody sample time: 11:40

Sample End Time: 11:55 Duration of sample time: 15 min

Collection Method:

____ Stainless steel bailer

____ Teflon bailer

____ Pos. Disp. Pump

X Disposable bailer

____ Dedicated pump

X Other: Submersible

Analyses:

X VOCs -

X SVOCs

X Metals

X PCB/Pest

____ Physical

____ Other

Analytical Method:

602 ____ 503 ____ Other ____

TCL VOCs

TCL SVOCs

TAL Inorganics and CN

Pesticides/PCBs

Observations

Weather/Temperature: 80 F, Clear Sky, SE Wind 0-5 MPH

Sample Description: Turbidity: (circle one) HIGH MODERATE (LOW)

Free Product? yes ____ no X describe ____

Sheen? yes ____ no X describe ____

Odor? yes ____ no X describe ____

Comments:

Calibrated Hach Turbidity Meter 00047 and Pine Env. Horiba 01046

Iron Phenathroline Method: Control= 0.0 Sample= 1.7 Mg/l

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 7/9/2002

SAMPLE ID : ERM-02
WELL ID : ERM-02
SAMPLERS : Gene Gabay

	Time Onsite:	Time Offsite:
	6:30	
PID reading.....		
Depth of well (from top of casing)	47.95	Time: 8:00
DNAPL Level (from top of casing).....	None	Time: 8:00
Static water level (from top of casing)	38.70	Time: 8:00
Water level after purging (from top of casing)	38.70	Time: 8:57
Water level before sampling (from top of casing)	38.70	Time: 8:57

Purging Method:

Well Volume Calculation: 1 volume 3 volumes

___ Peristaltic	___ Centrifugal	2 in. well:	9.25	ft. of water x 0.16 =	1.49	gal.	x 3 =	4.5	gal.
___ Bailer	___ Pos. Displ	4 in. well:		ft. of water x 0.65 =		gal.	x 3 =		gal.
X Submersible	___ Ded. Pump	6 in. well:		ft. of water x 1.47 =		gal.	x 3 =		gal.

Depth of Pump: 45' Purge Start Time: 8:09 (hrs) Purge Duration: 46 (min)
Purge End Time: 8:55 (hrs) Purge Flow Rate: 0.304 (Gpm)

Volume of water removed: 14 gal. >3 volumes: yes X no ___ purged dry? yes ___ no X

Field Tests:

	PH	COND	Turb	D.O.	Temp	ORP	D.T.W.
units		mS/cm	NTU	mg/l	°C	mV	Ft.
Initial							
8:10	4.70	0.245	184.0	10.76	16.15	248	38.72
8:20	4.87	0.241	141.0	7.68	19.14	214	38.72
8:30	5.24	0.239	130.0	7.08	21.25	186	38.71
8:40	5.00	0.236	5.0	7.87	16.9	202	38.70
8:43	4.98	0.237	10.0	7.89	16.65	206	38.71
8:46	4.92	0.237		7.75	16.32	208	38.71
8:55	4.93	0.243	8.0	7.86	16.12	213	38.71
After Sample	4.95	0.244	5.0	7.81	16.07	215	38.71

Sampling: Time readings stabilized: 8:43
Sample Start Time: 9:00 Chain of Custody sample time: 9:00
Sample End Time: 9:05 Duration of sample time: 5 min

Collection Method:		Analyses:		Analytical Method:	
___	Stainless steel bailer	X	VOCs -	602 ___ 503 ___	Other ___
___	Teflon bailer	X	SVOCs	TCL VOCs	
___	Pos. Disp. Pump	X	Metals	TCL SVOCs	
X	Disposable bailer	X	PCB/Pest	TAL Inorganics and CN	
___	Dedicated pump	___	Physical	Pesticides/PCBs	
X	Other: Submersible	___	Other		

Observations

Weather/Temperature: 75 F, Overcast, Southerly Wind 5-10 MPH

Sample Description: Turbidity: (circle one) HIGH MODERATE (LOW)

Free Product? yes ___ no X describe ___
Sheen? yes ___ no X describe ___
Odor? yes ___ no X describe ___

Comments:
07:00- Calibrated Hach Turbidity Meter 00 47 and Pine Env. Horiba 01046
Iron Phenathroline Method: Control= 0.0 Sample= .3 Mg/l

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 7/9/2002

SAMPLE ID : ERM-03
WELL ID : ERM-03
SAMPLERS : Gene Gabay

		Time Onsite:	Time Offsite:
		6:30	
PID reading.....			
Depth of well (from top of casing)	49.50	Time:	9:50
DNAPL Level (from top of casing).....	None	Time:	9:50
Static water level (from top of casing)	38.80	Time:	9:50
Water level after purging (from top of casing)	38.82	Time:	10:38
Water level before sampling (from top of casing)	38.82	Time:	10:38

Purging Method:

_ Peristaltic _ Centrifugal
_ Bailer _ Pos. Displ.
X Submersible _ Ded. Pump

Well Volume Calculation:

				1 volume		3 volumes
2 in. well:	10.70	ft. of water x 0.16 =	1.71	gal. x 3 =	5.13	gal.
4 in. well:		ft. of water x 0.65 =		gal. x 3 =		gal.
6 in. well:		ft. of water x 1.47 =		gal. x 3 =		gal.

Depth of Pump: 46.5 Purge Start Time: 9:51 (hrs) Purge Duration: 44 (min)
Purge End Time: 10:35 (hrs) Purge Flow Rate: 0.284 (Gpm)

Volume of water removed: 12.5 gal. >3 volumes: yes X no ___ purged dry? yes ___ no X

Field Tests:

	PH	COND	Turb	D.O.	Temp	ORP	D.T.W.
units		mS/cm	NTU	mg/l	°C	mV	Ft.
Initial							
9:52	5.27	0.211	207.0	10.86	16.28	214	38.81
10:02	4.90	0.188	270.0	7.62	16.69	198	38.82
10:10	4.88	0.214	63.0	7.40	16.8	207	38.82
10:18	5.08	0.215	22.0	7.21	16.86	209	38.82
10:25	5.09	0.212	11.0	7.12	16.96	213	38.82
10:30	5.18	0.214	5.0	7.23	16.85	213	38.82
10:35	5.22	0.214	4.0	7.23	16.87	215	38.82
After Sample	4.95	0.244	5.0	7.81	16.07	215	38.71

Sampling:
Time readings stabilized: 10:25
Sample Start Time: 10:40 Chain of Custody sample time: 10:40
Sample End Time: 10:50 Duration of sample time: 10 min

Collection Method:
_ Stainless steel bailer
_ Teflon bailer
_ Pos. Disp. Pump
X Disposable bailer
_ Dedicated pump
X Other: Submersible

Analyses:
X VOCs -
X SVOCs
X Metals
_ PCB/Pest
_ Physical
_ Other

Analytical Method:
602 ___ 503 ___ Other ___
TCL VOCs
TCL SVOCs
TAL Inorganics and CN

Observations

Weather/Temperature: 78 F, Partly Cloudy, Southerly Wind 5-10 MPH

Sample Description: Turbidity: (circle one) HIGH MODERATE (LOW)

Free Product? yes ___ no x describe ___
Sheen? yes ___ no x describe ___
Odor? yes ___ no x describe ___

Comments:
11:00- Calibrated Hach Turbidity Meter 00047 and Pine Env. Horiba 01046

Iron Phenathroline Method: Control= 0.0 Sample= .4 Mg/l

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 7/9/2002

SAMPLE ID : ERM-04
WELL ID : ERM-04
SAMPLERS : Gene Gabay

	Time Onsite:	Time Offsite:
	6:30	
PID reading.....		
Depth of well (from top of casing)	46.94	Time: 11:10
DNAPL Level (from top of casing).....	None	Time: 11:10
Static water level (from top of casing)	36.65	Time: 11:10
Water level after purging (from top of casing)	36.68	Time: 12:10
Water level before sampling (from top of casing)	36.68	Time: 12:10

Purging Method:

____ Peristaltic ____ Centrifugal
____ Bailer ____ Pos. Displ.
X Submersible ____ Ded. Pump

Well Volume Calculation:

			1 volume	3 volumes
2 in. well:	10.29	ft. of water x 0.16 =	1.65 gal.	x 3 = 4.95 gal.
4 in. well:		ft. of water x 0.65 =	gal.	x 3 = gal.
6 in. well:		ft. of water x 1.47 =	gal.	x 3 = gal.

Depth of Pump: 43' Purge Start Time: 11:27 (hrs) Purge Duration: 41 (min)
Purge End Time: 12:08 (hrs) Purge Flow Rate: 0.366 (Gpm)

Volume of water removed: 15 gal. >3 volumes: yes X no ___ purged dry? yes ___ no X

Field Tests:

	PH	COND	Turb	D.O.	Temp	ORP	D.T.W.
units		mS/cm	NTU	mg/l	°C	mV	Ft.
Initial							
11:28	4.67	0.18	230.0	12.21	16.62	232	36.69
11:38	5.62	0.182	168.0	9.10	17.07	192	36.69
11:48	5.40	0.186	55.0	8.90	16.81	193	36.68
11:58	5.58	0.194	8.0	8.78	17.07	197	36.68
12:04	5.63	0.193	5.0	8.76	17.08	201	36.68
12:08	5.43	0.195	2.0	8.68	17.12	203	36.68
After Sample	5.36	0.194	1.0	8.73	16.84	206	36.68

Sampling:

Time readings stabilized: 11:58
Sample Start Time: 12:11
Sample End Time: 12:17
Chain of Custody sample time: 12:11
Duration of sample time: 6 min

Collection Method:

____ Stainless steel bailer
____ Teflon bailer
____ Pos. Disp. Pump
X Disposable bailer
____ Dedicated pump
X Other: Submersible

Analyses:

X VOCs -
X SVOCs
X Metals
X PCB/Pest
____ Physical
____ Other

Analytical Method:

602 ____ 503 ____ Other ____
TCL VOCs
TCL SVOCs
TAL Inorganics and CN
Pesticides/PCBs

Observations

Weather/Temperature: 80 F, Overcast, Southerly Wind 5-10 MPH
Sample Description: Turbidity: (circle one) HIGH MODERATE (LOW)
Free Product? yes ___ no x describe
Sheen? yes ___ no x describe
Odor? yes ___ no x describe

Comments:
07:00- Calibrated Hach Turbidity Meter 00047 and Pine Env. Horiba 01046

Iron Phenathroline Method: Control= 0.0 Sample= .6 Mg/l

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 7/10/2002

SAMPLE ID : ERM-05 DUP071002

WELL ID : ERM-05 DUP071002 Time Onsite: Time Offsite:

SAMPLERS : Gene Gabay 7:30

PID reading.....

Depth of well (from top of casing) ..... 53.16 Time: 8:02

DNAPL Level (from top of casing)..... None Time: 8:02

Static water level (from top of casing) ..... 43.94 Time: 8:02

Water level after purging (from top of casing) ..... 43.93 Time: 8:42

Water level before sampling (from top of casing) ..... 43.93 Time: 8:42

Purging Method:

____ Peristaltic ____ Centrifugal

____ Bailer ____ Pos. Displ.

X Submersible ____ Ded. Pump

Depth of Pump: 50'

Well Volume Calculation: 1 volume 3 volumes

2 in. well: 9.22 ft. of water x 0.16 = 1.5 gal. x 3 = 4.5 gal.

4 in. well: ____ ft. of water x 0.65 = ____ gal. x 3 = ____ gal.

6 in. well: ____ ft. of water x 1.47 = ____ gal. x 3 = ____ gal.

Purge Start Time: 8:10 (hrs) Purge Duration: 29 (min)

Purge End Time: 8:39 (hrs) Purge Flow Rate: 0.414 (Gpm)

Volume of water removed: 12 gal. >3 volumes: yes X no ___ purged dry? yes ____ no X

Field Tests:

	PH	COND	Turb	D.O.	Temp	ORP	D.T.W.
units		mS/cm	NTU	mg/l	°C	mV	Ft.
Initial							
8:11	4.77	0.678	82.0	10.93	17.74	249	43.93
8:20	5.26	0.597	22.0	7.29	18.99	193	43.94
8:30	5.39	0.565	11.0	7.35	19.31	187	43.93
8:35	5.40	0.548	7.0	7.26	19.45	187	43.93
8:39	5.41	0.546	3.0	7.23	19.56	188	43.93
After Sample	5.46	0.524	3.0	7.01	19.56	190	43.93

Sampling:

Time readings stabilized: 8:30

Sample Start Time: 8:45 Chain of Custody sample time: 8:45

Sample End Time: 8:55 Duration of sample time: 10 min

Collection Method:

____ Stainless steel bailer

____ Teflon bailer

____ Pos. Disp. Pump

X Disposable bailer

____ Dedicated pump

X Other: Submersible

Analyses:

X VOCs -

X SVOCs

X Metals

X PCB/Pest

____ Physical

____ Other

Analytical Method:

602 ____ 503 ____ Other ____

TCL VOCs

TCL SVOCs

TAL Inorganics and CN

Pesticides/PCBs

Observations

Weather/Temperature: 74 F, Partly Cloudy, Northerly Wind 0-5 MPH

Sample Description: Turbidity: (circle one) HIGH MODERATE (LOW)

Free Product? yes ____ no x describe ____

Sheen? yes ____ no x describe ____

Odor? yes ____ no x describe ____

Comments:

:00- Calibrated Hach Turbidity Meter 00047 and Pine Env. Horiba 01046

Iron Phenathroline Method: Control= 0.0 Sample= .2 Mg/l

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 7/10/2002

SAMPLE ID : ERM-06
WELL ID : ERM-06
SAMPLERS : Gene Gabay

	Time Onsite:	Time Offsite:
	7:30	
PID reading.....		
Depth of well (from top of casing)	50.38	Time: 9:48
DNAPL Level (from top of casing).....	None	Time: 9:48
Static water level (from top of casing)	39.71	Time: 9:48
Water level after purging (from top of casing)	39.75	Time: 10:43
Water level before sampling (from top of casing)	39.75	Time: 10:43

Purging Method:

____ Peristaltic ____ Centrifugal
____ Bailer ____ Pos. Displ.
X Submersible ____ Ded. Pump

Well Volume Calculation:

			1 volume	3 volumes
2 in. well:	10.67	ft. of water x 0.16 =	1.7 gal.	x 3 = 5.1 gal.
4 in. well:		ft. of water x 0.65 =	gal.	x 3 = gal.
6 in. well:		ft. of water x 1.47 =	gal.	x 3 = gal.

Depth of Pump: 45' Purge Start Time: 9:54 (hrs) Purge Duration: 46 (min)
Purge End Time: 10:40 (hrs) Purge Flow Rate: 0.326 (Gpm)

Volume of water removed:
15 gal. >3 volumes: yes X no ___ purged dry? yes ___ no X

Field Tests:

	PH	COND	Turb	D.O.	Temp	ORP	D.T.W.
units		mS/cm	NTU	mg/l	°C	mV	Ft.
Initial							
9:56	5.25	0.257	363.0	10.35	17.13	207	39.75
10:05	5.69	0.229	244.0	7.59	17.82	174	39.75
10:15	5.69	0.216	51.0	7.16	17.98	176	39.75
10:25	5.61	0.208	24.0	7.05	17.83	186	39.75
10:30	5.68	0.205	15.0	6.97	17.86	181	39.75
10:35	5.63	0.206	9.0	6.90	17.92	183	39.75
10:40	5.62	0.204	7.0	6.86	17.94	187	39.75
After Sample	5.58	0.202	4.0	6.73	17.72	190	39.75

Sampling:

Time readings stabilized: 10:30
Sample Start Time: 10:47 Chain of Custody sample time: 10:47
Sample End Time: 11:00 Duration of sample time: 3 min

Collection Method:

____ Stainless steel bailer
____ Teflon bailer
____ Pos. Disp. Pump
X Disposable bailer
____ Dedicated pump
X Other: Submersible

Analyses:

X VOCs -
X SVOCs
X Metals
____ PCB/Pest
____ Physical
____ Other

Analytical Method:

602 ____ 503 ____ Other ____
TCL VOCs
TCL SVOCs
TAL Inorganics and CN

Observations

Weather/Temperature: 74 F, Partly Cloudy, Northerly Wind 0-5 MPH
Sample Description: Turbidity: (circle one) HIGH MODERATE (LOW)
Free Product? yes ___ no x describe
Sheen? yes ___ no x describe
Odor? yes ___ no x describe

Comments:
07:00- Calibrated Hach Turbidity Meter 00047 and Pine Env. Horiba 01046

Iron Phenathroline Method: Control= 0.0 Sample= .7 Mg/l

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 7/10/2002

SAMPLE ID : ERM-07

WELL ID : ERM-07 Time Onsite: Time Offsite:

SAMPLERS : Gene Gabay 7:30

PID reading.....

Depth of well (from top of casing) ..... 42.00 Time: 12:01

DNAPL Level (from top of casing)..... None Time: 12:01

Static water level (from top of casing) ..... 30.75 Time: 12:01

Water level after purging (from top of casing) ..... 30.84 Time: 12:40

Water level before sampling (from top of casing) ..... 30.84 Time: 12:40

Purging Method:

____ Peristaltic ____ Centrifugal

____ Bailer ____ Pos. Displ.

X Submersible ____ Ded. Pump

Depth of Pump: 40

Well Volume Calculation: 1 volume 3 volumes

2 in. well: 11.25 ft. of water x 0.16 = 1.81 gal. x 3 = 5.43 gal.

4 in. well: ____ ft. of water x 0.65 = ____ gal. x 3 = ____ gal.

6 in. well: ____ ft. of water x 1.47 = ____ gal. x 3 = ____ gal.

Purge Start Time: 12:06 (hrs) Purge Duration: 30 (min)

Purge End Time: 12:36 (hrs) Purge Flow Rate: 0.5 (Gpm)

Volume of water removed: 15 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests:

	PH	COND	Turb	D.O.	Temp	ORP	D.T.W.
units		mS/cm	NTU	mg/l	°C	mV	Ft.
Initial							
12:07	6.34	0.287	166.0	4.74	16.78	-3	30.84
12:20	6.07	0.357	10.0	1.65	17.06	-23	30.84
12:30	6.11	0.362	3.0	1.62	17.08	-32	30.84
12:33	6.18	0.364	1.0	1.68	17.04	-33	30.84
12:36	6.20	0.364	1.0	1.67	17.06	-34	30.84
After Sample	6.17	0.366	1.0	1.72	16.97	-36	30.84

Sampling:

Time readings stabilized: 12:30

Sample Start Time: 12:42 Chain of Custody sample time: 12:42

Sample End Time: 12:50 Duration of sample time: 8 min

Collection Method:

____ Stainless steel bailer

____ Teflon bailer

____ Pos. Disp. Pump

X Disposable bailer

____ Dedicated pump

X Other: Submersible

Analyses:

X VOCs -

X SVOCs

X Metals

____ PCB/Pest

____ Physical

____ Other

Analytical Method:

602 ____ 503 ____ Other ____

TCL VOCs

TCL SVOCs

TAL Inorganics and CN

Observations

Weather/Temperature: 80 F, Clear Sky, Northerly Wind 0-5 MPH

Sample Description: Turbidity: (circle one) HIGH MODERATE (LOW)

Free Product? yes ____ no x describe ____

Sheen? yes ____ no x describe ____

Odor? yes ____ no x describe ____

Comments:

:00- Calibrated Hach Turbidity Meter 00047 and Pine Env. Horiba 01046

Iron Phenathroline Method: Control= 0.0 Sample= 11 Mg/l with dilution method and 17 Mg/l with 1:4 parts sample water to DI water.

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 9/25/2002

SAMPLE ID : ERM-05
WELL ID : ERM-05 Time Onsite: Time Offsite:
SAMPLERS : M.Mendes 7:00 17:00

PID reading..... -
Depth of well (from top of casing) ..... 53.03 Time: 7:15
DNAPL Level (from top of casing)..... - Time:
Static water level (from top of casing) ..... Time:
Water level after purging (from top of casing) ..... Time:
Water level before sampling (from top of casing) ..... Time:

Purging Method:

____ Peristaltic ____ Centrifugal
____ Bailer ____ Pos. Displ.
X Submersible ____ Ded. Pump

Well Volume Calculation: 1 volume 3 volumes

2 in. well: ____ ft. of water x 0.16 = ____ gal. x 3 = ____ gal.
4 in. well: ____ ft. of water x 0.65 = ____ gal. x 3 = ____ gal.
6 in. well: ____ ft. of water x 1.47 = ____ gal. x 3 = ____ gal.

Depth of Pump: ____ Purge Start Time: ____ (hrs) Purge Duration: ____ (min)
Purge End Time: ____ (hrs) Purge Flow Rate: ____ (Gpm)

Volume of water removed: ____ gal. >3 volumes: yes ___ no ___ purged dry? yes ____ no ____

Field Tests:

	PH	COND	Turb	D.O.	Temp	ORP	D.T.W.
units		mS/cm	NTU	mg/l	°C	mV	Ft.
Initial							
After Sample							

Sampling: Time readings stabilized: ____
Sample Start Time: ____ Chain of Custody sample time: ____
Sample End Time: ____ Duration of sample time: ____ min

Collection Method:

____ Stainless steel bailer
____ Teflon bailer
____ Pos. Disp. Pump
X Disposable bailer
____ Dedicated pump
X Other: Submersible

Analyses:

____ VOCs -
____ SVOCs
____ Metals
____ PCB/Pest
____ Physical
____ Other

Analytical Method: 602 ____ 503 ____ Other ____

Observations

Weather/Temperature: ____
Sample Description: Turbidity: (circle one) HIGH MODERATE LOW
Free Product? yes ___ no ___ describe ____
Sheen? yes ___ no ___ describe ____
Odor? yes ___ no ___ describe ____

Comments:

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 9/25/2002

SAMPLE ID : ERM-05
WELL ID : ERM-05
SAMPLERS : M.Mendes

	Time Onsite:	Time Offsite:
	7:00	17:00
PID reading.....	-	-
Depth of well (from top of casing)	53.03	Time: 7:15
DNAPL Level (from top of casing).....	-	Time: -
Static water level (from top of casing)	44.33	Time: 7:15
Water level after purging (from top of casing)	-	Time: -
Water level before sampling (from top of casing)	-	Time: -

Purging Method:

____ Peristaltic ____ Centrifugal
____ Bailer ____ Pos. Displ.
X Submersible ____ Ded. Pump

Well Volume Calculation:

			1 volume	3 volumes
2 in. well:	8.70	ft. of water x 0.17 =	1.479 gal.	x 3 = 4.437 gal.
4 in. well:		ft. of water x 0.65 =	gal.	x 3 = gal.
6 in. well:		ft. of water x 1.47 =	gal.	x 3 = gal.

Depth of Pump: 50 Purge Start Time: 7:45 (hrs) Purge Duration: 32 (min)
Purge End Time: 8:17 (hrs) Purge Flow Rate: 0.1875 (Gpm)

Volume of water removed:
6 gal. >3 volumes: yes X no ___ purged dry? yes ___ no X

Field Tests:

	PH	COND	Turb	D.O.	Temp	ORP	Vol
units		mS/cm	NTU	mg/l	°C	mV	gal.
Initial							
7:48	5.53	0.653	20.8	8.91	15.01	224	-
7:50	5.63	0.633	7.6	8.79	15.41	207	-
7:53	5.71	0.638	1.4	8.89	16.95	192	4.00
7:56	5.79	0.635	1.4	8.90	18.46	177	-
8:00	5.84	0.617	1.4	8.90	19.56	166	-
8:05	5.88	0.611	1.4	8.90	20.09	158	5.00
8:10	5.91	0.61	1.4	8.77	20.25	150	-
8:15	5.92	0.61	1.4	8.74	20.4	145	6.00
After Sample	5.92	0.608	1.4	8.74	20.63	143	

Sampling:

Time readings stabilized: 8:15
Sample Start Time: 8:17 Chain of Custody sample time: 8:17
Sample End Time: 8:20 Duration of sample time: 3 min

Collection Method:

____ Stainless steel bailer
____ Teflon bailer
____ Pos. Disp. Pump
____ Disposable bailer
____ Dedicated pump
X Other: Submersible

Analyses:

____ VOCs - 602 ____ 503 ____ Other ____
X SVOCs
____ Metals
____ PCB/Pest
____ Physical
____ Other

Analytical Method:

Observations

Weather/Temperature: Sunny 65 degrees

Sample Description: Turbidity: (circle one) HIGH MODERATE **(LOW)**

Free Product? yes ___ no X describe ___
Sheen? yes ___ no X describe ___
Odor? yes ___ no X describe ___

Comments:

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 9/25/2002

SAMPLE ID : ERM-07
WELL ID : ERM-07
SAMPLERS : M.Mendes

	Time Onsite:		Time Offsite:
	7:00		17:00
PID reading	-		-
Depth of well (from top of casing)	41.99	Time:	8:40
DNAPL Level (from top of casing)	-	Time:	-
Static water level (from top of casing)	31.21	Time:	8:39
Water level after purging (from top of casing)	-	Time:	-
Water level before sampling (from top of casing)	-	Time:	-

Purging Method:

____ Peristaltic ____ Centrifugal
____ Bailer ____ Pos. Displ.
X Submersible ____ Ded. Pump

Well Volume Calculation:

				1 volume		3 volumes
2 in. well:	10.78	ft. of water x 0.17 =	1.8326	gal. x 3 =	5.4978	gal
4 in. well:		ft. of water x 0.65 =		gal. x 3 =		gal.
6 in. well:		ft. of water x 1.47 =		gal. x 3 =		gal.

Depth of Pump: 38 Purge Start Time: 9:12 (hrs) Purge Duration: 43 (min)
Purge End Time: 9:55 (hrs) Purge Flow Rate: 0.23255814 (Gpm)

Volume of water removed: 10 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests:

	PH	COND	Turb	D.O.	Temp	ORP	Vol
units		mS/cm	NTU	mg/l	°C	mV	gal.
Initial							
9:12	5.64	0.325	114.0	3.89	14.96	-92	0.00
9:18	5.77	0.36	5.5	2.08	18.34	-108	-
9:23	5.80	0.373	3.2	2.27	18.96	-110	2.50
9:28	5.84	0.388	3.1	2.64	19.54	-112	-
9:34	5.86	0.397	1.0	2.80	19.84	-113	-
9:40	5.88	0.403	1.0	2.78	20.37	-113	5.00
9:45	5.89	0.407	1.0	2.76	20.4	-114	-
9:50	5.91	0.408	0.9	3.00	20.32	-115	7.00
After Sample	5.93	0.412	0.8	2.87	19.8	-119	

Sampling:

Time readings stabilized: 9:40
Sample Start Time: 9:58 Chain of Custody sample time: 9:58
Sample End Time: 10:13 Duration of sample time: 15 min

Collection Method:

____ Stainless steel bailer
____ Teflon bailer
____ Pos. Disp. Pump
____ Disposable bailer
____ Dedicated pump
X Other: Submersible

Analyses:

X VOCs -
X SVOCs
X Metals
____ PCB/Pest
____ Physical
____ Other

Analytical Method:

602 ____ 503 ____ Other ____
+ Fe
TKN/T. Phosphate, Nitrate, Amonia

Observations

Weather/Temperature: Sunny 65 degrees

Sample Description: Turbidity: (circle one) HIGH MODERATE **(LOW)**

Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes X no ____ describe Hydrocarbon/ Fuel Odor

Comments:

Field Iron Test Kit - 5 mg/L

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 9/25/2002

\MPLE ID : PZ-08

ELL ID : PZ-08

SAMPLERS : M.Mendes

	Time Onsite:	Time Offsite:
	7:00	17:00
PID reading.....	-	-
Depth of well (from top of casing)	37.10	Time: 10:45
DNAPL Level (from top of casing).....	-	Time: -
Static water level (from top of casing)	34.28	Time: 10:45
Water level after purging (from top of casing)	-	Time: -
Water level before sampling (from top of casing)	-	Time: -

Purging Method:

____ Peristaltic ____ Centrifugal

____ Bailer ____ Pos. Displ.

X Submersible ____ Ded. Pump

Well Volume Calculation:

			1 volume	3 volumes
2 in. well:	2.82	ft. of water x 0.17 =	0.4794 gal.	x 3 = 1.4382 gal.
4 in. well:		ft. of water x 0.65 =	____ gal.	x 3 = ____ gal.
6 in. well:		ft. of water x 1.47 =	____ gal.	x 3 = ____ gal.

Depth of Pump: 36 Purge Start Time: 10:55 (hrs) Purge Duration: 62 (min)

Purge End Time: 11:57 (hrs) Purge Flow Rate: 0.193548387 (Gpm)

Volume of water removed:

12 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests:

	PH	COND	Turb	D.O.	Temp	ORP	Vol
units		mS/cm	NTU	mg/l	°C	mV	gal.
Initial	5.70	0.199	115.0	1.06	16.18	-131	-
11:00	5.78	0.202	13.1	0.61	17.88	-145	2.00
11:05	5.82	0.23	1.8	1.90	18.31	-156	3.00
11:16	5.85	0.205	1.9	4.24	18.44	-170	6.00
11:21	5.85	0.205	1.5	4.89	18.73	-178	7.00
11:31	5.87	0.206	1.4	5.90	18.91	-195	-
11:41	5.89	0.208	1.3	6.37	18.69	-212	11.00
After Sample							

Sampling: Time readings stabilized: 11:44

Sample Start Time: 11:45 Chain of Custody sample time: 11:45

Sample End Time: 11:54 Duration of sample time: 9 min

Collection Method:

____ Stainless steel bailer

____ Teflon bailer

____ Pos. Disp. Pump

____ Disposable bailer

____ Dedicated pump

X Other: Submersible

Analyses:

X VOCs -

X SVOCs

X Metals

____ PCB/Pest

____ Physical

____ Other

Analytical Method:

602 ____ 503 ____ Other ____

+ Fe

TKN/T. Phosphate, Nitrate, Amonia

Observations

Weather/Temperature: Sunny 76 degrees, NE Wind 5-10 mph

Sample Description: Turbidity: (circle one) HIGH MODERATE **(LOW)**

Free Product? yes ____ no X describe ____

Sheen? yes ____ no X describe ____

Odor? yes X no ____ describe Hydrocarbon/septic odor

Comments:

Iron Field Test kit - 5mg/L

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 9/25/2002

SAMPLE ID : PZ-17
WELL ID : PZ-17
SAMPLERS : M.Mendes

	Time Onsite:	Time Offsite:
	7:00	17:00
PID reading.....	-	-
Depth of well (from top of casing)	35.80	Time: 13:00
DNAPL Level (from top of casing).....	-	Time: -
Static water level (from top of casing)	34.17	Time: 13:00
Water level after purging (from top of casing)	-	Time: -
Water level before sampling (from top of casing)	-	Time: -

Purging Method:

____ Peristaltic ____ Centrifugal
____ Bailer ____ Pos. Displ.
X Submersible ____ Ded. Pump

Well Volume Calculation: 1 volume 3 volumes

2 in. well: 1.63 ft. of water x 0.17 = 0.2771 gal. x 3 = 0.8313 gal.
4 in. well: ____ ft. of water x 0.65 = ____ gal. x 3 = ____ gal.
6 in. well: ____ ft. of water x 1.47 = ____ gal. x 3 = ____ gal.

Depth of Pump: 35.25 Purge Start Time: 13:13 (hrs) Purge Duration: 42 (min)
Purge End Time: 13:55 (hrs) Purge Flow Rate: 0.357142857 (Gpm)

Volume of water removed:
15 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests:

	PH	COND	Turb	D.O.	Temp	ORP	Vol
units		mS/cm	NTU	mg/l	°C	mV	gal.
Initial	5.68	0.176	89.8	1.36	16.26	-204	5.00
13:31	5.70	0.163	9.8	1.73	17.01	-209	8.00
13:36	5.69	0.163	219.0	3.19	17.11	-214	10.00
13:41	5.73	0.164	24.2	3.70	16.86	-217	11.50
13:46	5.72	0.164	0.8	4.35	17.52	-219	13.00
13:55	5.72	0.164	0.8	3.91	17.76	-221	15.00
After Sample							

Sampling:

Time readings stabilized: 13:41
Sample Start Time: 13:55 Chain of Custody sample time: 13:55
Sample End Time: 14:09 Duration of sample time: 14 min

Collection Method:

____ Stainless steel bailer
____ Teflon bailer
____ Pos. Disp. Pump
____ Disposable bailer
____ Dedicated pump
X Other: Submersible

Analyses:

X VOCs -
X SVOCs
X Metals
____ PCB/Pest
____ Physical
____ Other

Analytical Method:

602 ____ 503 ____ Other ____
+ Fe
TKN/T. Phosphate, Nitrate, Amonia

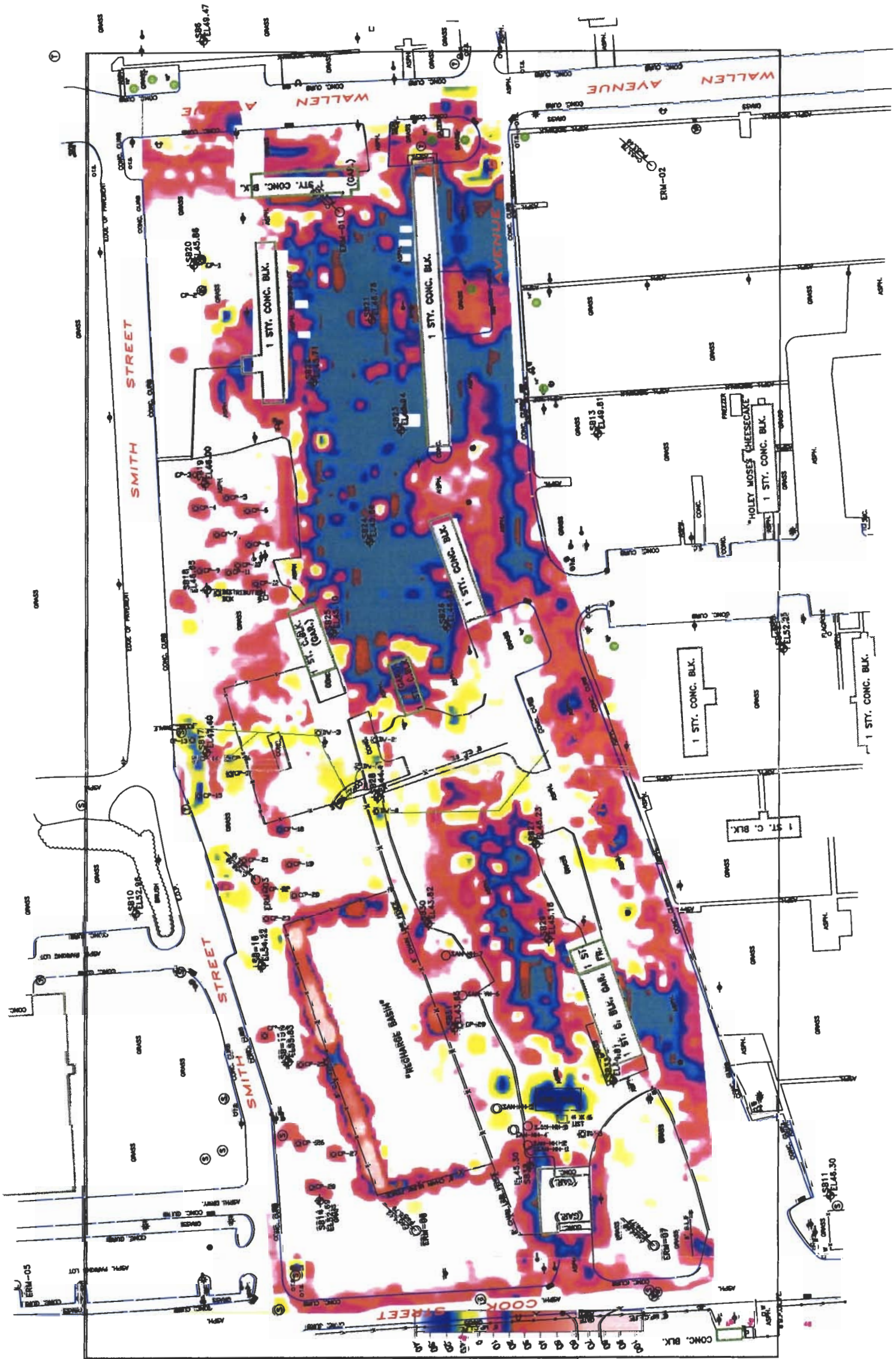
Observations

Weather/Temperature: Sunny 75 degrees, NE Wind 5-10 mph
Sample Description: Turbidity: (circle one) HIGH MODERATE **(LOW)**
Free Product? yes ____ no X describe ____
Sheen? yes X no ____ describe LNAPL Sheen on the surface
Odor? yes X no ____ describe Hydrocarbon/septic odor

Comments:
Field Iron Test Kit - > or = 5mg/L

Appendix E

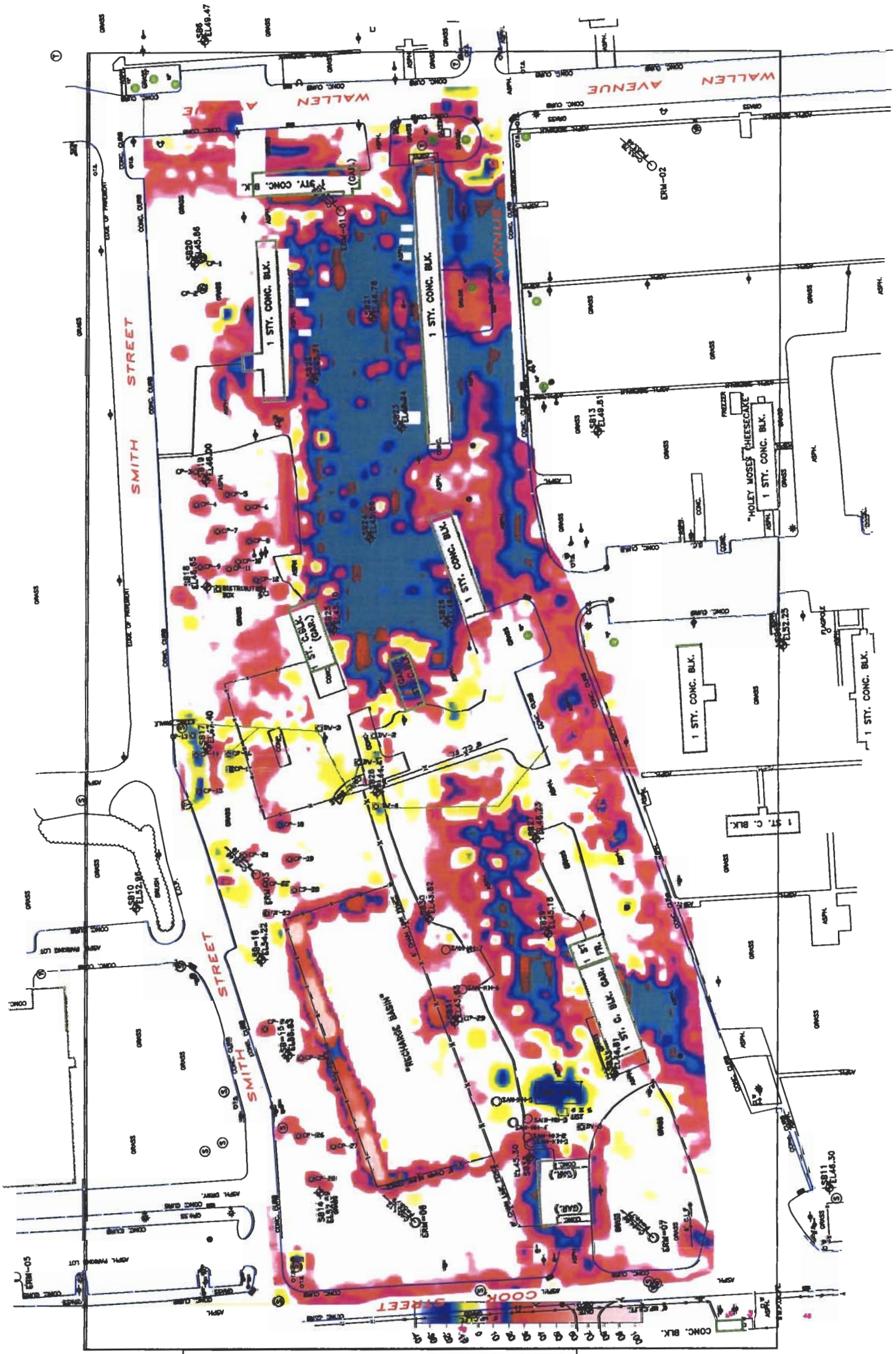
Geophysical Survey Report



Notes:
1) Base map prepared by:
American Engineering Services, P.C.
1600 Old County Road - Suite 209
Plainview, NY 11803
516-454-7500
2) Base map registered to NY State Plane Coordinates (NAD83) by AGS based on GPS data.

Figure 1
Site Map and Imaged Terrain Conductivity EM Results

Site:	Prepared For:
Francis S. Gabreski Airport Weshampton Beach, NY	Environmetal Resources Management 520 Broad Hollow Road Suite 210 Melville, NY 11747
SCALE: 1" = 100' AGS-02-134-1 8/9/02	ADVANCED GEOLOGICAL SERVICES 3 Mystic Lane Malvern, PA 19355 610-722-5500



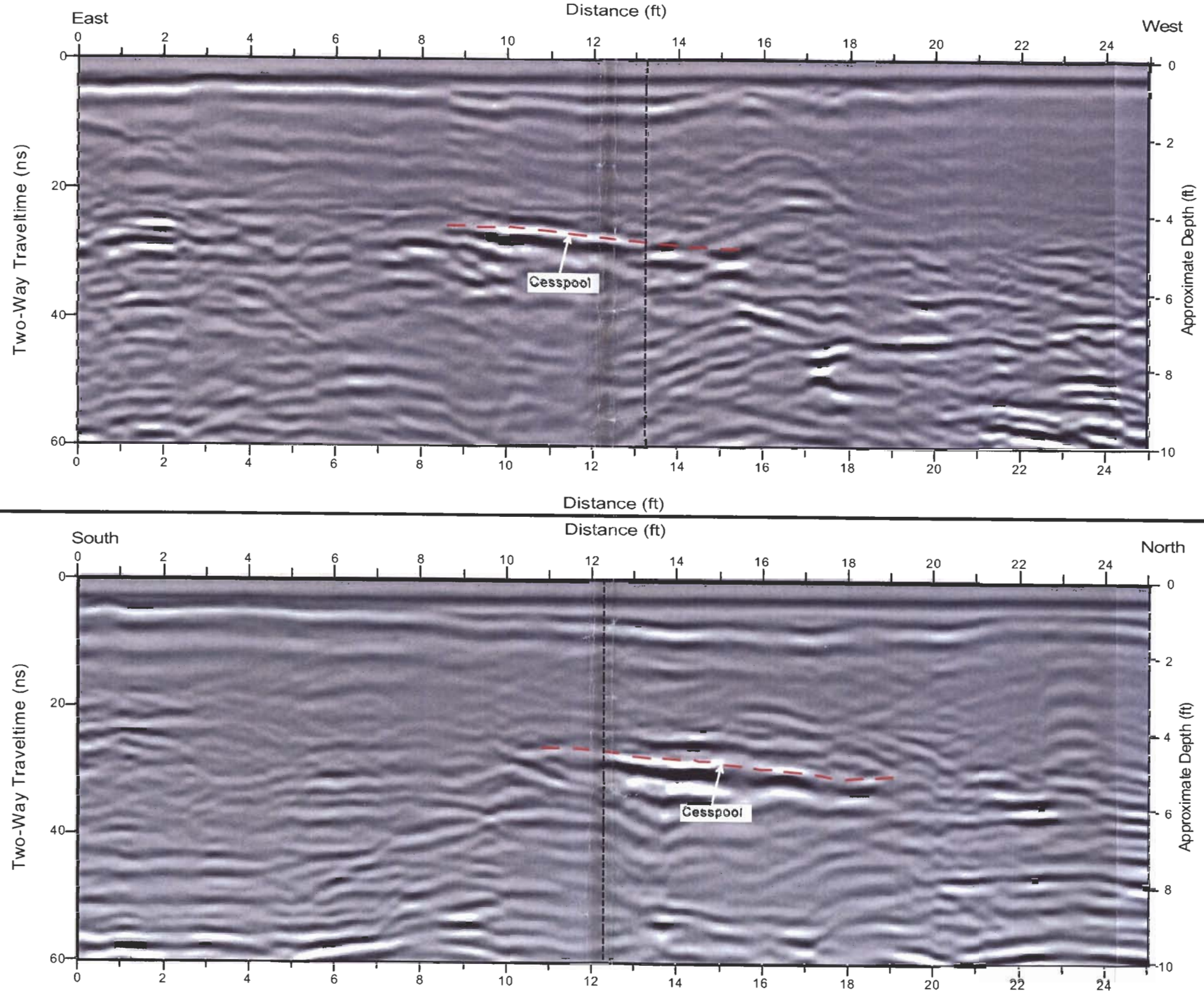
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516-454-7500
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Legend

CP-#	Potential Cesspool or Drywell
SAN-MH-1	Sanitary Manhole (Possibly Cesspool)
	Interpreted Storm Sewer Pipe

Figure 1
Site Map and Imaged Terrain Conductivity EM Results

Site:	Prepared For:
Francis S. Gabreski Airport Westhampton Beach, NY	Environmetal Resources Management 520 Broad Hollow Road Suite 210 Melville, NY 11747
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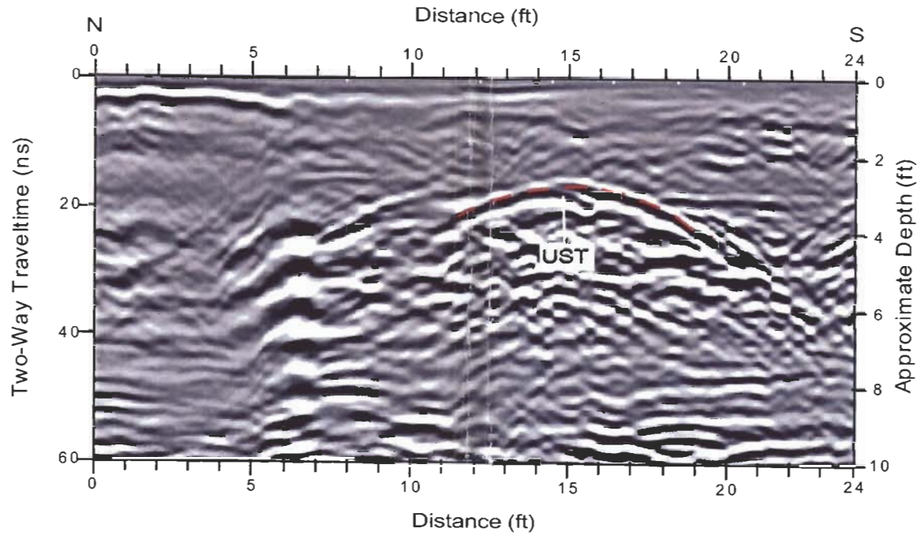
Note: 1) GPR image was collected using a GSSI SIR-2 system and a 400 MHz antenna.
2) Dashed black lines represent the intersection points of the GPR images.

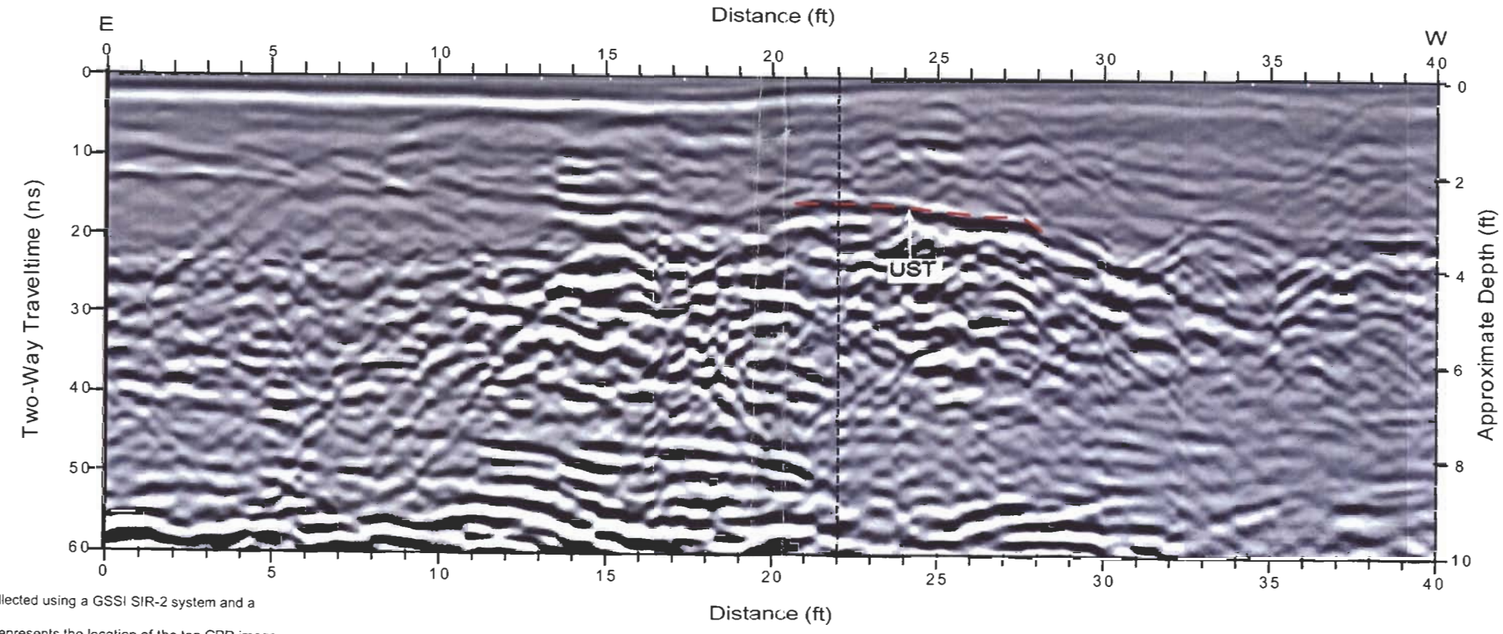
02-134-1 sb/7/31/02

Figure 2
GPR Images
Across Cesspool CP-9

Environmental Resources Management
Francis S. Gabreski Airport
Westhampton Beach, NY

ADVANCED GEOLOGICAL SERVICES





Note: 1) GPR image was collected using a GSSI SIR-2 system and a 400 MHz antenna.
2) Black dashed line represents the location of the top GPR image in relation to the lower GPR image.

02-134-1 sb/7/31/02

Figure 3
GPR Images Across
a 4-foot by 6-foot UST

Environmental Resources Management
Francis S. Gabreski Airport
Westhampton Beach, NY

ADVANCED GEOLOGICAL SERVICES

Appendix F

Test Pit Logs/Field Notes

ERM-Northeast

5788 Widewaters Parkway, Dewitt, New York 13214

TEST PIT LOG

Contractor: American Environmental	PROJECT NUMBER: 72708.02.01	Pit No.: TP-1
Operator: Gene Mastandrea	PROJECT NAME: Gabreski Airport	Location: Adjacent to MH-1, MH-2 &
Equipment: Case 590 Super L	Geologist: Michael F. Mendes	MH-3.

DATE/TIME	WEATHER OBSERVATIONS	GROUND WATER OBSERVATIONS			
Date: 9/23/2002	Temperature: 75 degrees	Date			
Time Start: 9:15	Precipitation: None	Time			
Time Finish: 10:20	Wind: Light NW 5-10mph	Water Level			
Note: PHOTO # 1	Ground Conditions:	Note			

DEPTH (ft below grade)	SAMPLE	FID / PID (ppm)	FIELD IDENTIFICATION	COMMENTS
0		0.0	0 to 8 inches of Black/Brown organic topsoil.	
1		0.0	8" to 5 ft Brown fine to med sand, coarse sand with	
2		0.0	gravel, moist. No odors, and No staining.	
3		0.0		
4		0.0		
5	X	0.0		
6			Test Pit Dimensions:	
7			30 feet long	
8			4 feet wide	
9			5 feet deep	
10				
11				
12				
13				
14				
15				

Signature: _____ Date: _____

ERM-Northeast

5788 Widewaters Parkway, Dewitt, New York 13214

TEST PIT LOG

Contractor: American Environmental	PROJECT NUMBER: 72708.02.01	Pit No.: TP-3
Operator: Gene Mastandrea	PROJECT NAME: Gabreski Airport	Location: Located east of SB-05
Equipment: Case 590 Super L	Geologist: Michael F. Mendes	

DATE/TIME	
Date:	9/23/2002
Time Start:	13:00
Time Finish:	13:31
Note:	PHOTO # 2

WEATHER OBSERVATIONS	
Temperature:	75-80 degrees
Precipitation:	None
Wind:	Light NW 5-10mph
Ground Conditions:	

GROUND WATER OBSERVATIONS			
Date			
Time			
Water Level			
Note			

DEPTH (ft below grade)	SAMPLE	FID / PID (ppm)	FIELD IDENTIFICATION	COMMENTS
0		0.0	0 to 8 inches of Brown/Black Topsoil with organics.	
1		0.0	8 inches to 10 ft of moist brown fine, medium, and	
2		0.0	coarse sand with gravel.	**No odors, No staining, No sample**
3		0.0		
4		0.0	**Note:** Exposed the Cesspool rings below the cover.	
5		0.0	No staining and no discolorations present.	
6		0.0		
7		0.0		
8		0.0	***Photo # 2: Cesspool Structure***	
9		0.0		
10		0.0	Test Pit Dimensions:	
11			10 feet long	
12			10 feet wide	
13			7 feet deep	
14				
15				

Signature: _____ Date: _____

ERM-Northeast

5788 Widewaters Parkway, Dewitt, New York 13214

TEST PIT LOG

Contractor: American Environmental	PROJECT NUMBER: 72708.02.01	Pit No.: TP-5
Operator: Gene Mastandrea	PROJECT NAME: Gabreski Airport	Location: West of Hampton Interiors
Equipment: Case 590 Super L	Geologist: Michael F. Mendes	East of SB-20

DATE/TIME	
Date:	9/24/2002
Time Start:	7:15
Time Finish:	8:00
Note:	

WEATHER OBSERVATIONS	
Temperature:	76 degrees
Precipitation:	None
Wind:	Light NW 5-10mph
Ground Conditions:	Dry

GROUND WATER OBSERVATIONS			
Date			
Time			
Water Level			
Note			

DEPTH (ft below grade)	SAMPLE	FID / PID (ppm)	FIELD IDENTIFICATION	COMMENTS
0		0.0	0 to 8 inches Brown Topsoil with organics.	
1		0.0	8 inches to 5 feet Brown fine, medium and coarse	
2		0.0	sand with gravel. No odors and no staining.	**No odors, No staining, No sample**
3		0.0		
4		0.0		
5		0.0		
6			Test Pit Dimensions:	
7			7 feet long	
8			4 feet wide	
9			5 feet deep	
10				
11				
12				
13				
14				
15				

Signature: _____ Date: _____

ERM-Northeast

5788 Widewaters Parkway, Dewitt, New York 13214

TEST PIT LOG

Contractor: American Environmental	PROJECT NUMBER: 72708.02.01	Pit No.: TP-7
Operator: Gene Mastandrea	PROJECT NAME: Gabreski Airport	Location: SB-17
Equipment: Case 590 Super L	Geologist: Michael F. Mendes	

DATE/TIME	
Date:	9/24/2002
Time Start:	9:30
Time Finish:	10:30
Note:	

WEATHER OBSERVATIONS	
Temperature:	76 degrees
Precipitation:	None
Wind:	N 5-10mph
Ground Conditions:	Dry

GROUND WATER OBSERVATIONS			
Date			
Time			
Water Level			
Note			

DEPTH (ft below grade)	SAMPLE	FID / PID (ppm)	FIELD IDENTIFICATION	COMMENTS
0		0.0	0 to 8 inches Brown Topsoil with organics.	
1		0.0	8 inches to 7 feet Brown fine, med and coarse sand	
2		0.0	with some gravel.	**No odors, No staining, No sample**
3		0.0		
4		0.0	Test Pit Dimensions:	
5		0.0	10 feet long	
6		0.0	4 feet wide	
7		0.0	7 feet deep	
8				
9				
10				
11				
12				
13				
14				
15				

Signature: _____ Date: _____

ERM-Northeast

5788 Widewaters Parkway, Dewitt, New York 13214

TEST PIT LOG

Contractor: American Environmental	PROJECT NUMBER: 72708.02.01	Pit No.: TP-9
Operator: Gene Mastandrea	PROJECT NAME: Gabreski Airport	Location: Adjacent to A&M Electronics
Equipment: Case 590 Super L	Geologist: Michael F. Mendes	Former Tank area.

DATE/TIME	
Date:	9/24/2002
Time Start:	12:30
Time Finish:	13:00
Note:	

WEATHER OBSERVATIONS	
Temperature:	76 degrees
Precipitation:	None
Wind:	N 5-10mph
Ground Conditions:	Dry

GROUND WATER OBSERVATIONS			
Date			
Time			
Water Level			
Note			

DEPTH (ft below grade)	SAMPLE	FID / PID (ppm)	FIELD IDENTIFICATION	COMMENTS
0		0.0	0 to 8 inches Brown/Black Topsoil with organics.	
1		0.0	8 inches to 5 feet Brown fine, med and coarse sand	
2		0.0	with trace gravels.	**No odors, No staining, No sample**
3		0.0	Soil is Moist	
4		0.0	Test Pit Dimensions:	
5		0.0	10 feet long	
6			4 feet wide	
7			5 feet deep	
8				
9				
10				
11				
12				
13				
14				
15				

Signature: _____ Date: _____

CONTENTS

PAGE NO.	REFERENCE	DATE

MAM ①

DATE: 6/10/02 (Monday)
Site: GADESKI AIRPORT, NY, West Hampton
Client: NYSDEC
Purpose: Meet w/ Advanced Geological Services - Orient AGS to Areas of Concern.
Weather: am: Sunny 80°
pm: Sunny 88°, humid.

0900 - ERM/M. Mendes on site checked in @ the Building Admin. Building w/ Johnie, told her we would be onsite for the week to complete the Electromagnetic Survey.

1030 - Don Jagel and Seth from AGS onsite.

11:00 AGS Setting up their grid that they will use w/ GPS and then the EM Survey.

11:00 - 1500 AGS Set up the grid base for the South Central Area.
EM unit was not functioning - have ordered a new one that will

MCN (4)

DATE: 6/12/02 (Wednesday)
Site: GABRESKI Airport, W.H., N.Y.
Client: NYSDEC
Purpose: Continue w/ GPR and EM Survey
Weather: am: Hazy hot & humid 92°
pm: Hazy hot & humid 95°.
0730 ERM & AGS onsite.
AGS taking GPS locations
1000 New EM unit EM-31 arrived onsite.
Tested and began collecting EM data.
1030 Met w/ Alex Santos regarding what we were doing.
1100-1[illegible] Continued Making locations Using GPR on all SB and MW locations.
Don Jajel Continuing to collect EM data from around the site.
1700 Completed Clearing all SB and MW locations
1715 offsite

MFN (3)

6/13/02 - (Thursday)
Site: GABRESKI Airport, W.H. N.Y.
Client: NYSDEC
Purpose: Continue EM and GPR in the South Central Area.
Weather: am: overcast, cool 65°
0730 ERM & AGS onsite.
AGS Setting up to continue EM and GPR on site today.
Note: AGS put some data together w/ maps. looks very good.
8:30-1000 - AGS using GPS to mark locations
10:00-12:15 Don Jajel collecting EM data. SETH and I are marking out Cesspools in the area of SB-17.
13:30-15:30 Locating Cesspools from building 140 to SB-31. located all of cesspools and manhole covers.
16:00 Using GPR on the box (possibly - distribution box for Cespool array) in the area of SB-18.
1700 ERM and AGS. offsite

6/17/02 (MAN) (8)

7500 - Have reached Depth of 40 ft w/ the Macro core. This will be the end point of this boring. Groundwater. Completed SB-01 in the nothern section.

1530 Completed today's work activities

1530 - 1600 - spoke about tomorrow's work activities,

Delta - well installation crew has been mobing to the site today.

Accomplish (1) boring today collected No Samples today.

DELTA, ERM, NYSDEC offsite @ 1630

(MAN) (9)

DATE: 06/18/02 (Tuesday)
Purpose: Continue SB and start MW installation
location: GREENSVILLE - Airport.
Weather: am. Sunny and 75°,
pm: Sunny hot ~85-90°. SW WIND 5-10
0700 ERM and Delta on site - Setting up Geoprobe on SB-02.
Jake Elder Setting drillers up on MW-02.
Onsite: Jim Pederson, Jamie Malcolm Jake Elder, Mike Mendes.
0734 - Received first core from SB-02
0929 - Received core from 28-32 feet
Note: collected Sample from SB-02 for VOCs SB-02 (31'-32') @ 0929. Sample placed on fresh ice immediately.
Completed SB-02 - will move to SB-03
Jim - getting water for decon.

Note: started on SB-03, ~ 6" below grade an ashphalt/concrete pad encountered that spreads out in the area of SB-03. Predug 6 location in radial directions. Slab encountered @

6/19/02 (MFM) (12)

from 40 ft used the micro core 1" x 2 ft. Sample core, GW encountered @ 42-44', No Sample Recovered from this depth - Therefor NO subsurface Sample.

1340 Completed boring SB-05

Lunch 12:00 - 12:30 -

1230 Started SB-06.

SB-06 (0.25'-0.75') @ 1230 for Inor/Pest.

1241 Received Core from 0-4 ft.

Continued Coring @ 24-28 collected Sample w/ Closed Sample core.

1405 - No core obtained.

1503 obtaining core from 32-36' below grade.

Note Samples collected today

SB-05 (0.25-0.50) @ ~~0930~~ 0735

SB-06 (0.25-0.75) @ 1250

both samples collected for TAL Inorganics and TCL Pesticides, All samples packed on ice, w/ COC, (According to the WORK PLAN)

1730 Shipped Samples to Mitkem Laboratory.

(MFM) (13)

DATE: 6/20/02 (Thursday)

Site: Gabreski, Hilport

Purpose: SB & MW Installations

Weather: am: Sunny 75°, foggy.

pm: Sunny 75°-80°, 5-10mph SW winds

0700 ERM/DELTA & DEC on site.

0705 Setting up for daily work activities.

0736 Beginning drilling on SB-07

Calibrated Microtip to 100 ppm isobutylene,

Conducte morning H&S meeting.

0749 SB-07 (0.25-0.75) TCL Pest's, TAL Inorgs collected @ the Surface. (1 jar) Place TB w/ Samples.

0804 Received Core from 12-16ft.

0900-0915. Water Break. (Temp. 85°)

0921 - Starting to drill Core (24'-28')

Collected Sample @ SB-07

0937 SB-07 (27'-28') for TCL VOC, TCL SVOC & TAL Inorganics (2 jars)

0950 No Sample Recovery from 28-32ft

1011 - Sample core received from 32'-36'. Below ground Surface.

MFW (16)

DATE: 06/21/02 (Friday)
Purpose: MW and soil boring Installation
s.te: Gabreski Airport.
Weather: am: Sunny 65°, West wind
pm: Sunny 83°, SW wind 5-10 mph

0700 ERM/Mendes, Gabany, DEC J. Makelm) and Delta Jim Pederson on site.

0703 Calibrating Microtip to 0.0 ppm ambient air. Calibrated 100 ppm isobutylene. Note: Temperature of Yesterday's Samples OK. 2-4° C.

0737 Started drilling @ SB-13

0746 Received Core 0-4 ft.

0835 Received core 20-24 ~~feet~~

0939 Recived Core 28-32 feet.

See Soil boring log for details on soil descriptions.

1009 Completed SB-13 @ the depth of 36 ft. GW encountered @ ~ 35 ft.

1009 SB-13(34-35')@ 1009 for VOC's

1111 Completed Redrilling MW-02, will move to mw-04(ERM-04).

6/21/02 MFW (17)

1142 Received Core from 12-16 ft.
1157 Received Core from 16-20 ft.
1222 Received Core from 20-24 ft.
1250 Received Core from 24-28 ft.
1346 Driving core from 28-32 ft.
1359 Received Core from 28-32 ft.
GW not encountered will drive Core from 32-36 ft.
See logs for details.
Received Core 32-36 ft-dry.
Drove core 36-38 w/ micro cores
Collected Sample from 36-37 ft.
SB-12(36-37)@ 1524 for VOC, SVOC & TAL Inorganics.

- All Samples on ice immediately follw Sample collection. Prepared Sampl for fedex delivery to Mitkem Co. Labs in RI, Saturday delivery Relinquished Samples @ 1730 to Fedex.

1700-1730 ERM at site drive to Fed Ex

6/24/02 MFW 20

Duplicate (DUP062402) Sample collected only for VOCs.

1530 DELTA offsite -

1540 Collected FB062402 by running laboratory supplied DI water through an Acetate Geoprobe liner and collecting in lab supplied glassware for VOC, SVOC, Inorganics and Metals

Note: All Samples placed on plenty of fresh ice for the Day. Samples will be held overnight on Plenty of fresh ice w/ Temperature Blank and TB062402 and Samples. C.O.C filled out and Placed w/ Samples

Note: MW04 (ERM-04) Completed today began split spooning on ERM-03. GW encountered @ 39 ft below Ground Surface.

JAKE E. and J. MALCOLM COVED OFF MW-05 or ERM-05 in PARKING LOT.

1730 ERM and DEC offsite

MFW 21

DATE: 06/25/02 (Tuesday)

site: GABRESKI Airport

Purpose: SB & MW Installations

Weather: am: overcast - 69°; light NW wind

pm:

0700 - ERM / DEC & DELTA ON site.

0710 - Conducted site H&S meeting.

0730 - Calibrating Photorae 2020, calibrate to ambient air, and 100ppm - Isobutylene cal gas.

0745 - J.E conducted ATW in ERM-04

DTW - 39.48 ft TOC to gs - 2.4

DTB - 49.65 ft

0800 - DELTA DRILL CREW on site Geoprobe Jimmy obtaining water from the Hydrant.

SB-14

0810 Drove core 0-4 and 4-7ft refusal encountered @ 7 ft w/ a Cesspool below grade @ 7ft. Moved over 6 ft.

0930 Continued driving cores down to target depth.

0935 Depth - 24-28 ft. core obtained.

MW (24)

DATE: 6/26/02 (Wednesday)
site: GABRESKI Airport.
Purpose: MW and SB installations
Weather: am: Hazy, hot - 72°, humid
pm: Hazy, hot - 90°, humid, SW 5-10.

0700 ERM and DEC on site, Delta on site @ 0710
0715 Calibrated P.I.D 20/20 to 100ppm isobutylene cal gas.
0730 Geo jimmy setting up on SB-31
0841 Received core from 0-4 ft, SB-31(0.0'-0.5') @ 0811 for TCL tests and TAL Inorganics
0839 - Received core 20'-24'.
0930 - Received core 24'-28'.
1034 - No Recovery from 28'-32'. will Retry the interval, Sample fell out
1059 SB-31(27'-28') @ 1059 for VOC SVOC, & TAL Inorganics.

Note: Drove core from 28-32 again however No sample recovered Sample collected from 27'-28'. GW encountered @ 31 ft.

6/26/02 MW (25)

1100 - (2) jars filled for analysis.
1228 SET UP on SB-29 on the Asphalt.
JAKE ELDER COMPLETED ERM-03 and set up on ERM-06.
1230 - Development of ERM-03 being conducted.
1313 - SB-29 have reached Depth of 20'
1330 - Pump for Development of ERM-03 is silted up.
1338 obtained core 20'-24'
1357 JAKE E. offsite.
1421 Obtained core from 24'-28'.
1445 Received (3) grooms from MW installation crew - 35'-37', 37'-39', 39'-4
See ERM-06 Geologic log for details
1455 - Received core from 28-32'
1500 SB-29(31'-32') @ 1500 for VOC, SVOC and pesticides
Note: All samples placed on ice immediately following Sample collection w/ Temperature blank

6/27/02 (MFW) (28)

1315 DEVELOPMENT OF ERM-03 started @ 1315.

1346 Received Core from -24'-28'. See log for details.

1420 Received core from 28-32'. SB-27 (28'-29') @ 1420 VOCs SVOCs, and TAL Inorganics.

1425 Completed the development of ERM-03. -

1435 Completed SB-27 - @ 32 ft GW@ 29', Geo Jimmy - back to shop to fix rods.

1500 ERM-07 split spooned to water table @ 32'. Petroleum staining was visible @ and above the water table w/ PID - 276 ppm

1515 Drove spoon to 34 completed saturated. End of Drilling for the day.

1530 Began development of ERM-05. started pump @ 1530.

→ over.

6/27/02 (MFW) (29)

ERM-05

DTW - 44.06
DTB - 55.00
WC = 11 ft
1x =
3x =
5x =

Pump on: 1530
Pump off:
Pump rate: 3-4 spm

Purged 25 gallons while surging well.

Time	Turb.	Cond (us)	PH	Temperature	ORP
1550	550	330	10.1	+23.0	159
2 gal 1555	3.48	—	—	+20.6	—
1600	2.37	—	—	—	—
1605	1.63	—	—	—	—

Note @ 1555 No readings available due to PH/ORP meter - malfunction.

1608 Well development completed @ 1608.

1615 Cleaned up work location.

1630 - Spoke to J. Mahlin.

1700 All samples on ice - and held for shipments tomorrow.

Cont. field measurements of pH, ORP turbidity. See development log for details. Surged well continuously to free material.

1410 Driving core from 24-28 ft.

1441 Driving core from 28-32 ft.

Note: 1430 DELTA Drilling Crew offsite Conrad & Steve

1451 Received core from 28-32 ft.

1513 Received core from 32-36 ft. Saturated @ 34ft.

1514 SB-18(33'-34')@ 1514 for VOCs. (1) jar.

1530 Geo jimmy at Delta offsite. Completed C.O.C custody, Prepared Samples for shipment to Mitkem Laboratories Via Fedex priority overnight for Saturday delivery. Samples packaged and shipped following C.O.C procedure and WORK PLAN.

1630 Dropped off Samples @ FED EX.

DATE: 7/01/02 (Monday)

SITE: GABRESKI Airport

PURPOSE: Soil boring Installation Manhole Installations -

WEATHER: am: Partly cloudy 76°, S winds 5-10 mph pm:

0700 ERM and Delta (Geojimmy onsite) Setting up on SB-16 this morning.

0710 Calibrating PID 20/20 to 100ppm isobutylene cal gas. - Zeroed instrument to Ambient air.

0730 Preparing Geoprobe @ SB-16, set up cooler w/ plenty of fresh ice. Placed trip blank and Temperature blank in coolers TB070102@0730

0745 obtained first Core 0-4 ft @ SB-16 SB-16(0.0'-0.5') @ 0745 collected for TCL Post's, TAL Inorganics.

[redacted] MFM

0745-1221 - Driving cores to GW which was encountered @ 40 ft.

1221 SB-16 (39'-40')@ 1221 for VOC, SVOC, Pesticides and Inorganics. DUP070102 was collected @ this interval for VOC, SVOC, Pest, Inorganics.

MAN (36)

DATE: 07/02/02 (Tuesday)
Site: Gobreski Airport
Purpose: SB installations
Weather: am: 76° - 69% humidity No wind
pm: 95°, Very humid, light wind.

0630 ERM and Delta on site.
Geo jimmy set up on SB-

0645 - Filled cooler w/ plenty of fresh ice created temperature of the Samples collecty 7/01/02 everything within limits.

0650 Calibrated Photovac 20/20 to 100ppm isobutylene cal gas and 0- ambient air.

0702 Began opening cores @ SB-19

0748 Driving core from → 24-28'.

0847 Completed SB-19 @ 32 ft.
GW encountered @ 32 ft.

Note: SB-19 (15'-16') @ 0816 collected for VOC analysis only. (1) jar collected from this interval.

Mobing to SB-20 - just west of Sewer lines.

07/02/02 MFM (37)

0857 Driving first core @ SB-20

1107 SB-20 (26-28') MS/MSD collected @ 1107 for VOC, SVOC, & TAL Inorganics. Triplicate QA/QC Volume collected for this interval

1140 Completed SB-20 @ 30 ft GW encountered only 2" of Recovery.

SB-28

1200 Mobed on to SB-28.

1224 Driving first core from 0-4 ft.

1400 Drove spoon from - 28-32
GW encountered @ 31.5'.

SB-28 (30.5'-31.5') @ 1401 for VOCs and SVOCs collected in (2) 4oz jars.

All samples collected were placed on ice w/ yesterday's samples that were collected. - Samples are packaged according to C.O.C. procedures w/ the Temp blank and Trip blank. Samples will be shipped to Mitkem Laboratory VIA Federal Express.

1600 Dropped off Samples @ Fed ex.

MFN 60

07/08/02 (Monday)
Site: GROESKI Airport
Purpose: SB installations @ GW Sampling.
Weather: am: Hazy 70°, Humid.
pm:

0700 ERM and DELTA onsite. Geo jimmy, getting ready for Soil Sampling.

0715 Calibrated the photovac 20/20 to 0 ppm ambient air and 100 ppm isobutylene Calibration gas. Note: GW Sampling to Commence today.
Setting up soil Sampling today @ SB-24.

SB-24

0734 started Coring @ SB-24. continued driving cores.

0830 Spoke to Gene he is on his way with the rental Van and equipment.

1025 Completed SB-24

0758 SB-24 (8-9') VOCs and SVOC Sample was collected and placed

on ice immediately following Sample collection.

Moved to SB-23.

SB-23

started @ 10:30.

1035 Received core from 0-4 ft. Continued Coring - to 20 ft.

12:00 - 12:30 Lunch.

12:36 - Driving - Core 20-24.

Note: GENE onsite today to Begin G.W. Sampling. SET up Bottles and Equipment Began Sampling ERM-01. will collect the MS/MSD from this location as well as Natural attenuation parameters.

1503 Received Core from 28'-32'. GW encountered @ 32.
SB-23 (31-32) @ 1503 Collected for VOCs. All Samples collected today will be held overnight on plenty of fresh ice @ proper temperature

07/09/02 (MAW) (AVC)

11:15 Set up on ERM-04.

Sampled ERM-04 for SVOC Pesticides, PCB, TAL Inorganics Cyanide and VOCs by Bailer. Fe iron Field test Conducted Result = 0.6 Mg/L. (See GW Sampling Log for details)

1300 EB070902 Conducted for VOC through Bailer w/ DI water Provided by the Laboratory (K.Mitkem) SVOC, Pests, PCBs, TAL Inorganics, and Cyanide Collected by pouring Laboratory Supplied DI water through a decontaminated (according to Workplan Procedure) Grundfos pump and collecting runoff in the appropriate Laboratory Supplied glassware. Samples shipped following COC procedure to Mitkem.

1515 Due to DELTA'S LACK OF LINERS Soil Sampling was not conducted today. Samples collected yesterday were packaged according to C.O.C procedure. Shipped Via Fed Ex to Mitkem.

(MAW) (45)

DATE: 07/10/02 (Wednesday)
SITE: GRZESKI AIRPORT.
PURPOSE: SB installations and mw GW Sampling
WEATHER: am: overcast 65°, NW breeze 35mph
pm:

0600 ERM & DELTA on site, We have liners for today will do as many borings as we can.

0615 CALIBRATED the Photovac 20/20 to 0ppm ambient air and 100ppm isobutylene gas.

0620 Began drilling @ SB-21.

0623 Received Core from 0-4 ft. continued receiving cores from SB-21.

0750 Driving core from 24'-28'.

0828 Received core from 28'-32'.

0829 SB-21 (31'-32') @ 0829 for VOC, SVOC and TAL Inorganics. (2 jars)
SB-21 completed @ 32 ft.

0835 TB070902 Placed w/ Sample Mobed to SB-22.

0845 Driving core 0-4 ft.

0845-0900 Coffee break.

0942 - Recored core 16'-20' ft.

DATE: 07/11/02 (Thursday).
SITE: GABRESKI AIRPORT
Purpose: Soil Boring and MW Installations.
Weather: am: Sunny 60°, light SW wind.
pm:

0600 ERM and Delta on site.
0635 Calibrating the photovac 20/20 to 0ppm ambient air and 100ppm isobutylene gas.
0830 Set up on SB-09. on the South Western block.
0656 Received core from - 0-4 ft. Driving cores to depth.
0730 Jim Pederson spoke to Tom K. The Drill Rig (F-7) and Geoprobe will be De-moded @ the end of today's WORK DAY.

0830 Surveyors on site to continue the Soilboring and MW survey locations.

0856 Received core from 24'-28' moist, No oW.
0926 Received core from 28'-32'

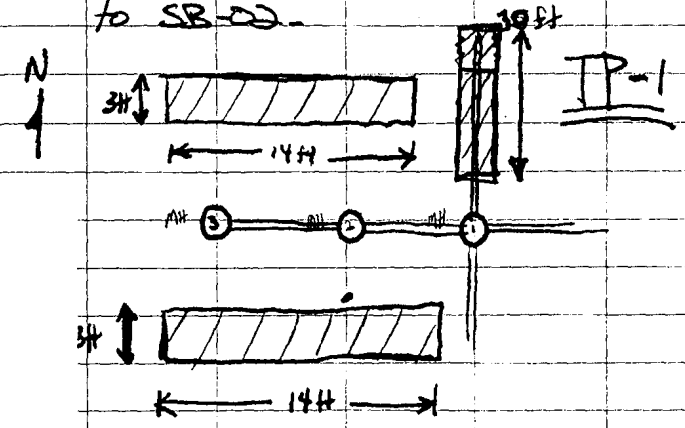
Note: Difficult to obtain the 32'-36' Sample:
1000 Received core from 32'-36'. Will go down SB-09 w/ 2 ft. Micro core and drive core from 39'-41' ft for water.
1055 Core from 39-41 received. Sample SB-09 (39'-41') @ 1055 collected for VOC, SVOC, TAL Inorganics Completed SB-09 @ 41 ft.
1115 Moved to SB-10
1120 Received Core from 0-4 ft. SB-10 (0.0'-0.5') @ 1120 for TCL Pest and TAL Inorganics.
Continued Coring @ SB-10 to a depth of 28'. @ 1333 received core from 24'-28' however the Rods were very tight while pulling out.
1353 SB-10 (27'-28') @ 1333 for VOCs SVOCs, TAL Inorganics was collected in (2) 4oz jars.
This marks the end of Soil Borings and the Soil Sampling task.

MAW 52

DATE: 09/23/02 (Monday)
Site: GABRESKI Airport, West hampton
Purpose: Test pitting activities
Weather: ave: overcast humid 75°, light SW wind

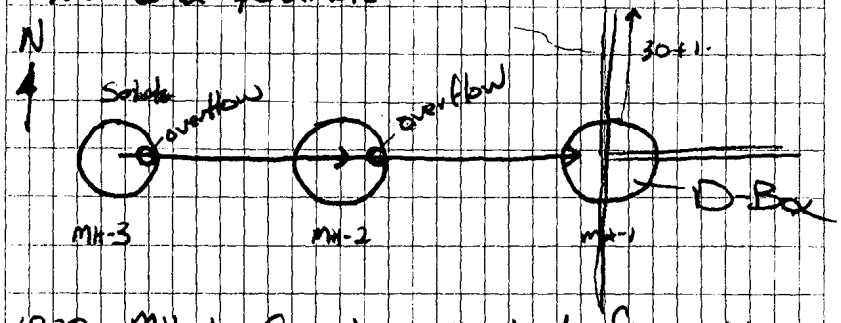
0700 EEM (M. Mendes) NYSDEC (J. Malcolm)
American Environmental (Gene Mastrodea)

0730 NYSDEC & EEM discussing work activities
0845 American Environmental on site.
0900 Calibrate PID & LEL to standards (all ok)
09.5 Begin test pitting @ the 3 man holes @ the Northern Area adjacent to SB-02.



9/23/02 MAW 53

Area TP-1 -
test Pit in areas of MH-1, 2 & 3 in the Vicinity of SB-2. Test pit dug North from MH-1 to delineate piping from MH-1. Test pit dug along MH-1 6" Piping approximately 5 ft in depth. No sand found.



1020 MH-1 Sample collected from the Bottom of MH-1. 3 to 4 inches of Sediment on the Bottom of MH-1 w/ a hard Concrete bottom. Sample collected at a depth of 5 ft. for TCL VOC, SVOC and Metals.

Moving over to TP-2 in the area of SB-05.

9/23/02 T (MFM) (56)

1405 Moved over to the location in front of a&m electronics to investigate possible tank location TP-4 - Possible tank.

TP-4 Began digging - @ 3ft below grade encountered 6" Steel pipe line - Soil above - Brown iron stained fine medium to coarse Sand, wf No odors and No staining

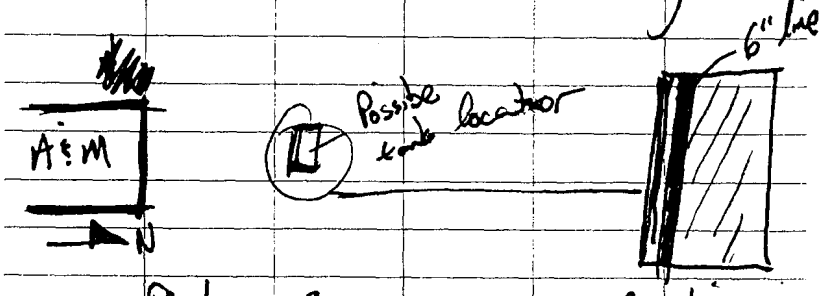


Photo #3 shows the location of Metal pipe that was encountered Not a tank. (Metal pipe in foreground)

BACKFILLING Excavation @ 1445.

1500 - Demo from American Environmental offsite.

9/23/02 (MFM) (57)

1528 - SS-SB-06/07 collected by Compositing soil from between SB-06/07 from (4) four locations. Collected Soil to be analyzed for Pesticides.

1540 - SB-16 collected by Compositing Surface Soil @ 0-.05' in the Vicinity of SB-16 and analyzing for Pesticides.

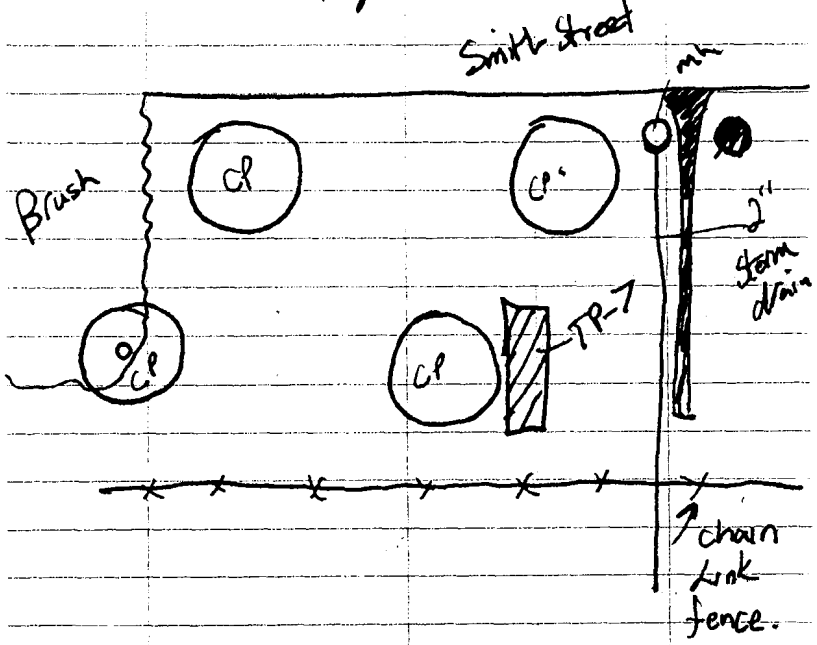
SB-30 @ 1553 collected from the Vicinity of SB-30 by compositing soil and analyzing for Pesticides

SB-31 @ 1610 collected by compositing soil from the Vicinity of SB-31 and analyzing for Pesticides.

all Samples placed on ice immediately following sample collection and will be shipped out on Wednesday 9/25/02

9/24/02 MFM (60)

TP-7 - Cesspool structure @ SB-17 for the purpose of identifying cesspool dug along side of the cesspool - old Cinder Block construction cesspool w/ 1 piece Concrete top.

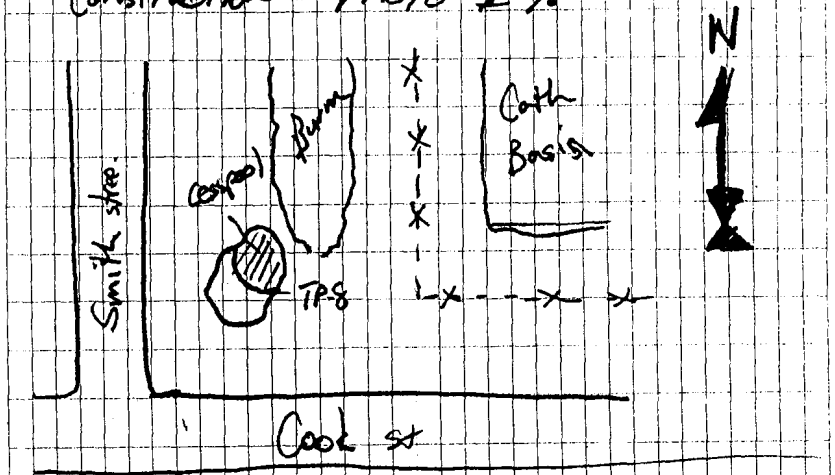


Test Pit 7 - dug to 7 ft below grad. 10 foot long by 4 ft wide. No odors No staining

Photo #6 - Cess pool structure cinder block Construction.

9/24/02 MFM (61)

TP-8 - Test pit @ the corner of Cook and Smith street - adjacent to Boring SB-14. Top of Cesspool cover located 10 ft below grade - Cinder block Construction - Photo #7.



Possible staining encountered - Darker Soil P.I.D ~ 30 ppm. ~ Possible moisture but within the P.I.D. No odors detected by olfactory.

12:00 Break for Lunch.

Moved over to the area East of Building 140.

9/25/02 (mfm) (64)

Well ID	Opt	DTW	DTB	Time	
TP-07	-	Dry	25.75	1521	
TP-23	-	30.59	34.80	1530	
TP-48	-	34.14	37.80	1540	
TP-49	-	33.92	37.40	1544	
TP-50	-	33.90	35.18	1551	
TP-19	-	32.22	34.12	1600	
TP-30	-	31.86	33.10	1601	
TP-28	-	35.20	36.83	1605	
TP-27	-	34.68	37.34	1608	strong odor.
TP-26	-	35.76	37.30	1610	strong odor
TP-17	-	34.17	35.80	1613	strong odor
TP-16	-	Broken	dry	-	-
TP-15	-	Broken	dry	-	
TP-8	-	34.28	37.10	1620	Strong odor
TP-9	-	Can't be located broken			
TP-10	-	34.60	Casing broken.	1624	Strong odor.
TP-51	-	32.65	47.5	1627	Strong odor
TP-6	(34.57)	35.16	38.30	1630	Product
TP-3	-	34.86	36.85	1639	
TP-2	-	34.98	36.10	1642	
TP-5	(34.51)	34.20	36.40	1648	Product

All Samples collected held overnight on ice for 9/25/02 Shipment.

(mfm) (65)

DATE: 09/25/02

Site - Gabreski Airport, West Hampton, NY

Purpose: Ground Water Sampling + Surveying.

Weather: am: 76°, light NE wind, Sunny

pm:

0700 ERM Inc. & NYSDEC (J. Malcolm) Calibrating Horiba U-22 to cal in one calibration Solution.

ERM-05 - Setting up on ERM-05 to purge and Sample for SVOCs only.

ERM-05

DTW - 44.03

DTB - 53.03

DOP - 50'

WC - 8.7

1x - 1.4

3x - 4.176

Pump on - 0746

Pump off - 0813

Sample time - 0817

Purge Vol = 6 gal

Sampled ERM-05 for SVOCs @ 0817 Moved to ERM-07.

0830 American Engineering - Surveyor onsite, discussed his work activities for the day.

Exhibit 1

Historic NAPL Information

LETTER REPORT
INDEPENDENT VERIFICATION OF ALLEDGED JP-4 AT SUFFOLK COUNTY AIRPORT LI, N.Y.

In Support of
The United States Air Force
Headquarters/LEEV

October 3, 1988

Prepared by
UNC Geotech
P.O. Box 14000
Grand Junction, Colorado 81502

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EXECUTIVE SUMMARY

The objective of this effort was to provide independent evaluation to verify previous reports from Suffolk County, Long Island, New York, that a JP-4 contamination of groundwater had been identified. The contamination plume is on Suffolk County Airport, formerly a U.S. Air Force base until 1969. Since the County does not use JP-4, they contended that it was a U.S. Air Force responsibility.

Samples of the floating product layer were taken from existing County wells and tanks in the area. These samples were analyzed by UNC Geotech Laboratory and IT Corporation Analytical Laboratory at Knoxville, Tennessee, using EPA or equivalent procedures. In addition, soil-gas samples were taken on one lateral of the plume to confirm plume width and the soil-gas sampling methodology for the area.

The analysis performed by both laboratories agreed that the product layer samples are a mixture of petroleum fuels, including Jet-A, JP-4, and diesel. They concluded that there is no match between product layer samples and samples of pure Jet-A, JP-4, Av gas, or gasoline obtained at the airport. All samples, except the pure samples above, indicated diesel fuel/oils present. Soil-gas samples on one lateral confirmed the County-stated plume width of 100-150 feet.

It is recommended that the source(s) of the plume be determined and eliminated. Further studies of the plume and groundwater should be performed to identify the recovery system design and location. The recovery system should be constructed and operated to provide the most effective removal of the petroleum product and, finally, written documentation from the County should be obtained which concurs that the product layer has been removed.

1.0 INTRODUCTION

1.1 OBJECTIVE

To provide independent review and validation of alleged JP-4 contamination on Suffolk County Airport, New York, to Headquarters U.S. Air Force (HQ/USAF) Engineering & Services Directorate, Environmental Division (HQUSAF/LEEV).

1.2 BACKGROUND

1.2.1 Installation History

During the latter part of 1941, the federal government began acquisition of parcels of land between the towns of Westhampton Beach and Riverhead, in Suffolk County, New York. By the latter part of 1942, a total of 11,500 acres of leased land had been obtained. The Civil Aeronautics Authority (CAA) initially began land acquisition to construct an airport for training purposes. However, in the early part of 1942 it was recognized that the proposed field would be ideal for construction of a training and gunnery base for fighter aircraft. Therefore, construction continued and the base was erected so as to most suitably serve as a training field for fighter-type aircraft and as a gunnery range for advanced training of gunnery pilots.

The base was first activated May 17, 1943, as a gunnery training base for fighter pilots and instructors. Fighter groups received gunnery training before going overseas in World War II. The base operated under the auspices of the U.S. Army and was called the Westhampton Beach Army Airfield (WBAAF). In November 1945, the WBAAF was deactivated. From 1948 to 1951, the field was leased and used by the Arabian American Oil Company (ARAMCO) as a training base for its personnel destined for Saudi Arabia. The Korean Conflict mobilization caused ARAMCO to vacate the premises and the base to be reactivated in June 1951. At that time the base was reactivated as the Suffolk County Air Force Base (SCAFB).

The base was reopened with personnel of the 103rd Fighter Interceptor Wing (FIW) of the Connecticut Air National Guard. After about a year, the 103rd FIW gave way to the 77th Air Base Squadron and its 45th Fighter Interceptor Squadron (FIS). The 519th Air Defense Group took over in 1954 with its two tactical squadrons, the 75th and the 331st FIS. In 1955, the 52nd Fighter Group, consisting of the 2nd and 5th FIS, was assigned to SCAFB. The mission of the 52nd Fighter Group was to provide aircraft and crews for interception in air defense, to participate in the USAF mission of anti-submarine warfare, to organize, equip, administer, train, and prepare for combat, and to operate and maintain SCAFB for the support of armed forces personnel or units utilizing the base. In 1958, a BOMARC (Boeing mi-99) missile site was constructed approximately five miles from the base and the 6th Air Defense Missile Squadron was activated. In 1960 the 2nd FIS took over operational duties of the 5th FIS when the 5th FIS departed the base. The 98th FIS was assigned to the group in 1963, and the group became the 52nd Fighter Wing with F-101 planes and 60 BOMARC missiles.

In 1964, the missile squadron was deactivated and in 1968 the 98th FIS departed the air base. The base was deactivated and closed in December 1969. With the closing of the base, most of the land was reacquired by Suffolk County. Several small parcels were reacquired by former private owners. The Air National Guard (ANG) became tenants of the area south of Cook Street on the west side of the airport in 1971. The ANG occupies 70 acres of building sites and aircraft working area. The present mission of the Suffolk County ANGB is aerospace rescue and recovery. The remainder of the former AFB is occupied by the Suffolk County Airport and small commercial establishments.

1.2.2 Current Issue

Suffolk County has informed HQUSAF/LEEV that the Suffolk County Department of Health Services has identified a plume of JP-4 contaminated groundwater approximately 100 feet wide and 500 feet long. Suffolk County further states "Representative samples from the plume were obtained by the Department of Health Services in December, 1986, and transferred to the United States Coast Guard's Central Oil Identification Laboratory in Groton, Connecticut. The resulting oil spill identification report concluded that the samples most closely resembled a JP-4 jet fuel. This would eliminate the County and any of its non-federal tenants as sources or causes of the problem." The County further states: "The County has installed a recovery system at a cost of approximately $90,000.00, and additional greater expenses can be anticipated as the actual recovery operation gets under way."

These conclusions were based on three (3) water samples and the analytical evaluation does not address the lack of weathering in the samples, nor, as stated, is the evaluation conclusive in identifying JP-4.

MAJOR DISAGREEMENT

1.3 SCOPE

HQ/USAF/LEEV has requested that we provide independent verification/validation of the alleged contamination. In order to provide this evaluation, additional samples from water wells and tanks were obtained from existing locations and analyzed. The results were evaluated for JP-4, and this document is a letter report transmitted to HQUSAF/LEEV with all findings.

In order to accomplish this, four (4) tasks were performed as follows:

1.3.1 Task 1

Obtain copies of, and review records presently held by Suffolk County to determine past sampling/analysis activities, protocols, well construction, and evaluations. Report to HQUSAF/LEEV.

1.3.2 Task 2

Develop sampling and analytical plans to determine if JP-4 is present, and if present, attempt to determine the source. Obtain UNC Geotech Quality Assurance, and Health and Safety input. Obtain HQUSAF/LEEV concurrence of the plans.

1.3.3 Task 3

Obtain approximately 60 samples from existing wells and other available locations on the former SCAFB and analyze them according to the approved plans.

1.3.4 Task 4

Evaluate and document the results to HQUSAF/LEEV in a letter report.

1.4 STATUS SUMMARY

1.4.1 Task 1 (Reference 1.3.1 above)

Suffolk County provided records of well construction in their files, although well construction forms were missing for wells 1-26 (Ref. Figure 2-3). This data was obtained during the field activities, and all data is entered on a data base at UNC Geotech. This data base is not provided as part of this report, but is held to assist in anticipated follow-on work related to plume size and source identification.

In addition, existing drawings held by the NYANG were reviewed and copies obtained. They indicate five tanks within the plume area, two of which have been subsequently removed by Suffolk County. There is no other possible source of the plume shown; however, the most recent drawing is dated 1962.

These activities have been previously reported to HQUSAF/LEEV, and this task is complete.

1.4.2 Task 2 (Reference 1.3.2 above)

Sampling and Analysis Plans were developed with the necessary Quality Assurance and Health and Safety input, and HQUSAF/LEEV concurrence was obtained on the May 13, 1988 revision. These plans are Section 2.1 of this report.

1.4.3 Task 3 (Reference 1.3.3 above)

It was identified by the monitoring well data base that the amount of product in the wells varied with the water table, which varied with the seasons. Since no product was present in the May, June, and early July time frame, sampling was delayed until the week of July 25, 1988. The report of that activity is Section 2.2 of this report.

The analytical plan called for analysis of up to 60 samples based on the number of wells, tanks, and quality control checks. Since samples were only taken from wells determined to have measurable product depth, the actual analysis was 28 samples of 30 obtained. Two samples were provided to Suffolk County. The results of the analytical effort is presented in Section 2.3 of this report.

1.4.4 Task 4 (Reference 1.3.4 above)

The results of this activity is this report which is prepared for HQUSAF/LEEV.

2.0 SAMPLING & ANALYSIS

2.1 SAMPLING AND ANALYSIS PLAN

The following plan outlines work to be performed in support of Headquarters U.S. Air Force (HQ/USAF) Engineerings and Services Directorate, Environmental Division (HQUSAF/LEEV) at the Suffolk County Airport, New York, to provide an independent evaluation and validation of alleged JP-4 jet fuel contamination. Various field and laboratory techniques will be employed to: 1) identify and evaluate the contaminant(s) present; 2) if deemed necessary, provide data to determine the source and extent of contamination. Results will be compiled, interpreted and submitted in a letter report which will summarize work performed and the resulting conclusions and recommendations.

Work described in this plan will be performed using a phased approach. The initial phase will be the validation of JP-4 contamination. Depending on the outcome of this initial phase, other work may be performed as described in this plan to further characterize the nature and extent of the problem depending on the specific needs of HQ USAF/LEEV.

2.1.1 Background

2.1.1.1 Location

The Suffolk County Airport (Westhampton Airport) is located between the towns of Riverhead (located approximately five miles north) and West Hampton Beach (approximately three miles south) in Suffolk County, Long Island, New York (Figure 2.1).

2.1.1.2 Geologic and Hydrologic Setting

Long Island is underlain by consolidated bedrock which, in turn, is overlain by a wedge-shaped mass of unconsolidated Pleistocene, glacial deposits and Cretaceous fluvial or deltaic deposits of gravel, sand, silt, and clay. The Pleistocene glacial deposits lie on an irregular eroded Cretaceous surface (Figure 2.2).

Groundwater in the uppermost part of the zone of saturation is generally under water-table conditions. The lower aquifers are confined and are predominantly under artesian conditions. The water table is a dynamic feature with a constantly varying potential equal to the altitude of the water table at any point. Under natural conditions, precipitation is the source of all the fresh water on Long Island. Recharge to the groundwater system is virtually all from infiltration of precipitation into the zone of aeration and subsequent downward percolation to the water table.

The Suffolk County Airport is within a deep recharge zone, as shown on Figure 2.2. Wells in the plume area are within the upper glacial aquifer which is composed primarily of outwash sands. The Suffolk County Department of Health Services (SCDHS) reports: Depth to groundwater is 30 feet; the hydraulic conductivity is 250 feet/day; porosity is about 30 per cent; and groundwater flow is to the southeast at a rate of one foot/day under a regional gradient of 0.00125.

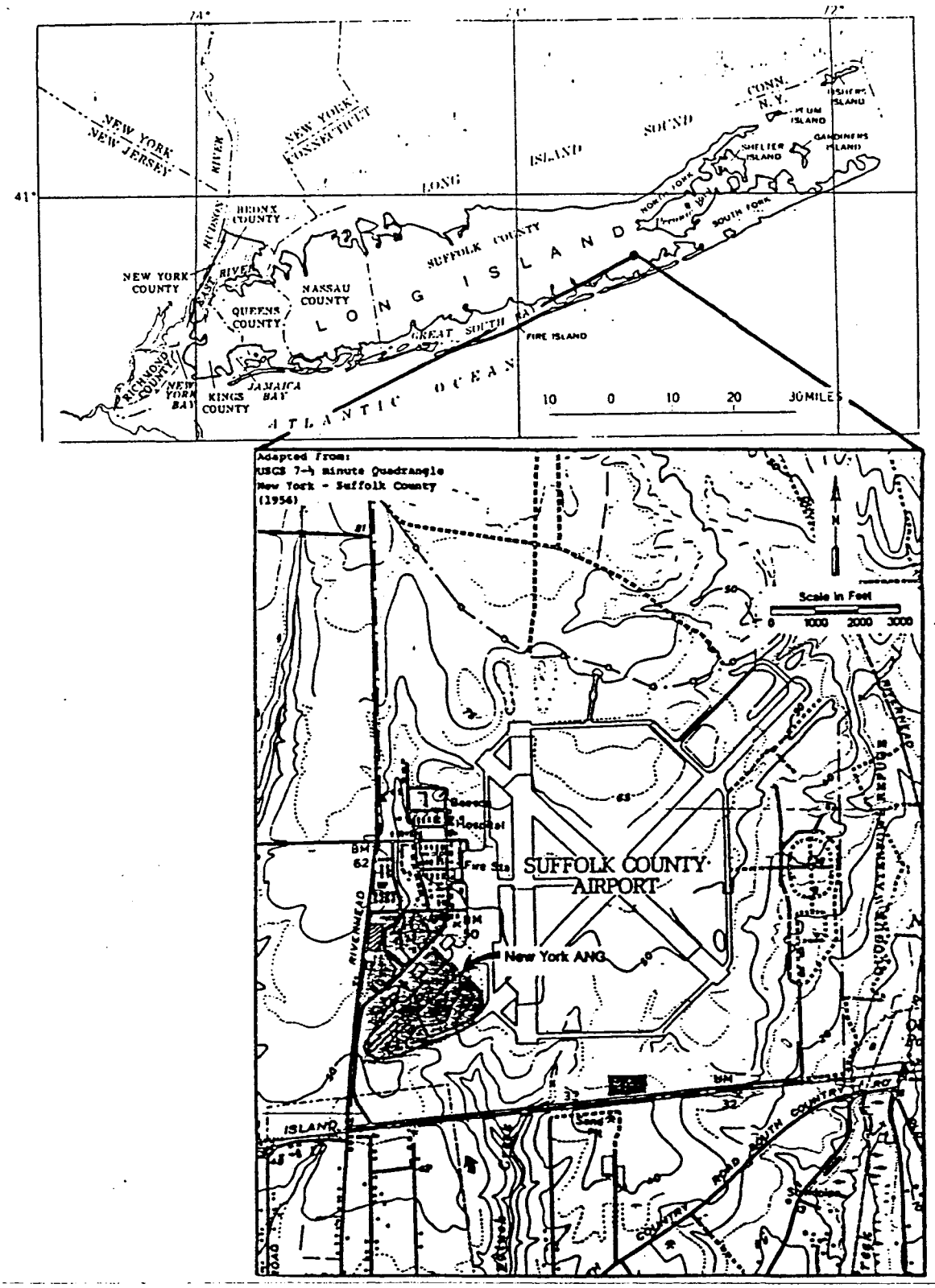


Figure 2.1 Location Map of the Suffolk County Airport

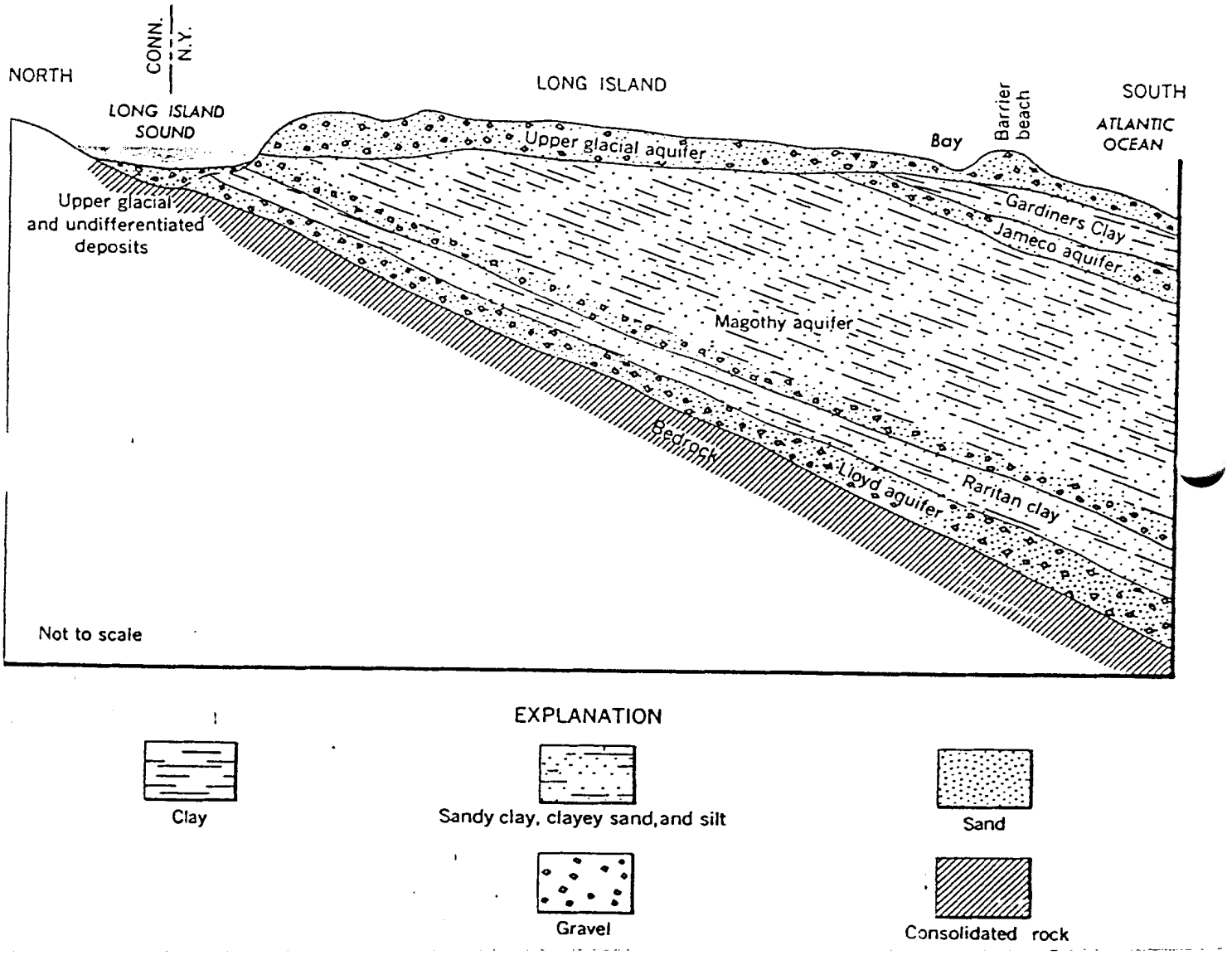


Figure 2.2 Geologic Features of the Ground-Water Reservoir
(Franke and McClymonds, 1972)

2.1.1.3 Previous Work

In October, 1985, the Suffolk County Department of Health Services (SCDHS) performed a Petro-Tite test on a 2,000 gallon county-owned gasoline tank on the west side of the airport. The tank failed the test and was subsequently removed the following month. Gasoline-contaminated soil was removed, and a groundwater monitoring program was initiated. A second 2,500 gallon gasoline tank at the same site was reportedly removed, and a third tank was abandoned and filled with sand.

Significant amounts of floating product (from two to eight inches thick) appeared in the County Monitor Well No. 1 in February, 1986. Additional wells were installed, and by September, 1986, a total of 47 shallow monitoring wells had been installed to define the extent of the plume. A recovery system was installed by the SCDHS at the downgradient leading edge of the plume consisting of two 100 gpm drawdown wells, two recovery wells, an air stripper, and two recovery basins.

The SCDHS previously leased the County building to the west of P-39 in the plume area to a bus company, which used the building for a repair shop. The company stored diesel fuel and gasoline in two 550 gallon above-ground tanks. These tanks were removed. An underground storage tank north of the building was connected to a floor drain in the building. The floor drain was ordered sealed by the SCDHS in 1985. The tank was inspected in September, 1986, and was reported dry and out of use. A tank to the south of the bus company building was used for fuel oil but does not appear to have been tested.

2.1.1.4 Present Condition

On February 25 and 26, 1988, personnel from UNC conducted a review of existing records held by Suffolk County and the New York Air National Guard and toured the area containing the alleged JP-4 plume. The presence of floating product was confirmed by UNC with an interface probe in several monitoring wells. The product was visually observed when SCDHS personnel lowered a bailer down one of the wells within the reported plume and retrieved about four inches of clear, amber petroleum product.

The plume area, as shown on previous USAF utility maps, contained several fuel tanks, cesspools, and septic tanks. Other buried utilities may be present but not shown on the existing maps (dated 1962). No detailed USAF records were available that would describe previous practices in the plume area.

At the time of the UNC visit, the county was operating their recovery system, but no product had been recovered to date. Monitoring of the plume is currently being performed by the County on a weekly basis using an interface probe to determine

water level and thickness of product. Monthly plotting of data indicates that the lateral extent plume varies from month to month but rarely exceeds the downgradient extent of the existing monitoring system and, therefore, does not extend to the installed recovery wells.

Access to the plume area is not restricted, and the monitor wells are not protected by locking caps. Remaining tanks are also easily accessible. No action appears to have been taken to preclude further introduction of product in the plume area.

2.1.2 Technical Approach

2.1.2.1 Existing Analytical Data

Data for three samples of product taken from the plume by SCDHS were summarized in a laboratory report from the U.S. Coast Guard Central Oil Identification Laboratory. The data from the plume samples were compared with data from samples of JP-4, Jet-A, and gasoline; and the Coast Guard concluded the samples most closely resembled JP-4, but exhibited little or no weathering. This implies a recent contaminant release.

The UNC/GJPO Chemistry Laboratory will review the U.S. Coast Guard data, obtain other information on the characteristics of JP-4 from the USAF, and use this information for evaluating the analytical parameters to be used for UNC-directed sampling.

2.1.2.2 Monitor Well Data

Weekly monitoring data for 54 groundwater monitoring wells were received from the SCHDS covering the time period of September, 1986, through January, 1988. This data included depth to product, depth to water, and the calculated thickness of product. Also obtained were drilling logs of wells 27 through 47 showing total depth of the well, depth of screen, and height of casing above the ground. Drilling logs for the first 26 wells could not be located by SCDHS personnel.

These data will be entered into a data base on a Zenith Z-150 microcomputer. Once the data base is established, various plots and graphs will be generated to aid in the interpretation of the cause and significance of seasonal variations in the extent of the plume and how these variations relate to the local groundwater system. The data base will also be used to help evaluate the present monitoring system and possibly to provide information to explain the lack of success with the present recovery system. The data will also be used to identify wells to be sampled to insure obtaining product samples.

2.1.2.3 Review of Utility Maps

Utility maps were obtained from the Air National Guard which outline the utilities of the area as they existed in 1962. Any

changes made after 1962 could not be determined from the available information.

The utility maps will be reviewed in detail to identify potential sources of the current JP-4 (?) plume which might have resulted from USAF activities. Based on this review, specific areas will be selected for further study which may include locating, accessing, and testing of buried tanks, supply lines, septic tanks, or any other potential source areas of petroleum contaminants.

2.1.3 Obtaining Additional Data

2.1.3.1 Collection of Suspected JP-4 from Existing Wells

To evaluate the contaminant(s) within the plume, samples of floating product will be collected from monitor wells representing the upgradient, central, and downgradient portions of the plume to evaluate the homogeneity of the product, as well as to provide positive identification of the contaminant(s). Well selection will be based on historical well monitoring data and on-site observations with an interface probe at the time of sampling. Sufficient volumes of product will be collected to allow sample splits to be provided to alternate laboratories as an independent check against UNC laboratory analytical results.

After verification with the interface probe and prior to obtaining a product sample, a portable GC instrument will be used at the well head to determine organic vapors present. This measurement will be repeated one hour after obtaining the sample and again 24 hours later.

Select wells within the plume will be sampled for product first and prior to sampling other wells. These wells will be sampled again after one hour, 24 hours, and finally as the last samples to be obtained at the culmination of the sampling effort. Portable GC instrument readings will be obtained prior to each sample. Determination of these wells will be made on-site the day sampling commences.

2.1.3.2 Collection of Known Petroleum Products

As previously described, the SCDHS has, in the plume area, a gasoline tank used for fueling of County-owned vehicles. In addition to this tank is a tank south of the building described as the bus company building reported to contain fuel oil. Tanks containing JP-4 and Jet-A fuel also reportedly exist in other portions of the Suffolk County Airport.

Representative samples of the various known petroleum products present at the Suffolk County Airport will be obtained for comparison purposes with the floating product within the existing plume. Following separate analysis of each petroleum product, the laboratory may be requested to combine samples

extracted from tanks in the plume area to determine the results of possible contaminant mixing. These results will also be compared with results of samples from within the plume.

2.1.3.3 Collection of Product of Unknown Composition

In the event that other tanks or potential source areas are delineated (i.e., septic tanks, cesspools, pipelines), representative samples will be collected, if possible, to determine if petroleum products are present and, if present, what type.

2.1.3.4 Volatile Organic Vapor Monitoring

With the use of a portable photo ionization detector, the plume area will be surveyed to detect organic vapors related to the plume contaminant(s). This surveying is accomplished by checking vent pipes, man-hole covers, storm drains, or other confined spaces or depressions for elevated levels of vapor phase organics. This simple screening technique can be used to help evaluate the potential source area for contaminants and may also be used to delineate the areal extent of contaminants associated with the existing plume.

This data will be correlated with the organic vapor data obtained in 3.2.1.

2.1.4 Sampling Procedures

2.1.4.1 Product Sampling

A Standard Teflon bottom-loading bailer will be used to retrieve petroleum product from monitor wells and tanks. Any water obtained with the sample will be drained from the bailer. The product will be emptied into a pre-cleaned amber glass vial (minimum of 40 ml). The bottle(s) will be filled with no head space and will be stored on ice. For wells in which the amount of product is small, this procedure may be repeated several times to obtain the required volume of product. This procedure meets ASTM methods and is recognized industry-wide.

2.1.4.2 Water Sampling

The monitor well will be evacuated by bailing at least three bore volumes to ensure that fresh formation water is in the well. Using a bottom-loading bailer, the bailer will be lowered into the screened portion of the well, and a sample will be extracted. Physical parameters such as Ph and conductivity will be performed at the time of sampling.

Depending on the type of analysis to be performed, filtering and addition of preservatives may be required. These will also be performed at the time of sampling. All water sampling will be

performed in accord with EPA methods (Practical Guide for Groundwater Sampling, EPA 600/2-85/104).

2.1.4.3 Soil Gas Sampling

2.1.4.3.1 Introduction

Two procedures are being recommended to accomplish the soil gas sampling at the Suffolk County Airfield. The choice of procedure will depend upon whether the location is paved or unpaved. The sampling results will be treated as separate populations from the standpoint of data analysis. In both cases, a grid will be established and serve to define the sample-location points.

2.1.4.3.2 Paved-Area Procedures

The first type of measurement discussed herein is based upon radon gas sampling procedures developed at the GJPO (Karp, 1988). This procedure will be employed in all paved areas. First, a hole will be drilled through the asphalt pavement at a survey grid location. A heavy-duty stainless steel tube containing a solid stainless steel rod will be driven into the soil to a depth of about four feet. The solid inner rod will then be removed from the tube, and the tube itself will then be raised by about six inches above the bottom of the hole. The soil gas will then be pumped from the soil through the tube using a TIP 1 (Photovac, Inc.) photoionization detector. The TIP not only draws the soil gas through the sampling tube, but it also analyzes the soil gas using a photoionization technique. The gases and vapors in the air stream which have ionization energies below that generated by the lamp, are ionized. The electric current due to the ion formation and collection is amplified and can be used to express the total ionizable particles present. This technique is, therefore, nonspecific with respect to the vapor species; instead, it counts the total number of all vapor particles whose ionizing energies are lower than those of the instrument.

This technique will be used to estimate the soil gas concentration due to the presence of compounds floating on the water table. Analyses will be performed by plotting the cumulative frequency distribution of total concentration for each sampling location. The break in slope of the plot will be used to define the threshold concentration of soil gas. All values exceeding the threshold concentration will be used to define the approximate shape of the plume.

2.1.4.3.3 Unpaved-Area Procedures

In unpaved areas, a variation of the technique given in an Environmental Protection Agency report (EPA/600/8-86/008) will be used. This technique employs a vapor flux chamber that is inserted into the ground to a depth of about 2 to 3 cm. The chamber is equipped with a sampling port and a return-air port. The TIP photoionization detector will be used to sample the gas which accumulates in the vapor-flux chamber, and the vent in the instrument will return the vapor to the vapor-flux chamber.

The TIP will be calibrated to convert millivolts to approximate concentrations of organic compounds. The calibration will be performed over the lowest concentration ranges possible to ensure that the low flux rates expected at the site are detectable. A reading of photoionization energy (millivolts) will be taken every 15 seconds for a period of about five minutes. The readings will then be converted to approximate concentrations, and plots of the instantaneous flux will be constructed. Peak values of instantaneous flux will be compared between all of the grid points, and will be used to plot the shape of the free-product plume.

2.1.4.3.4 Quantification

Relative flux and relative concentrations obtained using the photoionization detector will be quantified by collecting additional samples with the combined use of a vacuum pump and graphitized-carbon adsorbent tubes. The tubes would be used to hold the samples until they can be thermally desorbed and analyzed on the GC/MS. The analysis will yield concentrations of the compounds present in the soil gas. The distribution of peaks obtained on the GC/MS will facilitate characterization and identification of the source. These data will be collected in background areas and in areas suspected to be contaminated as per the TIP sampling procedures.

2.1.4.3.5 Limitations

The possible limitations of these techniques are that the depth to the free product may be too great for the vapors to diffuse to the surface in high enough concentrations to be detected by the TIP. A more sensitive instrument, such as a portable gas chromatograph, may be necessary in this case. At this time, the proposed testing procedures are in a developmental stage; they have been utilized at other

hazardous waste sites, however, and the results are encouraging.

2.1.4.4 Sample Shipping

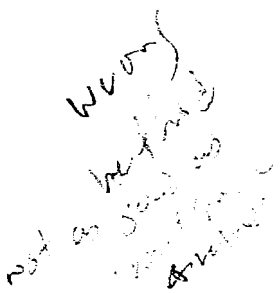
Samples will be packed in coolers with Blue Ice™ or equivalent at the time of collection. Shipments of samples will comply with Department of Transportation Hazardous Materials Regulations and will be made by overnight type services. Storage of samples will comply with EPA protocols for temperature and time, and chain of custody documents will be completed.

2.1.4.5 Decontamination

Following sample collection and preservation, equipment will be decontaminated by washing, rinsing with deionized or distilled water, the outside portions wiped with clean paper towels, and a final rinse with methanol or equivalent solvent.

2.1.5 Analytical Design

2.1.5.1 Analysis of Suspected JP-4 Samples



To verify whether the product within the plume is JP-4, the samples will be analyzed by high-resolution gas chromatography with flame ionization detection or mass spectrometry utilizing UNC/DOE approved procedures which are equivalent to ASTM methods (Annual Book of ASTM Standards, Section 11) and USGS methods (Methods for the Determination of Organic Substances in Water and Fluvial Sediments). The resulting chromatograms will be evaluated based on alkane content and their aromatic profiles to identify the type of contamination present.

2.1.5.2 Comparison with Known Petroleum Products

Several known petroleum products will be analyzed using the same methods described above. The resulting chromatograms will be compared with the suspected JP-4 samples to determine if the product from the plume matches known petroleum products present in the Suffolk County Airport area.

2.1.5.3 Comparison with Product of Unknown Composition

Samples of product derived from tanks no longer in use, tanks having received mixed waste (i.e., floor drain from bus company building), or other buried objects containing petroleum products will be analyzed using the previously described methods. Results will be compared with both known petroleum products and with the plume contaminant(s) to assist in determining a probable source of these contaminant(s).

2.1.5.4 Trace Element Determination

To determine if specific trace elements are present to aid in the identification of the product and its source, selected product samples may be analyzed using an ICP Mass Spectrometer for selected trace elements, such as trace metals (i.e., Fe, Mn, Pb, Cd, Cr) which may help identify the source of the contaminant(s). ICP/MS measurements will be done using UNC/DOE methods which are equivalent to EPA methods (method 6020, Inductively Coupled Mass Spectrometry).

An upgradient and a downgradient groundwater sample below the floating product may be collected and analyzed by ICP Mass Spectrometer for major cations and anions and trace elements to determine if there is any effect on the groundwater from the overlying product plume. Field measurements of Ph, alkalinity and conductivity would also be made for the groundwater samples.

2.1.5.5 Ignitability Test

A standard EPA Ignitability test (SW846) will be performed on selected petroleum products due to the different ignitabilities of JP-4 vs. Jet-A or other fuels. This test may provide additional supportive data to the JP-4 identification.

2.1.6 Data Interpretation

As indicated previously, the work described throughout this plan may be performed using a phased approach. Initial data interpretation will be confined to the evaluation and validation of JP-4 contamination through the collection, analysis, and data interpretation resulting in identification of petroleum product samples from the plume and surrounding areas.

2.1.7 Quality Assurance/Quality Control

All work will be performed in accordance with existing approved procedures and with properly trained and qualified personnel. The following documents contain the procedures to be used in support of this project:

- Statistical Evaluation of the Quality of Data
- Administrative Plan and Quality Control Methods for Analytical Laboratories.
- Handbook of Analytical and Sample Preparation Methods
- UNC Quality Assurance Manual
- DOE Environmental Survey Manual
- Environmental Sciences Procedures Manual

As a quality control check against the UNC laboratory, sample splits will be collected from the various petroleum products by the sampling team, and one of these splits will be sent to another laboratory. One of the two split samples will be provided to the SCHDS.

Internal quality control checks consisting of running of known standards, blanks, and replicates will also be performed as part of the normal operating procedures established for the laboratory. Chain-of-custody will be in place for collected samples from time of collection to analysis by the laboratory. These chain-of-custody procedures will also apply to laboratories used outside of the UNC laboratory.

The UNC Quality Assurance office will perform internal checks and review of work performed to ensure compliance with established procedures and assure quality data is being collected by qualified personnel. This effort will be documented in the report to HQ USAF/LEEV.

2.1.8 Health and Safety

The UNC ES&H office shall designate a member of its staff as the designated Site Safety Officer. The Site Safety Officer is directly responsible to the Project Team Leader and to the UNC Health and Safety office for assuring that all work will be performed in accordance with existing approved UNC Geotech procedures and with properly trained and qualified personnel.

Documentation of this training shall be kept in the UNC Health and Safety Department. Instrument operation, respirator fit tests, and updated physical scans are examples of the documentation required.

The project team leader shall maintain and distribute to the UNC ES&H Department copies of documentation of accident records, environmental monitoring, weekly health and safety meetings, and documentation that all on-site personnel have read and are familiar with this Sampling and Analysis Plan. The following documents contain the procedures to be used in support of this project:

The Environmental, Safety, and Health Policy and Procedures Manuals
The Environmental, Safety, and Health Level III Desk Top Manual
EPA's Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities
29 CFR 1910.1000 Subpart 2 - Toxic and Hazardous Substances

Sampling personnel will be provided with the locations of a first aid kit, fire extinguisher, emergency eye wash, emergency showers, emergency medical information (Material Safety Data Sheets) for substances present, a list of emergency phone numbers, and a map showing the location of the nearest emergency medical facilities. At least one sampling team member will have current first aid and CPR training.

All sampling personnel shall be knowledgeable of the state and local Contingency Plans for safe and effective response to emergencies.

Hazardous waste sites pose a multitude of health and safety risks. Risks from the following areas shall be considered while on the site:

1. Chemical exposure
2. Fire and explosion
3. Oxygen deficiency

4. Ionizing radiation
5. Biologic hazards
6. Physical safety hazards
7. Electrical hazards
8. Heat stress
9. Cold exposure
10. Noise

Based on historical information and the initial UNC visit to the site, the following petroleum products appear to be the main chemicals on the site: JP-4 (kerosene) fuel oil, diesel, and gasoline. These are class II combustible liquids per NFPA Code No. 30-1984 and should be handled and stored as such.

These products are incompatible with oxidizing materials, heat, spark, flame, and build-up of static electricity.

Level D protection shall be used with additional protective clothing consisting of steel-toe boots, safety glasses, and rubber gloves when handling samples, contaminated equipment and during equipment decontamination. Goggles shall be worn when the exposure to sprays and mists exists. The Material Safety Data Sheets shall be consulted for more information regarding exposure to these products.

Do not enter enclosed or confined spaces without proper protective equipment, including respiratory protection.

Excess sample material, solvent waste, contaminated gloves, PPE, or towels, etc., will be properly labeled and disposed of following sampling activities.

No smoking, eating, or chewing will be allowed within contaminated areas.

A portable Organic Vapor Monitor (either a P.I.D. or an F.I.D.) will be used to check for the presence of organic vapors in the breathing zone in work areas. PELs and TLVs are not given for the above-mentioned petroleum products, and the potential for exposure to other unknown chemicals exists. The following EPA recommended Action Levels shall be enforced:

Dial Reading	Level of Protection
Background to 5 ppm above background	C
5-500 ppm above background	B
500-1000 ppm above background	A

The UNC ES&H Department shall be notified when protection level is upgraded to Level B.

Any revisions to this Health and Safety Plan shall be initiated and reviewed by the UNC Environmental Safety and Health Department.

2.2 FIELD SAMPLING REPORT

2.2.1 Scope of Effort

Field sampling activities at the suspected JP-4 Plume Area at the Suffolk County Airport, Suffolk County, New York, were conducted from July 26 through 28, 1988. The initial tasks completed included measurements to update well information (total depth, distance from ground level to top of casing, depth to product, depth to water), and measurements to determine organic vapor concentrations in the borehole. Based on these initial measurements, select wells were identified for sampling. Wells were selected to obtain samples of floating product from different portions of the overall plume area.

Approximately 30 samples were collected from the Suffolk County project area. Five of the samples collected were from tanks and trucks in the area that contained known product (unleaded gasoline, AVGAS, Jet-A, JP-4, and diesel fuel. The remaining samples were collected from the plume and from unknown product in a reportedly empty tank. For two wells containing over six inches of measured product, samples were collected one hour and 24 hours after the initial sample collection. The 24-hour samples were co-sampled by the Suffolk County Health Department. Eight duplicate samples were sent to an alternate laboratory as a quality control check.

In addition to the product sampling effort, a soil gas survey was conducted over various portions of the plume area to better define the plume boundaries and to aid in the interpretation of the potential source area for the product forming the plume.

Utilizing the interface probe and HNU photoionization detector, other potential source areas for contaminants were investigated. This included old septic tanks, cesspools, and one abandoned tank. No product was detected in these areas and, therefore, no additional work was performed. The field activities were logged and presented in Appendix A: Sample Log Book.

2.2.2 Monitor Well Information

Copies of original monitor well completion information had previously been obtained from the Suffolk County Health Department (SCHD). This information, however, was incomplete and, in some cases, inaccurate since the well screen and casing had been raised and cut after initial completion. To complete a data base to be used to evaluate the plume area, several measurements were required to allow the normalization of the data according to true depth to water and product. The interface probe was lowered to the bottom of the well, and the total depth was recorded. This measurement, as well as depth to water and depth to product, was made from the measuring point used by the SCHD at the top of the casing. Using a tape measure, the amount of casing stick-up above ground surface was also measured. Elevations of the measuring points were also obtained for several monitoring wells from the SCHD.

Also to determine which wells would provide the best information on the nature of the product within the plume, all wells were scanned with a photoionization detector and were tested for floating product with an interface probe. All of the information derived from these initial measurements are presented in Table 2-1, and well locations are shown in Figure 2-3.

Martin
FYI
Please return

COUNTY OF SUFFOLK

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

CLARE B. BRADLEY, M.D., M.P.H.
COMMISSIONER

14Feb01

Mr. Paul John
Regional Spills Engineer
New York State Department of
Environmental Conservation
Building 40 - State University of New York
Stony Brook, NY 11794

Dear Mr. John:

The fuel spill data for the month of January 2001 is enclosed for your records.

The water levels at Firematics Training Center in Yaphank (Site #83-1283) remained unchanged this month. Recoverable amounts of product were found in 3 wells and we are currently monitoring the site on a bi-monthly schedule.

Water levels at the Baumann Bus site at Westhampton County Airport (Site #85-2503) dropped 0.5 feet. Recoverable amounts of product were found in wells #5, 6, 8, 9 and 27 while a film of product was found in one other well.

The Tank Farm at Westhampton County Airport (Site #85-2966) had no wells with any floating product. Water levels at this site remained unchanged.

Enclosed please find our field data sheets and recovery records.

If you have any questions, please contact me at (631) 853-2253.

Sincerely,

Edward W. Olson
Senior P. H. Sanitarian
Bureau of Groundwater Resources

Enclosures

DIVISION OF ENVIRONMENTAL QUALITY
OFFICE OF WATER RESOURCES
220 RABRO DRIVE EAST, HAUPPAUGE, N.Y. 11788
TEL. (631) 853-2251
FAX (631) 853-2307

VOLUMES RECOVERED BY BAILING

SITE #85-2503	COUNTY AIRPORT, WESTHAMPTON	FOR THE MONTH OF: **Jan 2001**

WELL NUMBER	DATE: 5Jan		DATE: 18Jan		DATE:	
	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED
5	0.99	0.16	0.89	0.15		
6	0.87	0.14	0.89	0.15		
8	0.11	0.02	0.23	0.04		
9	0.02	-	0.77	0.13		
10						
11						
15						
16						
17						
26						
27	0.35	.02	.87	0.14		
28			-	-		
44						
TOTAL		0.34		0.61		

TOTAL VOLUME RECOVERED = 1 gallon

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

Fair

#85-2503 County Airport, [Bmn.Bs] Westhampton Date: 5/APR01

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			34.76
3 ✓			34.63
5 ✓	.94	34.26	35.20
6 ✓	.87	34.32	35.19
7 ✓			DRY
8 ✓	.11	34.04	34.15
9 ✓	.02	33.58	33.60
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			33.96
18			
26 ✓		PULLED	
27 ✓	.35	34.43	34.78
28 ✓			35.~~00~~
29			
30 ✓			31.64
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			36.19
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

12 — 14

14.27

14.93

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

Thurs

Si : #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 18 Jan 01

WELL#	prod. in ft.	depth to product	depth to grdwater	
1 ✓		DESTROYED		
2 ✓			34.81	
3 ✓			34.70	
5 ✓	.89	34.33	35.22	49.47
6 ✓	.89	34.38	35.27	
7 ✓			DRY	
8 ✓	.23	34.09	34.32	
9 ✓	.77	33.53	34.30	48.53
10 ✓		DESTROYED		
11 ✓		DESTROYED		
15 ✓		BROKED		
16 ✓		BROKED		
17 ✓			34.01	
18				
26 ✓		PLUGGED		
27 ✓	.87	34.39	35.26	
28 ✓	~~.00~~	35.05	35.05	
29				
30 ✓			31.71	
40				
41				
42 ✓		BURIED		
43 ✓		BURIED		
44 ✓			36.25	
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55 ✓		GONE		

12 - 5

All numbers reported as: feet-inches-1/8inches

Martin,
FYI
Please return
Ed

COUNTY OF SUFFOLK

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

CLARE B. BRADLEY, M.D., M.P.H.
COMMISSIONER

1Mar01

Mr. Paul John
Regional Spills Engineer
New York State Department of
Environmental Conservation
Building 40 - State University of New York
Stony Brook, NY 11794

Dear Mr. John:

The fuel spill data for the month of February 2001 is enclosed for your records.

The water levels at Firematics Training Center in Yaphank (Site #83-1283) rose 0.3 feet this month. A recoverable amount of product was found in 1 well and a non-recoverable amount was found in one other well. We are currently monitoring the site on a monthly schedule.

Water levels at the Baumann Bus site at Westhampton County Airport (Site #85-2503) remained unchanged. Recoverable amounts of product were found in five wells, while a film of product was found in one other well.

The Tank Farm at Westhampton County Airport (Site #85-2966) had no wells with any floating product. Water levels at this site rose 0.3 feet.

Enclosed please find our field data sheets and recovery records.

If you have any questions, please contact me at (631) 853-2253.

Sincerely,

Edward W. Olson
Senior P. H. Sanitarian
Bureau of Groundwater Resources

Enclosures

DIVISION OF ENVIRONMENTAL QUALITY
OFFICE OF WATER RESOURCES
220 RABRO DRIVE EAST, HAUPPAUGE, N.Y. 11788
TEL. (631) 853-2251
FAX (631) 853-2307

VOLUMES RECOVERED BY BAILING

SITE #85-2503	COUNTY AIRPORT, WESTHAMPTON	FOR THE MONTH OF: **Feb 2001**

WELL NUMBER	DATE: 7Feb		DATE: 22Feb		DATE:	
	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED
5	0.83	0.14	0.74	0.12		
6	0.86	0.14	0.87	0.14		
8	0.54	0.09	0.56	0.09		
9	0.72	0.12	0.69	0.11		
10						
11						
15						
16						
17						
26						
27	0.76	0.12	0.75	0.12		
28	0.01	-	0.01	-		
44						
TOTAL		0.61		0.58		

TOTAL VOLUME RECOVERED = 1.2 gallons

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES

MONITORING WELL REPORT

Wed

#85-2503 County Airport, [Bmn.Bs] Westhampton Date: 7/28/01

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			34.85
3 ✓			34.69
5 ✓	.83	34.34	55.17
6 ✓	.26	34.38	35.24
7 ✓			DRY
8 ✓	.54	34.05	34.59
9 ✓	.72	33.54	34.26
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			34.02
18			
26 ✓		PLUGGED	
27 ✓	.76	34.41	35.17
28 ✓	.01	35.04	35.05
29			
30 ✓			31.70
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			36.22
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

14.30 (2 - 5)

14.27

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

THURS

e: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 22FEB01

WELL#	prod. in ft.	depth to product	depth to grdwater	
1 ✓		DESTROYED		
2 ✓			34.87	
3 ✓			34.74	
5 ✓	.74	34.48	35.22	49.47
6 ✓	.87	34.42	35.29	
7 ✓			DRY	
8 ✓	.56	34.08	34.64	
9 ✓	.69	33.59	34.28	48.53
10 ✓		DESTROYED		
11 ✓		DESTROYED		
15 ✓		BROKEN		
16 ✓		BROKEN		
17 ✓			34.05	
18				
26 ✓		PLUGGED		
27 ✓	.75	34.45	35.20	
28 ✓	.01	35.08	35.09	
29				
30 ✓			31.74	
40				
41				
42 ✓		BURIED		
43 ✓		BURIED		
44 ✓			36.27	
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55 ✓		GONE		

12-5

All numbers reported as: feet-inches-1/8inches

COUNTY OF SUFFOLK

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

CLARE B. BRADLEY, M.D., M.P.H.
COMMISSIONER

9Apr01

Mr. Paul John
Regional Spills Engineer
New York State Department of
Environmental Conservation
Building 40 - State University of New York
Stony Brook, NY 11794

Dear Mr. John:

The fuel spill data for the month of March 2001 is enclosed for your records.

The water levels at Firematics Training Center in Yaphank (Site #83-1283) rose 0.9 feet this month. A recoverable amount of product was found in one well. We are currently monitoring the site on a monthly schedule.

Water levels at the Baumann Bus site at Westhampton County Airport (Site #85-2503) rose 0.7 feet. Recoverable amounts of product were found in three wells early in the month. No product was found later in the month.

The Tank Farm at Westhampton County Airport (Site #85-2966) had no wells with any floating product. Water levels at this site rose 1.0 foot.

Enclosed please find our field data sheets and recovery records.

If you have any questions, please contact me at (631) 853-2253.

Sincerely,

Edward W. Olson
Senior P. H. Sanitarian
Bureau of Groundwater Resources

Enclosures

DIVISION OF ENVIRONMENTAL QUALITY
OFFICE OF WATER RESOURCES

220 RABRO DRIVE EAST, HAUPPAUGE, N.Y. 11788

TEL. (631) 853-2251
FAX (631) 853-2307

VOLUMES RECOVERED BY BAILING

SITE #85-2503	COUNTY AIRPORT, WESTHAMPTON	FOR THE MONTH OF: **Mar 2001**

WELL NUMBER	DATE: 15Mar		DATE:		DATE:	
	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED
5	0.16	0.03				
6	0.09	0.01				
8	0.12	0.02				
9						
10						
11						
15						
16						
17						
26						
27						
28						
44						
TOTAL		0.06		0		

TOTAL VOLUME RECOVERED = 0.1 gallons

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

Site: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: THURS 15MAR01

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			34.53
3 ✓			34.40
5 ✓	.16	34.14	34.30
6 ✓	.09	34.20	34.29
7 ✓			DRY
8 ✓	.12	33.79	33.91
9 ✓			33.34
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKEN	
16 ✓		BROKEN	
17 ✓			33.70
18			
26 ✓		PLUGGED	
27 ✓			34.21
28 ✓			34.74
29			
30 ✓			31.40
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			35.93
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

15.17

15.19

12 - 3

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES

MONITORING WELL REPORT

TUES

e: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: JAN 01

WELL#	prod. in ft.	depth to product	depth to grdwater	
1 ✓		DESTROYED		
2 ✓			34.19	
3 ✓			34.05	
5 ✓			33.84	49.49
6 ✓			33.87	
7 ✓			DRY	
8 ✓			33.47	
9 ✓			33.01	48.53
10 ✓		DESTROYED		
11 ✓		DESTROYED		
15 ✓		BROKED		
16 ✓		BROKED		
17 ✓			33.37	
18				
26 ✓		PLUGGED		
27 ✓			33.87	
28 ✓			34.39	
29				
30 ✓			31.05	
40				
41				
42 ✓		BURIED		
43 ✓		BURIED		
44 ✓			35.55	
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55 ✓		GONE		

12

All numbers reported as: feet-inches-1/8inches

FYI
Please return.

COUNTY OF SUFFOLK

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

CLARE B. BRADLEY, M.D., M.P.H.
COMMISSIONER

7May01

Mr. Paul John
Regional Spills Engineer
New York State Department of
Environmental Conservation
Building 40 - State University of New York
Stony Brook, NY 11794

Dear Mr. John:

The fuel spill data for the month of April 2001 is enclosed for your records.

The water levels at Firematics Training Center in Yaphank (Site #83-1283) rose 1.9 feet this month. A recoverable amount of product was found in one well. We are currently monitoring the site on a monthly schedule.

Water levels at the Baumann Bus site at Westhampton County Airport (Site #85-2503) rose 1.8 feet. No product was found in any of the wells.

The Tank Farm at Westhampton County Airport (Site #85-2966) had no wells with any floating product. Water levels at this site rose 1.9 foot.

Enclosed please find our field data sheets and recovery records.

If you have any questions, please contact me at (631) 853-2253.

Sincerely,

Edward W. Olson
Senior P. H. Sanitarian
Bureau of Groundwater Resources

Enclosures

DIVISION OF ENVIRONMENTAL QUALITY
OFFICE OF WATER RESOURCES
220 RABRO DRIVE EAST, HAUPPAUGE, N.Y. 11788
TEL. (631) 853-2251
FAX (631) 853-2307

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES

MONITORING WELL REPORT

Tues

#85-2503 County Airport, [Bmn.Bs] Westhampton Date: 10APR01

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			33.28
3 ✓			33.08
5 ✓			32.89
6 ✓			32.90
7 ✓			DRY
8 ✓			32.52
9 ✓			32.04
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKEN	
16 ✓		BROKEN	
17 ✓			32.39
18			
26 ✓		PLUGGED	
27 ✓			32.89
28 ✓			33.14
29			
30 ✓			30.08
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			34.56
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

16.58(2) — 0

16.49

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

TUES
#85-2503 County Airport, [Bmn.Bs] Westhampton Date: 14APR0

WELL#	prod. in ft.	depth to product	depth to grdwater	
1 ✓		DESTROYED		
2 ✓			32.42	
3 ✓			32.28	
5 ✓			32.06	49.47
6 ✓			32.09	
7 ✓			DRY	
8 ✓			31.69	
9 ✓			31.24	48.53
10 ✓		DESTROYED		
11 ✓		DESTROYED		
15 ✓		BROKED		
16 ✓		BROKED		
17 ✓			31.59	
18				
26 ✓		PULLED		
27 ✓			32.10	
28 ✓			32.61	
29				
30 ✓			29.30	
40				
41				
42 ✓		BURIED		
43 ✓		BURIED		
44 ✓			33.78	
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55 ✓		GONE		

All numbers reported as: feet-inches-1/8inches

COUNTY OF SUFFOLK

FYI
Please return
BD

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

CLARE B. BRADLEY, M.D., M.P.H.
COMMISSIONER

1Jun01

Mr. Paul John
Regional Spills Engineer
New York State Department of
Environmental Conservation
Building 40 - State University of New York
Stony Brook, NY 11794

Dear Mr. John:

The fuel spill data for the month of May 2001 is enclosed for your records.

The water levels at Firematics Training Center in Yaphank (Site #83-1283) dropped 0.4 feet this month. A recoverable amount of product was found in one well. We are currently monitoring the site on a monthly schedule.

Water levels at the Baumann Bus site at Westhampton County Airport (Site #85-2503) rose 0.6 feet. A small amount of product was found in one of the wells.

The Tank Farm at Westhampton County Airport (Site #85-2966) had no wells with floating product. Water levels at this site dropped 0.1-0.4 feet.

Enclosed please find our field data sheets and recovery records.

If you have any questions, please contact me at (631) 853-2253.

Sincerely,

Edward W. Olson
Senior P. H. Sanitarian
Bureau of Groundwater Resources

Enclosures

DIVISION OF ENVIRONMENTAL QUALITY
OFFICE OF WATER RESOURCES

220 RABRO DRIVE EAST, HAUPPAUGE, N.Y. 11788

TEL. (631) 853-2251
FAX (631) 853-2307

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

ce: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: TUES 8MAY01

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			32.08
3 ✓			31.95
5 ✓			31.73
6 ✓			31.76
7 ✓			DRY
8 ✓			31.38
9 ✓	.01	30.91	30.92
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKEN	
16 ✓		BROKEN	
17 ✓			31.27
18			
26 ✓		PLUGGED	
27 ✓			31.76
28 ✓			32.30
29			
30 ✓			28.97
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			33.47
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

17.74

17.61

12-0

All numbers reported as: feet-inches-1/8inches

FOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

TUES 29MAY01 8/2

-2503 County Airport, [Bmn.Bs] Westhampton Date:

WELL#	prod. in ft.	depth to product	depth to grdwater	
1 ✓		DESTROYED		
2 ✓			31.84	
3 ✓			31.70	
5 ✓			31.48	49.47
6 ✓			31.51	
7 ✓			DRY	
8 ✓			31.13	
9 ✓	.03	30.65	30.68	48.53
10 ✓		DESTROYED		
11 ✓		DESTROYED		
15 ✓		BROKEN		
16 ✓		BROKEN		
17 ✓			31.02	
18				
26 ✓		PLUGGED		
27 ✓			31.52	
28 ✓			32.05	
29				
30 ✓			28.72	
40				
41				
42 ✓		BURIED		
43 ✓		BURIED		
44 ✓			33.25	
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55 ✓		GONE		

12 - 0

All numbers reported as: feet-inches-1/8inches

MT
FYI
Please return
EO

16Jul01

Mr. Paul John
Regional Spills Engineer
New York State Department of
Environmental Conservation
Building 40 - State University of New York
Stony Brook, NY 11794

Dear Mr. John:

The fuel spill data for the month of June 2001 is enclosed for your records.

The water levels at Firematics Training Center in Yaphank (Site #83-1283) dropped 0.3 feet this month. Product was found in one well, but not enough to recover. We are currently monitoring the site on a monthly schedule.

Water levels at the Baumann Bus site at Westhampton County Airport (Site #85-2503) dropped 0.1 feet. A small amount of product was found in one of the wells.

The Tank Farm at Westhampton County Airport (Site #85-2966) had no wells with floating product. Water levels at this site dropped 0.1 feet.

Enclosed please find our field data sheets.

If you have any questions, please contact me at (631) 853-2253.

Sincerely,

Edward W. Olson
Senior P. H. Sanitarian
Bureau of Groundwater Resources

Enclosures

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

Site: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: TUES 12 JUNE 01

12-01

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			31.90
3 ✓			31.77
5 ✓			31.55
6 ✓			31.58
7 ✓			DRY
8 ✓			31.21
9 ✓	.02	30.72	30.74
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKEN	
16 ✓		BROKEN	
17 ✓			31.10
18			
26 ✓		PLUGGED	
27 ✓			31.59
28 ✓			32.13
29			
30 ✓			28.80
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			33.33
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

17.92

17.79

All numbers reported as: feet-inches-1/8inches

MT
FYI
Please return
EO

COUNTY OF SUFFOLK

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

CLARE B. BRADLEY, M.D., M.P.H.
COMMISSIONER

13Aug01

Mr. Paul John
Regional Spills Engineer
New York State Department of
Environmental Conservation
Building 40 - State University of New York
Stony Brook, NY 11794

Dear Mr. John:

The fuel spill data for the month of July 2001 is enclosed for your records.

The water levels at Firematics Training Center in Yaphank (Site #83-1283) rose 0.2 feet this month. Product was found in one well, but not enough to recover. We are currently monitoring the site on a monthly schedule.

Water levels at the Baumann Bus site at Westhampton County Airport (Site #85-2503) rose 0.1 feet. A small amount of product was found in one of the wells.

The Tank Farm at Westhampton County Airport (Site #85-2966) had no wells with floating product. Water levels at this site rose 0.1 feet.

Enclosed please find our field data sheets.

If you have any questions, please contact me at (631) 853-2253.

Sincerely,

Edward W. Olson
Senior P. H. Sanitarian
Bureau of Groundwater Resources

Enclosures

DIVISION OF ENVIRONMENTAL QUALITY
OFFICE OF WATER RESOURCES
220 RABRO DRIVE EAST, HAUPPAUGE, N.Y. 11788
TEL. (631) 853-2251
FAX (631) 853-2307

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

Site: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: June 5 July 01

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			31.73
3 ✓			31.60
5 ✓			31.39
6 ✓			31.42
7 ✓			DRY
8 ✓			31.04
9 ✓	.06	30.14	30.20
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			30.93
18			
26 ✓		PULLED	
27 ✓			31.43
28 ✓			31.96
29			
30 ✓			28.63
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			33.15
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

18.08

17.93

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

Site: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 19 July 01

WELL#	prod. in ft.	depth to product	depth to grdwater	
1 ✓		DESTROYED		
2 ✓			31.78	
3 ✓			31.65	
5 ✓			31.44	49.49
6 ✓			31.47	
7 ✓			DRY	
8 ✓			31.84	
9 ✓	.07	30.59	30.66	48.53
10 ✓		DESTROYED		
11 ✓		DESTROYED		
15 ✓		BROKEN		
16 ✓		BROKEN		
17 ✓			30.92	
18				
26 ✓		PLUGGED		
27 ✓			31.48	
28 ✓			30.92	
29				
30 ✓			28.65	
40				
41				
42 ✓		BURIED		
43 ✓		BURIED		
44 ✓			33.20	
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55 ✓		GONE		

All numbers reported as: feet-inches-1/8inches

Martin
FYI
Please return
Ed

COUNTY OF SUFFOLK

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

CLARE B. BRADLEY, M.D., M.P.H.
COMMISSIONER

5Sep01

Mr. Paul John
Regional Spills Engineer
New York State Department of
Environmental Conservation
Building 40 - State University of New York
Stony Brook, NY 11794

Dear Mr. John:

The fuel spill data for the month of August 2001 is enclosed for your records.

The water levels at Firematics Training Center in Yaphank (Site #83-1283) dropped 0.7 feet this month. Product was found in one well, but not enough to recover. We are currently monitoring the site on a monthly schedule.

Water levels at the Baumann Bus site at Westhampton County Airport (Site #85-2503) dropped 0.1 feet. A recoverable amount of product was found in one of the wells during one monitoring event.

The Tank Farm at Westhampton County Airport (Site #85-2966) had no wells with floating product. Water levels at this site dropped 0.2 feet.

Enclosed please find our field data sheets and recovery results.

If you have any questions, please contact me at (631) 853-2253.

Sincerely,

Edward W. Olson
Senior P. H. Sanitarian
Bureau of Groundwater Resources

Enclosures

DIVISION OF ENVIRONMENTAL QUALITY
OFFICE OF WATER RESOURCES
220 RABRO DRIVE EAST, HAUPPAUGE, N.Y. 11788
TEL. (631) 853-2251
FAX (631) 853-2307

VOLUMES RECOVERED BY BAILING

SITE #85-2503	COUNTY AIRPORT, WESTHAMPTON	FOR THE MONTH OF: **Aug 2001**

WELL NUMBER	DATE: 1Aug		DATE:		DATE:	
	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED
5						
6						
8						
9	0.11	0.02				
10						
11						
15						
16						
17						
26						
27						
28						
44						
TOTAL		0.02		0		

TOTAL VOLUME RECOVERED = 0.02 gallons

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

WED

Site: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 1/4/00

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			31.88
3 ✓			31.76
5 ✓			31.54
6 ✓			31.57
7 ✓			DRY
8 ✓			31.19
9 ✓	0.11	30.70	30.81
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			31.09
18			
26 ✓		PLUGGED	
27 ✓			31.58
28 ✓			32.12
29			
30 ✓			28.80
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			33.32
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

17.93 12 - 1

17.72

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

TUES

Site: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 14AUG01

WELL#	prod. in ft.	depth to product	depth to grdwater	
1 ✓		DESTROYED		
2 ✓			31.82	
3 ✓			31.75	
5 ✓			31.52	49.47
6 ✓			31.54	
7 ✓			DRY	
8 ✓			31.19	
9 ✓	.05	30.70	30.75	48.53
10 ✓		DESTROYED		
11 ✓		DESTROYED		
15 ✓		BROKEN		
16 ✓		BROKEN		
17 ✓			31.07	
18				
26 ✓		PULLED		
27 ✓			31.54	
28 ✓			32.12	
29				
30 ✓			28.78	
40				
41				
42 ✓		BURIED		
43 ✓		BURIED		
44 ✓			33.31	
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55 ✓		GONE		

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

Site: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: TUES 28 AUG 01

12-0

WELL#	prod. in ft.	depth to product	depth to grdwater	
1 ✓		DESTROYED		
2 ✓			31.83	
3 ✓			31.70	
5 ✓			31.48	49.47
6 ✓			31.52	
7 ✓			DRY	
8 ✓			31.14	
9 ✓	.04	30.65	30.69	48.53
10 ✓		DESTROYED		
11 ✓		DESTROYED		
15 ✓		BROKED		
16 ✓		BROKED		
17 ✓			31.03	
18				
26 ✓		PLUGGED		
27 ✓			31.54	
28 ✓			32.08	
29				
30 ✓			28.79	
40				
41				
42 ✓		BURIED		
43 ✓		BURIED		
44 ✓			33.27	
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55 ✓		GONE		

All numbers reported as: feet-inches-1/8inches

MT
FYI
Please return

COUNTY OF SUFFOLK

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

CLARE B. BRADLEY, M.D., M.P.H.
COMMISSIONER

1Oct01

Mr. Paul John
Regional Spills Engineer
New York State Department of
Environmental Conservation
Building 40 - State University of New York
Stony Brook, NY 11794

Dear Mr. John:

The fuel spill data for the month of September 2001 is enclosed for your records.

The water levels at Firematics Training Center in Yaphank (Site #83-1283) dropped 0.6 feet this month. No product was found in any of the wells. We are currently monitoring the site on a monthly schedule.

Water levels at the Baumann Bus site at Westhampton County Airport (Site #85-2503) dropped 0.4 feet. A small amount of product was found in one well, but no recovery was made.

The Tank Farm at Westhampton County Airport (Site #85-2966) had no wells with floating product. Water levels at this site dropped 0.6 feet.

Enclosed please find our field data sheets.

If you have any questions, please contact me at (631) 853-2253.

Sincerely,

Edward W. Olson
Senior P. H. Sanitarian
Bureau of Groundwater Resources

Enclosures

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

WED
#85-2503 County Airport, [Bmn.Bs] Westhampton Date: 12SEP01

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			32.12
3 ✓			31.99
5 ✓			31.77
6 ✓			31.82
7 ✓			DRY
8 ✓			31.44
9 ✓	.07	30.94	31.01
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKEN	
16 ✓		BROKEN	
17 ✓			31.32
18			
26 ✓		PLUGGED	
27 ✓			31.83
28 ✓			32.36
29			
30 ✓			29.03
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			33.56
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

17.70

17.52

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

THURS

Site #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 19/SEPT 91

12-2

WELL#	prod. in ft.	depth to product	depth to grdwater	
1 ✓		DESTROYED		
2 ✓			32.23	
3 ✓			32.11	
5 ✓			31.90	49.47
6 ✓			31.93	
7 ✓			DRY	
8 ✓			31.55	
9 ✓	.03	31.05	31.08	48.53
10 ✓		DESTROYED		
11 ✓		DESTROYED		
15 ✓		BROKEN		
16 ✓		BROKEN		
17 ✓			31.44	
18				
26 ✓		PULLED		
27 ✓			31.95	
28 ✓			32.08	
29				
30 ✓			29.13	
40				
41				
42 ✓		BURIED		
43 ✓		BURIED		
44 ✓			33.68	
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55 ✓		GONE		

All numbers reported as: feet-inches-1/8inches

Martin
FYI
Please return
Ed

COUNTY OF SUFFOLK

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

CLARE B. BRADLEY, M.D., M.P.H.
COMMISSIONER

7Nov01

Mr. Paul John
Regional Spills Engineer
New York State Department of
Environmental Conservation
Building 40 - State University of New York
Stony Brook, NY 11794

Dear Mr. John:

The fuel spill data for the month of October 2001 is enclosed for your records.

The water levels at Firematics Training Center in Yaphank (Site #83-1283) dropped 0.4 feet this month. No product was found in any of the wells. We are currently monitoring the site on a monthly schedule.

Water levels at the Baumann Bus site at Westhampton County Airport (Site #85-2503) dropped 0.4 feet. A small amount of product was found in one well. Recovery was required early in the month, but levels of floating product decreased by the second monitoring event.

The Tank Farm at Westhampton County Airport (Site #85-2966) had no wells with floating product. Water levels at this site dropped 0.4 feet.

Enclosed please find our field data sheets and recovery results.

If you have any questions, please contact me at (631) 853-2253.

Sincerely,

Edward W. Olson
Senior P. H. Sanitarian
Bureau of Groundwater Resources

Enclosures

DIVISION OF ENVIRONMENTAL QUALITY
OFFICE OF WATER RESOURCES
220 RABRO DRIVE EAST, HAUPPAUGE, N.Y. 11788
TEL. (631) 853-2251
FAX (631) 853-2307

VOLUMES RECOVERED BY BAILING

SITE #85-2503	COUNTY AIRPORT, WESTHAMPTON	FOR THE MONTH OF: **Oct 2001**

WELL NUMBER	DATE: 11Oct		DATE:		DATE:	
	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED
5						
6						
8						
9	0.14	0.03				
10						
11						
15						
16						
17						
26						
27						
28						
44						
TOTAL		0.03		0		

TOTAL VOLUME RECOVERED = 0.03 gallons

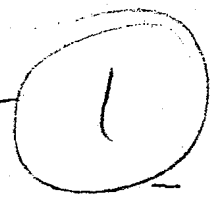
SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

THURS

.te: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 11 OCT 01

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			32.46
3 ✓			32.33
5 ✓			32.11
6 ✓			32.16
7 ✓			DRY
8 ✓			31.97
9 ✓	.14	31.28	31.42
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			31.66
18			
26 ✓		PLUGGED	
27 ✓			32.11
28 ✓			32.91
29			
30 ✓			29.36
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			32.91
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

17.36



17.11

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

TUES

ite: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 23OCT01

WELL#	prod. in ft.	depth to product	depth to grdwater	
1 ✓		DESTROYED		
2 ✓			32.67	
3 ✓			32.54	
5 ✓			32.33	49.49
6 ✓			32.37	
7 ✓			DRY	
8 ✓			31.98	
9 ✓	.01	31.50	31.51	48.53
10 ✓		DESTROYED		
11 ✓		DESTROYED		
15 ✓		BROKEN		
16 ✓		BROKEN		
17 ✓			31.87	
18				
26 ✓		PLUGGED		
27 ✓			32.38	
28 ✓			32.41	
29				
30 ✓			29.58	
40				
41				
42 ✓		BURIED		
43 ✓		BURIED		
44 ✓			34.12	
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55 ✓		GONE		

All numbers reported as: feet-inches-1/8inches

Martin
FYI
Please return

COUNTY OF SUFFOLK

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

CLARE B. BRADLEY, M.D., M.P.H.
COMMISSIONER

17Dec01

Mr. Paul John
Regional Spills Engineer
New York State Department of
Environmental Conservation
Building 40 - State University of New York
Stony Brook, NY 11794

Dear Mr. John:

The fuel spill data for the month of November 2001 is enclosed for your records.

The water levels at Firematics Training Center in Yaphank (Site #83-1283) dropped 0.3 feet this month. No product was found in any of the wells. We are currently monitoring the site on a monthly schedule.

Water levels at the Baumann Bus site at Westhampton County Airport (Site #85-2503) dropped 0.4 feet. A film of product was found in one well and no recovery was made.

The Tank Farm at Westhampton County Airport (Site #85-2966) had no wells with floating product. Water levels at this site dropped 0.3 feet.

Enclosed please find our field data sheets.

If you have any questions, please contact me at (631) 853-2253.

Sincerely,

Edward W. Olson
Senior P. H. Sanitarian
Bureau of Groundwater Resources

Enclosures

DIVISION OF ENVIRONMENTAL QUALITY
OFFICE OF WATER RESOURCES
220 RABRO DRIVE EAST, HAUPPAUGE, N.Y. 11788
TEL. (631) 853-2251
FAX (631) 853-2307

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES (2-0
MONITORING WELL REPORT

THURS

:e: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 8NOV01

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			32.94
3 ✓			32.81
5 ✓			32.59
6 ✓			32.64
7 ✓			DRY
8 ✓			32.25
9 ✓	0	31.77	31.77
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			32.14
18			
26 ✓		PLUGGED	
27 ✓			32.66
28 ✓			33.19
29			
30 ✓			29.85
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			34.39
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

16.88

16.76

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

Site: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: Tues 10/20/00

WELL#	prod. in ft.	depth to product	depth to grdwater	
1 ✓		DESTROYED		
2 ✓			33.13	
3 ✓			33.00	
5 ✓			32.78	49.47
6 ✓			32.83	
7 ✓		(DRY)		
8 ✓			32.44	
9 ✓			31.97	48.53
10 ✓		DESTROYED		
11 ✓		DESTROYED		
15 ✓		BROKED		
16 ✓		BROKED		
17 ✓			32.34	
18				
26 ✓		PULLED		
27 ✓			32.85	
28 ✓			33.38	
29				
30 ✓			30.03	
40				
41				
42 ✓		BURIED		
43 ✓		BURIED		
44 ✓			34.58	
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55 ✓		GONE		

All numbers reported as: feet-inches-1/8inches

Martin
FYI
Please return

COUNTY OF SUFFOLK

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

CLARE B. BRADLEY, M.D., M.P.H.
COMMISSIONER

3Jan02

Mr. Paul John
Regional Spills Engineer
New York State Department of
Environmental Conservation
Building 40 - State University of New York
Stony Brook, NY 11794

Dear Mr. John:

The fuel spill data for the month of December 2001 is enclosed for your records.

The water levels at Firematics Training Center in Yaphank (Site #83-1283) dropped 0.4 feet this month. No product was found in any of the wells. We are currently monitoring the site on a monthly schedule.

Water levels at the Baumann Bus site at Westhampton County Airport (Site #85-2503) dropped 0.3 feet. No product was found in any of the wells.

The Tank Farm at Westhampton County Airport (Site #85-2966) had no wells with floating product. Water levels at this site dropped 0.3 feet.

Enclosed please find our field data sheets.

If you have any questions, please contact me at (631) 853-2253.

Sincerely,

Edward W. Olson
Senior P. H. Sanitarian
Bureau of Groundwater Resources

Enclosures

DIVISION OF ENVIRONMENTAL QUALITY
OFFICE OF WATER RESOURCES
220 RABRO DRIVE EAST, HAUPPAUGE, N.Y. 11788
(631) 853-2251
FAX (631) 853-2307

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

Site: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: WED 19DEC01

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			33.46
3 ✓			33.58
5 ✓			33.25
6 ✓			33.29
7 ✓			DRY
8 ✓			32.89
9 ✓			32.42
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKEN	
16 ✓		BROKEN	
17 ✓			32.79
18			
26 ✓		PLUGGED	
27 ✓			33.31
28 ✓			33.84
29			
30 ✓			30.50
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			35.03
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

TOP
↓
49.47 (16.22)
48.53 (16.11)
48.75

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

#85-2503 County Airport, [Bmn.Bs] Westhampton Date: WED 5/09/01 3R

WELL#	prod. in ft.	depth to product	depth to grdwater	
1 ✓		DESTROYED		
2 ✓			33.39	
3 ✓			33.26	
5 ✓			33.05	49.47
6 ✓			33.09	
7 ✓			DRY	
8 ✓			32.70	
9 ✓			32.22	48.53
10 ✓		DESTROYED		
11 ✓		DESTROYED		
15 ✓		BROKEN		
16 ✓		BROKEN		
17 ✓			32.60	
18				
26 ✓		PLUGGED		
27 ✓			33.11	
28 ✓			33.64	
29				
30 ✓			30.29	
40				
41				
42 ✓		BURIED		
43 ✓		BURIED		
44 ✓			34.84	
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55 ✓		GONE		

12 — ⊕

All numbers reported as: feet-inches-1/8inches

MT
FYI
Please return
EO

COUNTY OF SUFFOLK

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

CLARE B. BRADLEY, M.D., M.P.H.
COMMISSIONER

13Feb02

Mr. Paul John
Regional Spills Engineer
New York State Department of
Environmental Conservation
Building 40 - State University of New York
Stony Brook, NY 11794

Dear Mr. John:

The fuel spill data for the month of January 2002 is enclosed for your records.

The water levels at Firematics Training Center in Yaphank (Site #83-1283) dropped 0.3 feet this month. A skim of floating product was detected in one well. We are currently monitoring the site on a monthly schedule.

Water levels at the Baumann Bus site at Westhampton County Airport (Site #85-2503) dropped 0.3 feet. No product was found in any of the wells.

The Tank Farm at Westhampton County Airport (Site #85-2966) had no wells with floating product. Water levels at this site dropped 0.3 feet.

Enclosed please find our field data sheets.

If you have any questions, please contact me at (631) 853-2253.

Sincerely,

Edward W. Olson
Senior P. H. Sanitarian
Bureau of Groundwater Resources

Enclosures

DIVISION OF ENVIRONMENTAL QUALITY
OFFICE OF WATER RESOURCES
220 RABRO DRIVE EAST, HAUPPAUGE, N.Y. 11788
TEL. (631) 853-2251
FAX (631) 853-2307

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

Site: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: WED 2 JAN 02

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			33.79
3 ✓			33.65
5 ✓			33.45
6 ✓			33.50
7 ✓			DRY
8 ✓			33.10
9 ✓			32.63
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			33.00
18			
26 ✓		PULLED	
27 ✓			33.52
28 ✓			34.04
29			
30 ✓			30.70
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			35.24
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

12-

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

FR1

Site: #85-2503 County Airport, [Bmn\Bs] Westhampton Date: 18JAN02

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			34.19
3 ✓			33.86
5 ✓			33.66
6 ✓			33.69
7 ✓			DRY
8 ✓			33.31
9 ✓			32.83
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKEN	
16 ✓		BROKEN	
17 ✓			33.20
18			
26 ✓		PLUGGED	
27 ✓			33.72
28 ✓			34.24
29			
30 ✓			30.90
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			35.45
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

12 — ⊘

All numbers reported as: feet-inches-1/8inches

COUNTY OF SUFFOLK

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

CLARE B. BRADLEY, M.D., M.P.H.
COMMISSIONER

MT
FYI
Please return

12Mar02

Mr. Paul John
Regional Spills Engineer
New York State Department of
Environmental Conservation
Building 40 - State University of New York
Stony Brook, NY 11794

Dear Mr. John:

The fuel spill data for the month of February 2002 is enclosed for your records.

The water levels at Firematics Training Center in Yaphank (Site #83-1283) dropped 0.3 feet this month. Product was found in three wells. Monitoring has been upgraded to a weekly schedule.

Water levels at the Baumann Bus site at Westhampton County Airport (Site #85-2503) dropped 0.5 feet. Product was found in two of the wells.

The Tank Farm at Westhampton County Airport (Site #85-2966) had no wells with floating product. Water levels at this site dropped 0.3 feet.

Enclosed please find our field data sheets.

If you have any questions, please contact me at (631) 853-2253.

Sincerely,

Edward W. Olson
Senior P. H. Sanitarian
Bureau of Groundwater Resources

Enclosures

DIVISION OF ENVIRONMENTAL QUALITY
OFFICE OF WATER RESOURCES
■ 2220 VAIL BRO DRIVE EAST, HAUPPAUGE, N.Y. 11788 ■
TEL. (631) 853-2281
FAX (631) 853-2307

VOLUMES RECOVERED BY BAILING

SITE #85-2503	COUNTY AIRPORT, WESTHAMPTON	FOR THE MONTH OF: **Feb 2002**

WELL NUMBER	DATE: 21Feb		DATE:		DATE:	
	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED
5	0.56	0.09				
6	0.12	0.02				
8						
9						
10						
11						
15						
16						
17						
26						
27						
28						
44						
TOTAL		0.11		0		

TOTAL VOLUME RECOVERED = 0.11 gallons

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

5-2503 County Airport, [Bmn.Bs] Westhampton Date: 6 Feb C.

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			34.27
3 ✓			34.15
5 ✓			33.93
6 ✓			33.99
7 ✓			DRY
8 ✓			33.59
9 ✓			33.12
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			33.48
18			
26 ✓		PUCCED	
27 ✓			34.0
28 ✓			34.53
29			
30 ✓			31.20
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			35.72
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

12-0

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

85-2503 County Airport, [Bmn.Bs] Westhampton Date: THURS 1 FEB 02

JM

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			34.48
3 ✓			34.35
5 ✓	.56	34.07	34.63
6 ✓	.12	34.17	34.29
7 ✓			DRY
8 ✓			33.80
9 ✓			33.34
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKEN	
16 ✓		BROKEN	
17 ✓			33.69
18			
26 ✓		PLUGGED	
27 ✓			34.21
28 ✓			34.74
29			
30 ✓			31.39
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			35.93
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

2/12

All numbers reported as: feet-inches-1/8inches

Martin
FYI
Please return
Ed

COUNTY OF SUFFOLK

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

CLARE B. BRADLEY, M.D., M.P.H.
COMMISSIONER

3Apr02

Mr. Paul John
Regional Spills Engineer
New York State Department of
Environmental Conservation
Building 40 - State University of New York
Stony Brook, NY 11794

Dear Mr. John:

The fuel spill data for the month of March 2002 is enclosed for your records.

The water levels at Firematics Training Center in Yaphank (Site #83-1283) dropped 0.2 feet this month. Product was found in three wells. Monitoring has been maintained at the weekly schedule.

Water levels at the Baumann Bus site at Westhampton County Airport (Site #85-2503) dropped 0.4 feet. Product was found in two of the wells.

The Tank Farm at Westhampton County Airport (Site #85-2966) had no wells with floating product. Water levels at this site dropped 0.2 feet.

Enclosed please find our field data sheets.

If you have any questions, please contact me at (631) 853-2253.

Sincerely,

Edward W. Olson
Associate Public Health Sanitarian
Bureau of Groundwater Resources

Enclosures

DIVISION OF ENVIRONMENTAL QUALITY
OFFICE OF WATER RESOURCES
220 RABRO DRIVE EAST, HAUPPAUGE, N.Y. 11788
OFFICE (631) 853-2251
FAX (631) 853-2307

VOLUMES RECOVERED BY BAILING

SITE #85-2503	COUNTY AIRPORT, WESTHAMPTON	FOR THE MONTH OF: **Mar 2002**

WELL NUMBER	DATE: 7Mar		DATE: 19Mar		DATE:	
	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED
5	0.71	0.12	0.83	0.14		
6	0.38	0.06	0.65	0.11		
8						
9						
10						
11						
15						
16						
17						
26						
27						
28						
44						
TOTAL		0.18		0.25		

TOTAL VOLUME RECOVERED = 0.43 gallons

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

Site: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: WED 6 MARCH 3R

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			34.65
3 ✓			34.53
5 ✓	.71	34.19	34.40
6 ✓	.38	34.30	34.68
7 ✓			DRY
8 ✓			33.96
9 ✓			33.49
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			33.85
18			
26 ✓		PLUGGED	
27 ✓			34.37
28 ✓			34.89
29			
30 ✓			31.55
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			36.08
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

12-2

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

#85-2503 County Airport, [Bmn.Bs] Westhampton Date: 19MAR01

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			34.82
3 ✓			34.69
5 ✓	.83	34.35	35.18
6 ✓	.65	34.43	35.08
7 ✓			DRY
8 ✓			34.13
9 ✓			33.66
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKEN	
16 ✓		BROKEN	
17 ✓			34.02
18			
26 ✓		PLUGGED	
27 ✓			34.53
28 ✓			35.06
29			
30 ✓			31.72
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			36.25
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

12 + 2

All numbers reported as: feet-inches-1/8inches

Martin
FYI
Please return

COUNTY OF SUFFOLK

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

CLARE B. BRADLEY, M.D., M.P.H.
COMMISSIONER

15May02

Mr. Paul John
Regional Spills Engineer
New York State Department of
Environmental Conservation
Building 40 - State University of New York
Stony Brook, NY 11794

Dear Mr. John:

The fuel spill data for the month of April 2002 is enclosed for your records.

The water levels at Firematics Training Center in Yaphank (Site #83-1283) rose 0.4 feet this month. Non-recoverable amounts of product were found in three wells. Monitoring has been changed back to a monthly schedule.

Water levels at the Baumann Bus site at Westhampton County Airport (Site #85-2503) dropped 0.3 feet. Product was found in six of the wells.

The Tank Farm at Westhampton County Airport (Site #85-2966) had no wells with floating product. Water levels at this site dropped 0.1 feet.

Enclosed please find our field data sheets.

If you have any questions, please contact me at (631) 853-2253.

Sincerely,

Edward W. Olson
Associate Public Health Sanitarian
Bureau of Groundwater Resources

Enclosures

DIVISION OF ENVIRONMENTAL QUALITY
OFFICE OF WATER RESOURCES
220 RABRO DRIVE EAST, HAUPPAUGE, N.Y. 11788
TEL. (631) 853-2253
FAX (631) 853-2300

VOLUMES RECOVERED BY BAILING

SITE #85-2503	COUNTY AIRPORT, WESTHAMPTON	FOR THE MONTH OF: **Apr 2002**

WELL NUMBER	DATE: 12Apr		DATE: 23Apr		DATE:	
	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED
5	0.96	0.16	0.96	0.16		
6	1.00	0.16	1.05	0.17		
8			0.01	-		
9	0.76	0.12	0.86	0.14		
10						
11						
15						
16						
17						
26						
27	0.39	0.06	0.43	0.07		
28	0.01	-	0.04	-		
44						
TOTAL		0.5		0.54		

TOTAL VOLUME RECOVERED = 1.04 gallons

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

Site: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 4/12/02

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			34.98
3 ✓		———	34.86
5 ✓	0.96	34.48	35.44
6 ✓	1.0	34.53	35.53
7 ✓		DRY	DRY
8 ✓		———	34.29
9 ✓	0.76	33.72	34.48
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKEN	
16 ✓		BROKEN	
17 ✓			34.18
18			
26 ✓		PLUGGED	
27 ✓	0.39	34.65	35.04
28 ✓	0.01	35.22	35.23
29			
30 ✓			31.88
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			36.41
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

4 12

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

#85-2503 County Airport, [Bmn.Bs] Westhampton Date: TUES 23APR02 JM

12 — 4

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			35.08
3 ✓			34.96
5 ✓	.96	34.59	35.55
6 ✓	1.05	34.62	35.67
7 ✓			DRY
8 ✓	.01	34.38	34.39
9 ✓	.86	33.79	34.65
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			34.28
18			
26 ✓		PULLED	
27 ✓	.43	34.74	35.17
28 ✓	.04	35.30	35.34
29			
30 ✓			31.97
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			36.49
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

All numbers reported as: feet-inches-1/8inches

Matin
FYI
Please return
EQ

COUNTY OF SUFFOLK

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

CLARE B. BRADLEY, M.D., M.P.H.
COMMISSIONER

5Jun02

Mr. Paul John
Regional Spills Engineer
New York State Department of
Environmental Conservation
Building 40 - State University of New York
Stony Brook, NY 11794

Dear Mr. John:

The fuel spill data for the month of May 2002 is enclosed for your records.

The water levels at Firematics Training Center in Yaphank (Site #83-1283) rose 0.3 feet this month. Slicks of product were found in two wells. Monitoring continues on a monthly schedule.

Water levels at the Baumann Bus site at Westhampton County Airport (Site #85-2503) rose 0.2 feet. Product was found in six of the wells.

The Tank Farm at Westhampton County Airport (Site #85-2966) had no wells with floating product. Water levels at this site rose 0.3 feet.

Enclosed please find our field data sheets and recovery data.

If you have any questions, please contact me at (631) 853-2253.

Sincerely,

Edward W. Olson
Associate Public Health Sanitarian
Bureau of Groundwater Resources

Enclosures

DIVISION OF ENVIRONMENTAL QUALITY
OFFICE OF WATER RESOURCES
220 RABRO DRIVE EAST, HAUPPAUGE, N.Y. 11788
TEL. (631) 853-2281
FAX (631) 853-2307

VOLUMES RECOVERED BY BAILING

SITE #85-2503	COUNTY AIRPORT, WESTHAMPTON	FOR THE MONTH OF: **May 2002**

WELL NUMBER	DATE: 7May		DATE: 23Apr		DATE:	
	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED
5	0.75	0.12	0.47	0.08		
6	0.83	0.14	0.71	0.12		
8	slick		0.01	-		
9	0.71	0.12	0.51	0.08		
10						
11						
15						
16						
17						
26						
27	0.68	0.11	0.21	0.03		
28	0.61	0.10				
44						
TOTAL		0.59		0.31		

TOTAL VOLUME RECOVERED = 0.9 gallons

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

Tues

[illegible]-2503 County Airport, [Bmn.Bs] Westhampton Date: 7 May 02

12-5

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			35.02
3 ✓			34.87
5 ✓	.75	34.54	35.29
6 ✓	.83	34.57	35.40
7 ✓			DRY
8 ✓		34.29	34.29
9 ✓	.71	33.70	34.41
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			34.19
18			
26 ✓		PULLED	
27 ✓	.68	34.60	35.28
28 ✓	.61	35.15	35.76
29			
30 ✓			31.87
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			36.39
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

All numbers reported as: feet-inches-1/8inches

JM

12-4

FFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

03 County Airport, [Bmn.Bs] Westhampton Date: 23MAY02
Thursday

WELL#	prod. in ft.	depth to product	depth to grdwater	
1 ✓		DESTROYED		
2 ✓			34.88	
3 ✓			34.74	
5 ✓	.47	34.55	35.02	(Bailed)
6 ✓	.11	34.47	35.18	(Bailed)
7 ✓			DRY	
8 ✓	.01	34.17	34.18	
9 ✓	.51	33.70	34.21	(Bailed)
10 ✓		DESTROYED		
11 ✓		DESTROYED		
15 ✓		BROKEN		
16 ✓		BROKEN		
17 ✓			34.06	
18		[redacted]	[redacted]	
26 ✓		PLUGGED		
27 ✓	.21	34.55	34.76	(Bailed)
28 ✓			35.10	
29				
30 ✓			31.74	
40				
41				
42 ✓		BURIED		
43 ✓		BURIED		
44 ✓			36.26	
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55 ✓		GONE		

All numbers reported as: feet-inches-1/8inches

Martin
FYI
Please return
Ed

COUNTY OF SUFFOLK

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

CLARE B. BRADLEY, M.D., M.P.H.
COMMISSIONER

15Jul02

Mr. Paul John
Regional Spills Engineer
New York State Department of
Environmental Conservation
Building 40 - State University of New York
Stony Brook, NY 11794

Dear Mr. John:

The fuel spill data for the month of June 2002 is enclosed for your records.

The water levels at Firematics Training Center in Yaphank (Site #83-1283) rose 0.3 feet this month. No product was found in any of the wells. Monitoring continues on a monthly schedule.

Water levels at the Baumann Bus site at Westhampton County Airport (Site #85-2503) rose 0.2 feet. Product was found in four of the wells.

The Tank Farm at Westhampton County Airport (Site #85-2966) had no wells with floating product. Water levels at this site rose 0.1 feet.

Enclosed please find our field data sheets and recovery data.

If you have any questions, please contact me at (631) 853-2253.

Sincerely,

Edward W. Olson
Associate Public Health Sanitarian
Bureau of Groundwater Resources

Enclosures

DIVISION OF ENVIRONMENTAL QUALITY
OFFICE OF WATER RESOURCES
220 RABRO DRIVE EAST, HAUPPAUGE, N.Y. 11788
TEL. (631) 853-2251
FAX (631) 853-2307

VOLUMES RECOVERED BY BAILING

SITE #85-2503	COUNTY AIRPORT, WESTHAMPTON	FOR THE MONTH OF: **June 2002**

WELL NUMBER	DATE: 7Jun		DATE: 19Jun		DATE:	
	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED
5	0.13	0.02				
6	0.29	0.05	0.01	-		
8	0.01	-	slick	-		
9	0.16	0.03				
10						
11						
15						
16						
17						
26						
27						
28						
44						
TOTAL		0.1		0		

TOTAL VOLUME RECOVERED = 0.1 gallons

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

FR1

#85-2503 County Airport, [Bmn.Bs] Westhampton Date: 7/JUNE/02

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			34.74
3 ✓			34.61
5 ✓	.13	34.39	34.52
6 ✓	.29	34.40	34.69
7 ✓			DRY
8 ✓	.01	34.03	34.04
9 ✓	.16	33.54	33.70
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKEN	
16 ✓		BROKEN	
17 ✓			33.93
18			
26 ✓		PLUGGED	
27 ✓			34.44
28 ✓			34.97
29			
30 ✓			31.64
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			36.15
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

12 - 3

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

e: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: WED 19 JUNE 02

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			34.61
3 ✓			34.48
5 ✓			34.26
6 ✓	.01	34.29	34.30
7 ✓			DRY
8 ✓	0	33.90	33.90
9 ✓			33.42
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKEN	
16 ✓		BROKEN	
17 ✓			33.78
18			
26 ✓		PLUGGED	
27 ✓			34.29
28 ✓			34.82
29			
30 ✓			31.49
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			35.99
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

12 - 0

All numbers reported as: feet-inches-1/8inches

Martin
FYI
Please return
Ed

COUNTY OF SUFFOLK

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

CLARE B. BRADLEY, M.D., M.P.H.
COMMISSIONER

9Aug02

Mr. Paul John
Regional Spills Engineer
New York State Department of
Environmental Conservation
Building 40 - State University of New York
Stony Brook, NY 11794

Dear Mr. John:

The fuel spill data for the month of July 2002 is enclosed for your records.

The water levels at Firematics Training Center in Yaphank (Site #83-1283) dropped 0.3 feet this month. No product was found in any of the wells. Monitoring continues on a monthly schedule.

Water levels at the Baumann Bus site at Westhampton County Airport (Site #85-2503) rose 0.1 feet. A small amount of product was found in one of the wells, but no recovery could be performed.

The Tank Farm at Westhampton County Airport (Site #85-2966) had no wells with floating product. Water levels at this site dropped 0.3 feet.

Enclosed please find our field data sheets.

If you have any questions, please contact me at (631) 853-2253.

Sincerely,

Edward W. Olson
Associate Public Health Sanitarian
Bureau of Groundwater Resources

Enclosures

DIVISION OF ENVIRONMENTAL QUALITY
OFFICE OF WATER RESOURCES
220 RABRO DRIVE EAST, HAUPPAUGE, N.Y. 11788
TEL. (631) 853-2551
FAX (631) 853-2507

(JM) 12
0 Bailed

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

#85-2503 County Airport, [Bmn.Bs] Westhampton Date ~~7/25/02~~ 8/5/02 Friday

	WELL#	prod. in ft.	depth to product	depth to grdwater
	1 ✓		DESTROYED	
	2 ✓			34.53
	3 ✓			34.39
	5 ✓			34.28
	6 ✓			34.22
	7 ✓	——	——	(DRY)
*	8 ✓	.01	33.82	33.83
	9 ✓			33.36
	10 ✓		DESTROYED	
	11 ✓		DESTROYED	
	15 ✓		BROKED	
	16 ✓		BROKED	
	17 ✓			33.11
	18			
	26 ✓		PLUGGED	
	27 ✓			34.23
	28 ✓			34.74
	29			
	30 ✓			31.42
	40			
	41			
	42 ✓		BURIED	
	43 ✓		BURIED	
	44 ✓			35.92
	45			
	46			
	47			
	48			
	49			
	50			
	51			
	52			
	53			
	54			
	55 ✓		GONE	

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

THURS
18 JULY 05

Site: #85-2503 County Airport, [Bmn.Bs] Westhampton Date:

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			34.52
3 ✓			34.39
5 ✓			34.17
6 ✓			34.21
7 ✓			DRY
8 ✓			33.81
9 ✓			33.35
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			33.71
18			
26 ✓		PUCCED	
27 ✓			34.20
28 ✓			34.73
29			
30 ✓			31.40
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			35.90
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

12 — (1)

All numbers reported as: feet-inches-1/8inches

Martin
FYI. Please
return

COUNTY OF SUFFOLK

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

CLARE B. BRADLEY, M.D., M.P.H.
COMMISSIONER

9Sep02

Mr. Paul John
Regional Spills Engineer
New York State Department of
Environmental Conservation
Building 40 - State University of New York
Stony Brook, NY 11794

Dear Mr. John:

The fuel spill data for the month of August 2002 is enclosed for your records.

The water levels at Firematics Training Center in Yaphank (Site #83-1283) dropped 0.9 feet this month. Product was found in several of the wells and monitoring has been changed to a weekly schedule.

Water levels at the Baumann Bus site at Westhampton County Airport (Site #85-2503) dropped 0.3 feet. Product was found in three of the wells and recovery was performed.

The Tank Farm at Westhampton County Airport (Site #85-2966) had no wells with floating product. Water levels at this site dropped 0.4 feet.

Enclosed please find our field data sheets and recovery results.

If you have any questions, please contact me at (631) 853-2253.

Sincerely,

Edward W. Olson
Associate Public Health Sanitarian
Bureau of Groundwater Resources

Enclosures

DIVISION OF ENVIRONMENTAL QUALITY
OFFICE OF WATER RESOURCES
220 RABRO DRIVE EAST, HAUPPAUGE, N.Y. 1178[illegible]
TEL. (631) 853-[illegible]
FAX (631) 853-[illegible]

VOLUMES RECOVERED BY BAILING

SITE #85-2503	COUNTY AIRPORT, WESTHAMPTON	FOR THE MONTH OF: **August 2002**

WELL NUMBER	DATE: 16Aug		DATE: 30Aug		DATE:	
	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED	DEPTH OF PRODUCT	VOLUME BAILED
5	0.49	0.08	0.54	0.09		
6	0.35	0.06	0.49	0.08		
8						
9	0.21	0.03	0.40	0.07		
10						
11						
15						
16						
17						
26						
27						
28						
44						
TOTAL		0.17		0.24		

TOTAL VOLUME RECOVERED = 0.41 gallons

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

JM 12-

Site: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: Friday 2 Aug 02

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓		[redacted]	34.58
3 ✓			33.46
X 5 ✓	.03	34.22	34.25
6 ✓			34.27
7 ✓			(DRY)
8 ✓			33.88
9 ✓			33.42
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			33.79
18			
26 ✓		PLUGGED	
27 ✓			34.28
28 ✓			34.81
29			
30 ✓			31.48
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			35.98
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

#85-2503 County Airport, [Bmn.Bs] Westhampton Date: FRI 6/4/90

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			34.74
3 ✓			34.61
5 ✓	.49	34.31	34.80
6 ✓	.35	34.38	34.73
7 ✓			DRY
8 ✓			34.03
9 ✓	.21	33.54	33.75
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			33.93
18			
26 ✓		PLUGGED	
27 ✓			34.44
28 ✓			34.46
29			
30 ✓			31.63
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			36.14
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

12 - 3

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

Site: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 30 APR 02

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			34.79
3 ✓			34.67
5 ✓	.54	34.35	34.89
6 ✓	.49	34.41	34.90
7 ✓			DRY
8 ✓			34.09
9 ✓	.40	33.55	33.95
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			33.98
18			
26 ✓		PLUGGED	
27 ✓			34.49
28 ✓			35.02
29			
30 ✓			31.68
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			36.60
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

12 - 3

All numbers reported as: feet-inches-1/8inches

2003 DATA

COVER SHEET

FAX

To: DEBORAH WRIGHT

Fax #: 315-463-7554

Date: 13 JUNE 03

From:

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
OFFICE OF WATER RESOURCES
220 RABRO DRIVE EAST, HAUPPAUGE NY 11788

☐ Bureau of Drinking Water - Hauppauge
Telephone # 631-853-2251 FAX # 631-853-2307

☐ Bureau of Drinking Water - Riverhead
Telephone # 631-852-1905 FAX # 631-852-2743

☒ Bureau of Groundwater Resources - Hauppauge
Telephone # 631-853-2250 FAX # 631-853-2307

Pages (Including cover sheet) 13

COMMENTS:

AS REQUEST FROM ED OLSON
(BAUMAN BUS DATA)

If there is any problem regarding transmittal of this material, please call _____

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

THURS

#: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 9Jan03

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			34.32
3 ✓			34.14
5 ✓			33.98
6 ✓			34.01
7 ✓			DRY
8 ✓			33.61
9 ✓		DESTROYED	
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			33.50
18			
26 ✓		PUCCED	
27 ✓			33.99
28 ✓			34.53
29			
30 ✓			31.19
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			35.68
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

11 — 0

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

Re: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 14 Nov 03 Fri

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			33.95
3 ✓			33.78
5 ✓			33.58
6 ✓			33.59
7 ✓			DRY
8 ✓			33.17
9 ✓		DESTROYED	
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			32.99
18			
26 ✓		PLUGGED	
27 ✓			33.40
28 ✓			33.99
29			
30 ✓			30.74
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			35.27
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

All numbers reported as: feet-inches-1/8inches

110

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

re: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 6Feb03

FT - IN - 8THS

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			33-7-6
3 ✓			33-6-1
5 ✓			33-3-4
6 ✓			33-4-0
7 ✓			dry
8 ✓			32-11-1
9 ✓		DESTROYED-GONE	
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			32-9-6
18			
26 ✓		PULLED	
27 ✓			33-3-6
28 ✓			33-10-1
29			
30 ✓			30-6-2
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			35-0-1
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

11 - 0

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

THURS

ite: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 10F.80

(FT-IN-1/8 IN)

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			33-7-0
3 ✓			33-5-3/8
5 ✓			33-2-7/8
6 ✓			33-3-2/8
7 ✓			DRY
8 ✓			32-10-5/8
9 ✓		DESTROYED	
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			32-9-2/8
18			
26 ✓		PLUGGED	
27 ✓			33-3-2/8
28 ✓			32-9-5/8
29			
30 ✓		BURIED-SUBW	
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			34-11-6/8
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

10 - 0

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

FR1

Site: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 7MAR03

FT-IN-1/8

SNOW

10-0

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			33-1-0
3 ✓			32-11-3
5 ✓			32-8-6
6 ✓			32-9-2
7 ✓			DRY
8 ✓			32-4-3
9 ✓		DESTROYED	
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			32-3-1
18			
26 ✓		PLUGGED	
27 ✓			32-9-1
28 ✓			33-3-4
29			
30 ✓	BURIED-SNOW BANK		
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			34-5-4
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

Site: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 2/MAR03

WELL#	prod. in ft.	depth to product	depth to grdwater	
1 ✓		DESTROYED		
2 ✓			32-11-2	
3 ✓			32-9-5	
5 ✓			32-7-1	
6 ✓			32-7-4	
7 ✓			DRY	(BOTTOMS AT 25'8")
8 ✓			32-2-5	
9 ✓		DESTROYED		
10 ✓		DESTROYED		
11 ✓		DESTROYED		
15 ✓		BROKED		
16 ✓		BROKED		
17 ✓			32-1-3	32.61
18				
26 ✓		PUCCED		
27 ✓			32-7-3	
28 ✓			33-1-6	29.81
29				
30 ✓			29-9-6	
40				
41				
42 ✓		BURIED		
43 ✓		BURIED		
44 ✓			34-3-5	
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55 ✓		GONE		

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

WED

ite: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 2APR03

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			32-8-0
3 ✓			32-6-3
5 ✓			32-3-6
6 ✓			32-4-2
7 ✓			DRY
8 ✓			31-11-3
9 ✓		DESTROYED	
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			31-10-0
18			
26 ✓		PLUGGED	
27 ✓			32-4-0
28 ✓			32-10-4
29			
30 ✓			29-6-3
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			34-0-4
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

11-0

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

FR1

te: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 18APR03

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			32.31
3 ✓			32.17
5 ✓			31.96
6 ✓			31.44
7 ✓			DRY
8 ✓			31.59
9 ✓		DESTROYED	
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			31.48
18			
26 ✓		PLUGGED	
27 ✓			31.98
28 ✓			32.51
29			
30 ✓			29.19
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			33.67
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

FR1

Site: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 2MAY03

FT - IN - 1/8

16-0

WELL#	prod. in ft.	depth to product	depth to grdwater	
1 ✓		DESTROYED		
2 ✓			31-9-5	
3 ✓			31-8-1	
5 ✓			31-5-3	
6 ✓			31-5-7	
7 ✓			DRY	
8 ✓			31-1-0	
9 ✓			27-9-4	
10 ✓		DESTROYED		27-10-2
11 ✓		DESTROYED		28-1-6
15 ✓		BROKED	28-4-6	
16 ✓		BROKED	28-1-5	
17 ✓			30-11-6	30.98
18				
26 ✓		PLUGGED		
27 ✓			31-5-6	
28 ✓			32-0-0	
29				
30 ✓			28-5-0	28.62
40				
41				
42 ✓		BURIED		
43 ✓		BURIED		
44 ✓			33-2-0	
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55 ✓		GONE		

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

Site: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 16MAY03

FR1

FT-110-1/8

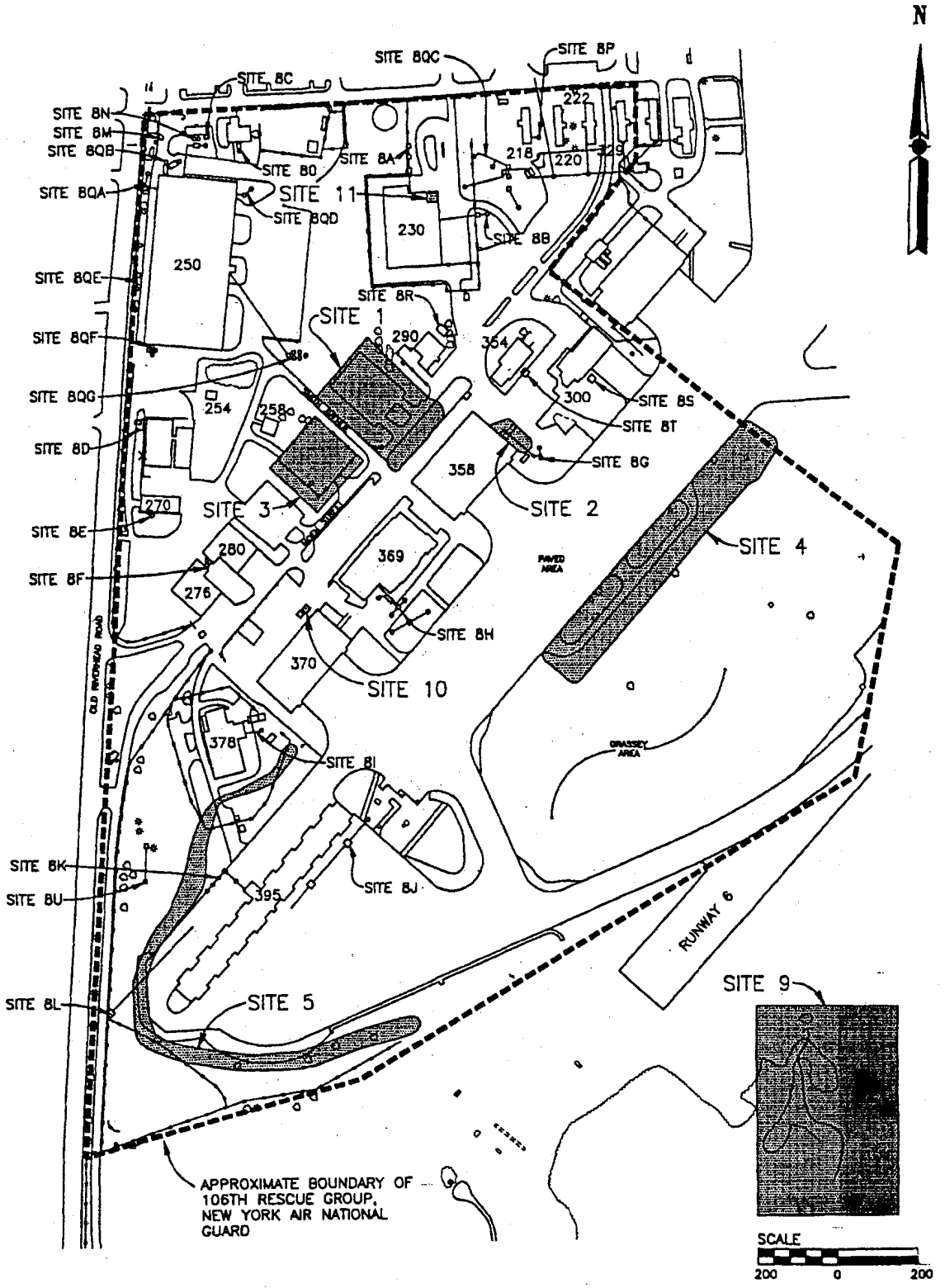
WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED 28-0-0	
2 ✓			31-5-7
3 ✓			31-4-2
5 ✓			31-1-5
6 ✓			31-2-0
7 ✓			27-9-1
8 ✓			30-9-3
9 ✓			27-5-7
10 ✓		DESTROYED	26-6-4
11 ✓		DESTROYED	27-10-0
15 ✓		BROKED	28-1-2
16 ✓		BROKED	27-10-0
17 ✓			30-8-1
18			
26 ✓		PLUGGED	27-7-4
27 ✓			31-2-2
28 ✓			31-8-4
29			
30 ✓			28-4-3
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			32-10-5
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	27-9-6

19-0

All numbers reported as: feet-inches-1/8inches

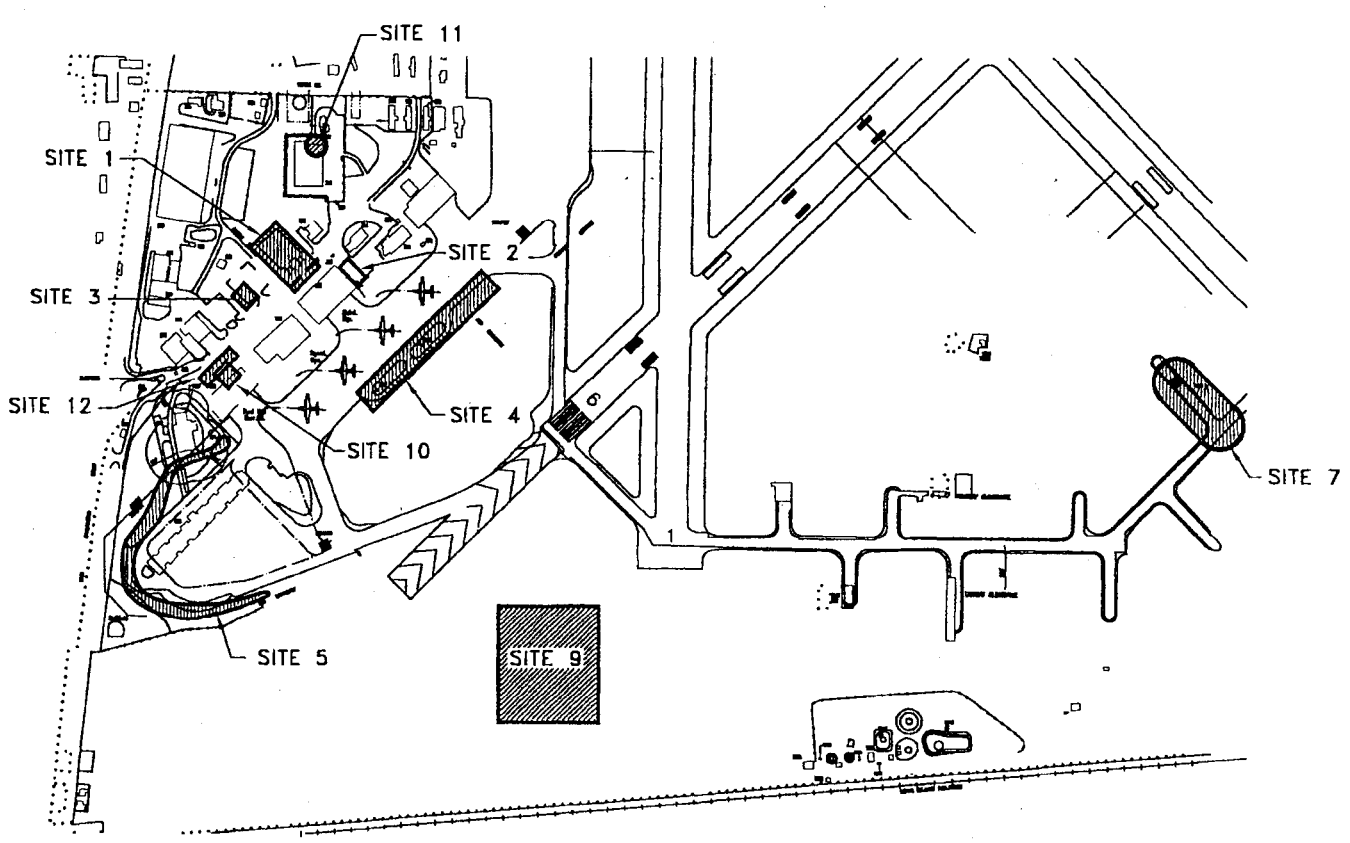
Exhibit 2

Air National Guard Property Investigation Information (from Peer Report)

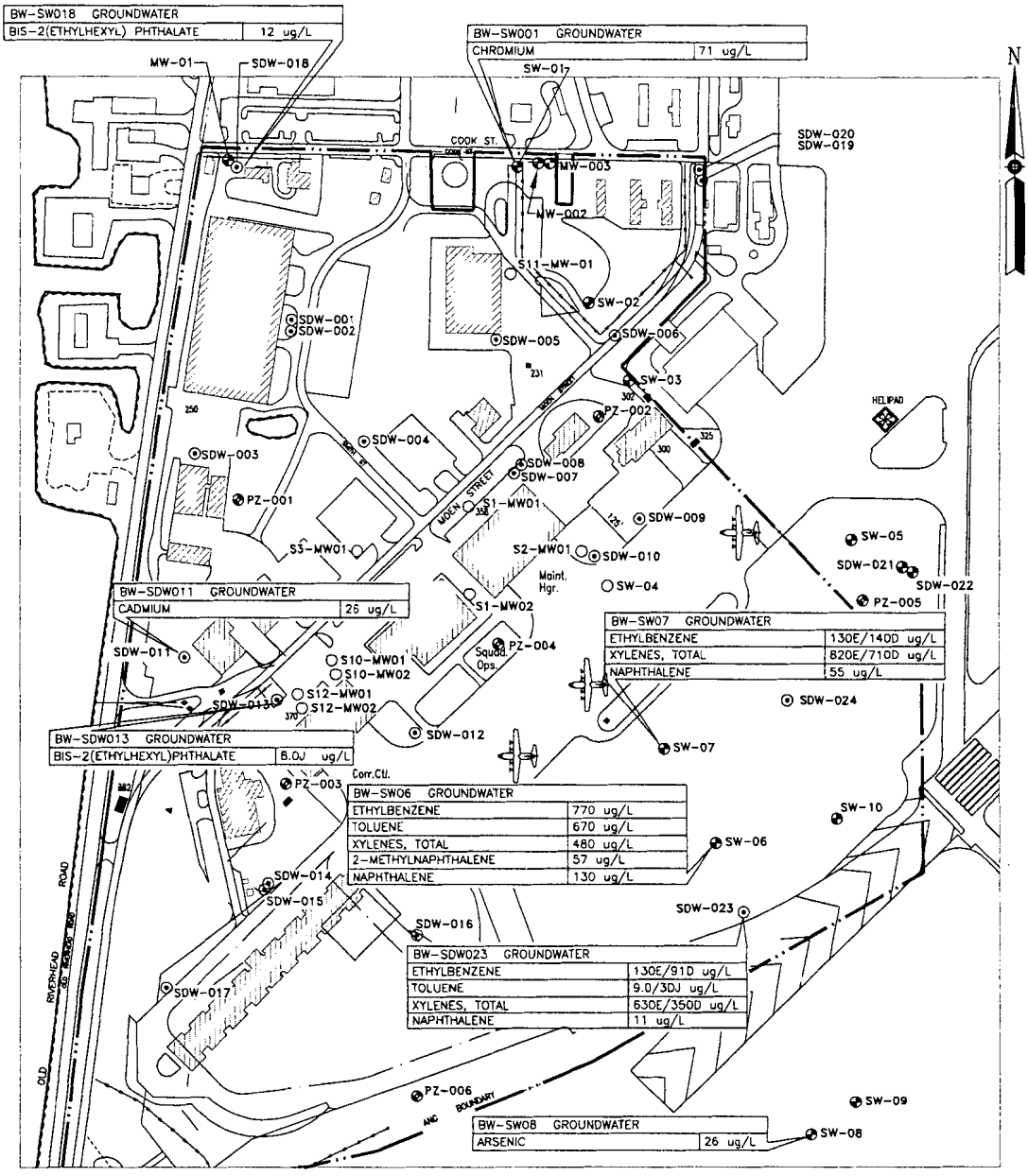


SOURCE: ABB ENVIROMENTAL SERVICES, INC. 1997

PEER PROJ./1566-053 FILE: SITE8.FIG1.3.DWG	SITE 8 – LOCATION MAP 106th RESCUE WING, NEW YORK AIR NATIONAL GUARD FRANCIS S. GABRESKI AIRPORT WESTHAMPTON BEACH, NEW YORK	FIGURE 1.3



PEER PROJ./1566-053 FILE:FIG-1.2-IRP-SITES	IRP SITE LOCATION MAP 106th RESCUE WING, NEW YORK ANG FRANCIS S. GABRESKI AIRPORT WESTHAMPTON BEACH, NEW YORK	FIGURE 1.2



LEGEND

- ⊙ PRE-EXISTING SMALL DIAMETER WELL
- ◕ PRE-EXISTING WELL
- ◕ PRE-EXISTING PIEZOMETER
- ○ NEW MONITORING WELL (RI, 2000-2001)

NOTE: WELL LOCATIONS APPROXIMATE

SOURCE: BASE MAP AND ABB-ES, 1997

0 200 400
SCALE IN FEET

PEER

PROJ./1566-053

FILE:FIG-5.15-BW

BASEWIDE CONTAMINANTS IN GROUNDWATER (RI)
106th RESCUE WING, NEW YORK AIR NATIONAL GUARD
FRANCIS S. GABRESKI AIRPORT
WESTHAMPTON BEACH, NEW YORK

FIGURE
5.15

Exhibit 2

Air National Guard Property Investigation Information (from Peer Report)

ENVIRONMENTAL RESTORATION PROGRAM

DRAFT-FINAL
REMEDIAL INVESTIGATION
REPORT

FOR
SITES 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, AND 12

106TH RESCUE WING
NEW YORK AIR NATIONAL GUARD
FRANCIS S. GABRESKI AIRPORT
WESTHAMPTON BEACH, NEW YORK

MAY 2002



ENVIRONMENTAL RESTORATION PROGRAM

DRAFT-FINAL
REMEDIAL INVESTIGATION
REPORT

FOR
SITES 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, AND 12

106TH RESCUE WING
NEW YORK AIR NATIONAL GUARD
FRANCIS S. GABRESKI AIRPORT
WESTHAMPTON BEACH, NEW YORK

MAY 2002

Prepared by

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78 Mitchell Road
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Prepared for the

Air National Guard
under National Guard Bureau Contract DAHA90-94-D-0011

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I CALCULATIONS
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EXECUTIVE SUMMARY

This Remedial Investigation (RI) Report was prepared as part of the Environmental Restoration Program (ERP) for the New York Air National Guard (ANG), 106th Rescue Wing (106th RQW), Francis S. Gabreski Airport, in Westhampton Beach, New York. The primary objectives of this RI Report are to document the characterization of contaminants at seven sites; evaluate the risks posed to human health and the environment by the seven sites, and four previously investigated sites; and make recommendations based on the evaluation of previous and current data.

The seven sites investigated are:

- Site 1 – Aviation Gas (AVGAS) Spill Site;
- Site 2 – Former Hazardous Waste Storage Area (1970 to 1982);
- Site 3 – Former Waste Storage Area (1984 to 1989);
- Site 7 – Former Fire Training Area (FTA)
- Site 10 – Waste Stripper Tank No. 61, Building 370;
- Site 11 – Trench Drain Sump, Building 230; and
- Site 12 – Spill Site Northwest of Building 370.

In addition, the history of four formerly-investigated sites is included in this RI. The sites are:

- Site 4 – Aircraft Refueling Apron Spill Site
- Site 5 – Southwest Storm Drainage Ditch
- Site 8 – Old Base Septic System
- Site 9 – Ramp Drainage Outfall

The general approach for this RI at the seven sites was to construct a conceptual site model by evaluating the available data, site conditions, geology, hydrogeology, contaminant characteristics, and pathway dynamics for each site. Investigative methodologies included surface and subsurface soil sampling from direct-push and hollow-stem auger soil borings, groundwater screening and confirmatory sampling from direct-push borings, new monitoring well installation, and groundwater sampling from new and existing monitoring wells. Sampling activities included 30 surface soil samples, 74 subsurface soil samples, and 150 groundwater samples.

The concentrations of analytes detected were compared to action levels which included: New York State Department of Environmental Conservation (NYSDEC) Recommended Soil Cleanup Objectives (RSCOs), Upper Limit of Background Concentrations (ULBCs), and Background (eastern United States) for soils; and NYSDEC Class GA groundwater; and Federal Drinking Water Standards, Maximum Contaminant Levels (MCLs) for groundwater. Contaminants with concentrations less than the recommended action levels were not considered as contaminants of potential concern (COPCs).

During the RI, soil and groundwater samples were analyzed for volatile and semivolatile organic compounds, and Target Analyte List (TAL) metals; groundwater bioremediation parameters, total petroleum hydrocarbons (TPHs) and polychlorinated biphenyls (PCBs) from selected sites; and tri-ortho(cresyl)phosphate (TCP) in samples collected from Site 12. Background locations for soil and groundwater were sampled to obtain baseline data for comparison to the site results.

Summaries of the RI findings at the background location and the seven sites are:

Background. Chromium exceeded the NYSDEC RSCOs in surface and subsurface soil samples, and lead exceeded the NYSDEC RSCOs in surface soil samples. Chromium exceeded the NYSDEC Action Level, but not the MCL, in groundwater from the on-site background monitoring well. Since these exceedances occurred at off-site or upgradient locations, they are considered representative of background conditions. Therefore, chromium in soil and groundwater was determined to be naturally occurring and is not considered a COPC at any of the sites.

Site 1 – AVGAS Spill Site. No evidence was found of AVGAS contaminants at this site. COPCs were not identified in subsurface soil or groundwater. Risk assessment of concentrations of PAHs and lead, identified as COPCs in surface soil, showed they do not pose an unacceptable risk. No further action is necessary, and preparation of a decision document is recommended.

Site 2 – Former Hazardous Waste Storage Area (1970 to 1982). No COPCs were identified in subsurface soil or groundwater. Exceedances were detected for arsenic, cadmium, and lead in surface soils, and they were identified as COPCs. Risk assessment shows that their concentrations in surface soils do not pose an unacceptable risk. Based on these results, no further action is necessary, and preparation of a decision document for site closure is recommended.

Site 3 – Former Waste Storage Facility (1984 to 1989). Exceedances were detected for cadmium and lead in surface soils at this site, and they were identified as COPCs. Cadmium and lead were eliminated as COPCs in surface soil during the risk assessment. No COPCs were identified in subsurface soil and groundwater. Therefore, no further action is necessary, and preparation of a decision document is recommended.

Site 7 – Former Fire Training Area. Lead was detected in surface and shallow soils at concentrations exceeding NYSDEC Action Levels. Volatile and semivolatile organic compounds, arsenic, and lead were detected exceeding NYSDEC Action Levels in groundwater samples, and define a plume migrating southeastward from the source area at the former FTA. Volatile and semivolatile organic compound contamination has migrated to downgradient monitoring wells, and represents a potential data gap in definition of the plume's leading edge. Metals contamination in groundwater was detected beyond the source area at the former FTA, but not as far as the downgradient wells. Metals data from the affected monitoring well are suspect due to its galvanized steel construction.

Additional investigation is recommended to find the leading edge of the plume, by installing and sampling new downgradient monitoring wells, and to remedy deficient existing monitoring wells.

The risk assessment for contaminants in groundwater and subsurface soils concluded that an exposure pathway for on-site receptors does not currently exist. One hypothetical off-site receptor (Meetinghouse Road Well Field) was identified. Risk characterization indicates that EPA's acceptable risk levels are exceeded for non-cancer effects to children for the hypothetical future groundwater pathway scenario. However, the risk assessment indicates that current exposures are not likely occurring. Lead and arsenic in groundwater are retained as COPCs. Evaluation of remedial action alternatives is recommended to address surface soil contamination and the groundwater plume.

Site 10 – Waste Stripper Tank No. 61, Building 370. PAHs were detected at concentrations exceeding NYSDEC RSCOs in one sample out of a total of six samples in shallow soils, and were identified as COPCs. Lead was detected in three out of six shallow soils exceeding NYSDEC RSCOs, and was identified as a COPC. The risk assessment found that lead and PAH concentrations in surface soils do not pose an unacceptable risk. There were no exceedances by volatile or semivolatile organic compounds to indicate that the former Waste Stripper Tank introduced contaminants to the subsurface soils, or groundwater, and no other COPCs were identified. No further action is necessary, and preparation of a decision document is recommended.

Site 11 – Trench Drain Sump, Building 230. Chromium and lead exceeded background concentrations, but not the NYSDEC RSCOs, in unsaturated soils. PAHs exceeded NYSDEC RSCOs in shallow soil from one sample location. Low levels of TPH-diesel range organics (DRO) were detected in groundwater. No COPCs were positively identified in groundwater from the site. The risk assessment indicates that PAHs, lead, and TPH detected at the site do not pose an unacceptable risk. Therefore, no further action is necessary, and preparation of a decision document is recommended.

Site 12 – Spill Site Northwest of Building 370. Soil staining was observed during the RI field activities at Site 12. However, no COPCs were detected. The detection of lead in one shallow soil sample is associated with debris from recent construction activities. No COPCs were identified in groundwater. The risk assessment shows that the lead concentration detected in surface soil does not post an unacceptable risk. No further action is necessary, and a decision document is recommended.

Summaries of the RI findings at the four previously-investigated sites are:

Site 4 - Aircraft Refueling Apron Spill Site. The results from this RI indicate that a groundwater plume consisting of dissolved phase volatile and semivolatile organic compounds has decreased in extent and concentration since previous investigations. Subsurface soils impacted by volatile and semivolatile organic compounds, and observations of light sheen and oily odors, indicate that a continuing source of groundwater contamination exists. Field observations and analytical results indicate that natural attenuation of the plume is occurring. No

further action is recommended for surface soils. Further investigation of groundwater or subsurface soils contamination is not recommended. Evaluation of remedial action alternatives is recommended to address subsurface soil contamination and the groundwater plume.

Site 5 - Southwest Storm Drainage Ditch. Previous investigations of Site 5 found exceedances of volatile and semivolatile organic compounds and metals in surface and shallow subsurface soils and sediments. Contamination was limited to the ditch, and concentrations decreased with increasing distance from the head of the ditch. No COPCs were identified in groundwater. The risk assessment concluded that levels of exposure would be acceptable for human receptors. No further action is recommended at Site 5, and preparation of a decision document is recommended.

Site 8 - Base Septic System. The RI conclusion for Site 8 found no COPCs and no further action was recommended. Based on the results, this RI recommends no further action for surface and subsurface soils and groundwater. However, the septic system structures remain a potential source for contamination to soil and groundwater. The septic system structures should be cleaned and abandoned in place. Pending completion of abandonment of the septic system structures, preparation of a decision document is recommended.

Site 9 - Ramp Drainage Outfall. The RI risk assessment results found that COPCs identified at Site 9 in surface soils posed no unacceptable risk. Therefore, no further action is recommended for Site 9, and preparation of a decision document is recommended.

ENVIRONMENTAL RESTORATION PROGRAM

DRAFT-FINAL REMEDIAL INVESTIGATION REPORT

FOR
SITES 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, AND 12

106TH RESCUE WING
NEW YORK AIR NATIONAL GUARD
FRANCIS S. GABRESKI AIRPORT
WESTHAMPTON BEACH, NEW YORK

1.0 INTRODUCTION

A Remedial Investigation (RI) was conducted at Sites 1, 2, 3, 7, 10, 11, and 12 at the 106th Rescue Wing (RQW), New York Air National Guard (ANG), located at the Francis S. Gabreski Airport in Westhampton Beach, New York. Figure 1.1 shows the location of the Francis S. Gabreski Airport in relation to Long Island, New York, and to the local area. The sites that were investigated include:

- Site 1 – Aviation Gasoline (AVGAS) Spill Site
- Site 2 - Former Hazardous Waste Storage Area (1970 to 1982)
- Site 3 - Former Waste Storage Area (1984 to 1989)[1]
- Site 7 - Former Fire Training Area (FTA)
- Site 10 - Waste Stripper Tank
- Site 11 - Trench Drain Sump[2]
- Site 12 - Spill Site Northwest of Building 370

Figure 1.2 shows the locations of Sites 1, 2, 3, 7, 10, 11, and 12 in relation to the 106th RQW ANG facility. Sites 4, 5, and 9, which were not part of this RI, but included in discussions of

[1] Historically, this site was referred to as the "Current Waste Storage Area." For clarity, the site will be referred to herein as the "Former Waste Storage Area."
[2] Formerly, this site was incorrectly referred to as the "Waste Oil Vessel." The site will be referred to herein as the "Trench Drain Sump."

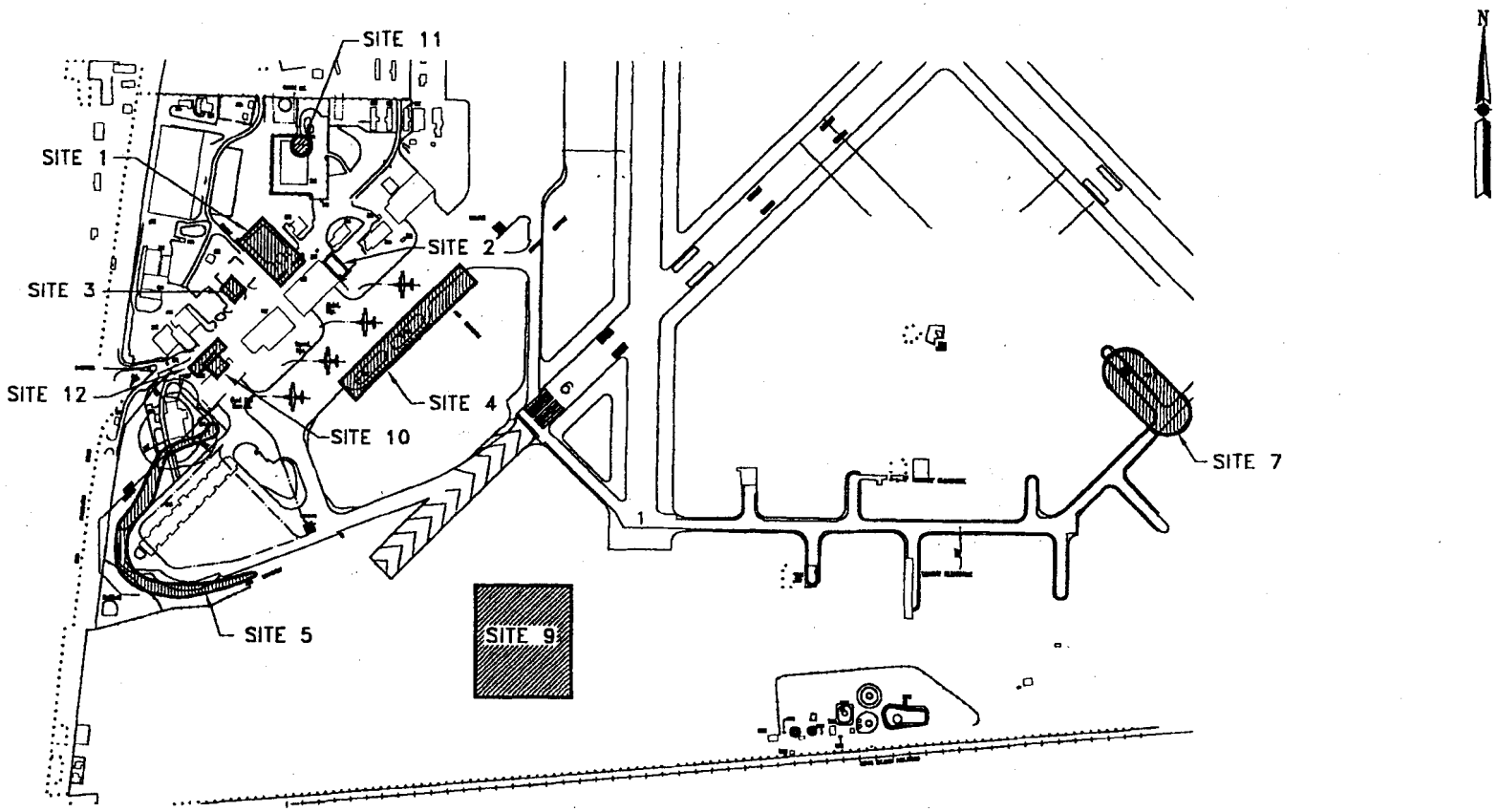
previous investigative work, are also shown on Figure 1.2, and discussed in Section 2.4.2.3. Site 8, which is also included in discussions of previous work, is a composite of cesspools, septic tanks, dry wells, etc., at numerous locations throughout the base. Site 8 is shown on Figure 1.3, and discussed in Section 2.4.2.3. Information and data for Sites 4, 5, 8, and 9 developed during previous investigations were evaluated and incorporated into this RI. The primary sources for Sites 4, 5, 8, and 9 were the "Site Investigation Report" [ABB-Environmental Services (ABB-ES), May 1997], and "Revised Draft Remedial Investigation, Sites 4, 5, 8, and 9" [Stone & Webster Environmental Technology & Services (S&W), January 1999]. The focus was to organize and present the existing data in a comprehensive fashion.

The sites evaluated and incorporated into this RI are:

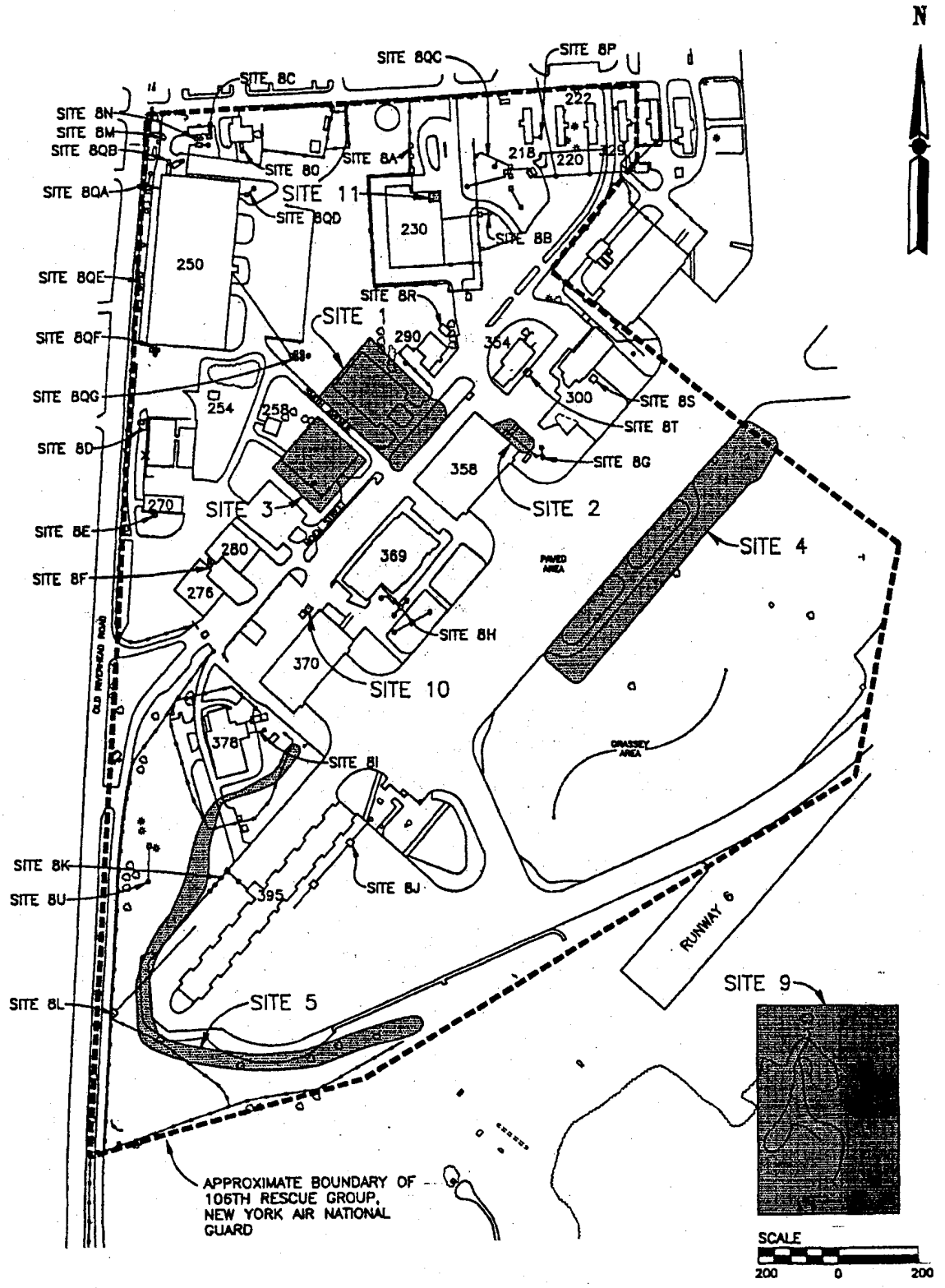
- Site 4 – Aircraft Refueling Apron Spill Site
- Site 5 – Southwest Storm Drainage Ditch
- Site 8 – Old Base Septic System - Cells 1, 2, 3, 4, and 5
- Site 9 – Ramp Drainage Outfall

PEER Consultants, P.C. (PEER), has been tasked by the ANG/Environmental Division, Installation Restoration Branch (ANG/CEVR) to conduct this RI. The RI was necessary due to the potential for contamination in surface soils, subsurface soils, and groundwater in the vicinity of the sites, which was detected or presumed to be present during previous investigations.

A kickoff/scoping meeting was held at the base on March 29, 2000. Representatives from the New York State Department of Environmental Conservation (NYSDEC), the ANG/CEVR, the base, the Suffolk County Department of Health Services (SCDHS), and PEER were present when the project objectives were discussed. A regulatory meeting was held at the base on August 31, 2000. The NYSDEC, the ANG/CEVR, the 106th RQW, SCDHS, and PEER were present. Revisions to the RI Work Plan were discussed, finalized, and were incorporated.



PEER PROJ./1566-053 FILE:FIG-1.2-IRP-SITES	IRP SITE LOCATION MAP 106th RESCUE WING, NEW YORK ANG FRANCIS S. GABRESKI AIRPORT WESTHAMPTON BEACH, NEW YORK	FIGURE 1.2



SOURCE: ABB ENVIROMENTAL SERVICES, INC. 1997

PEER PROJ./1566-053 FILE: SITE8.FIG1.3.DWG	SITE 8 – LOCATION MAP 106th RESCUE WING, NEW YORK AIR NATIONAL GUARD FRANCIS S. GABRESKI AIRPORT WESTHAMPTON BEACH, NEW YORK	FIGURE 1.3

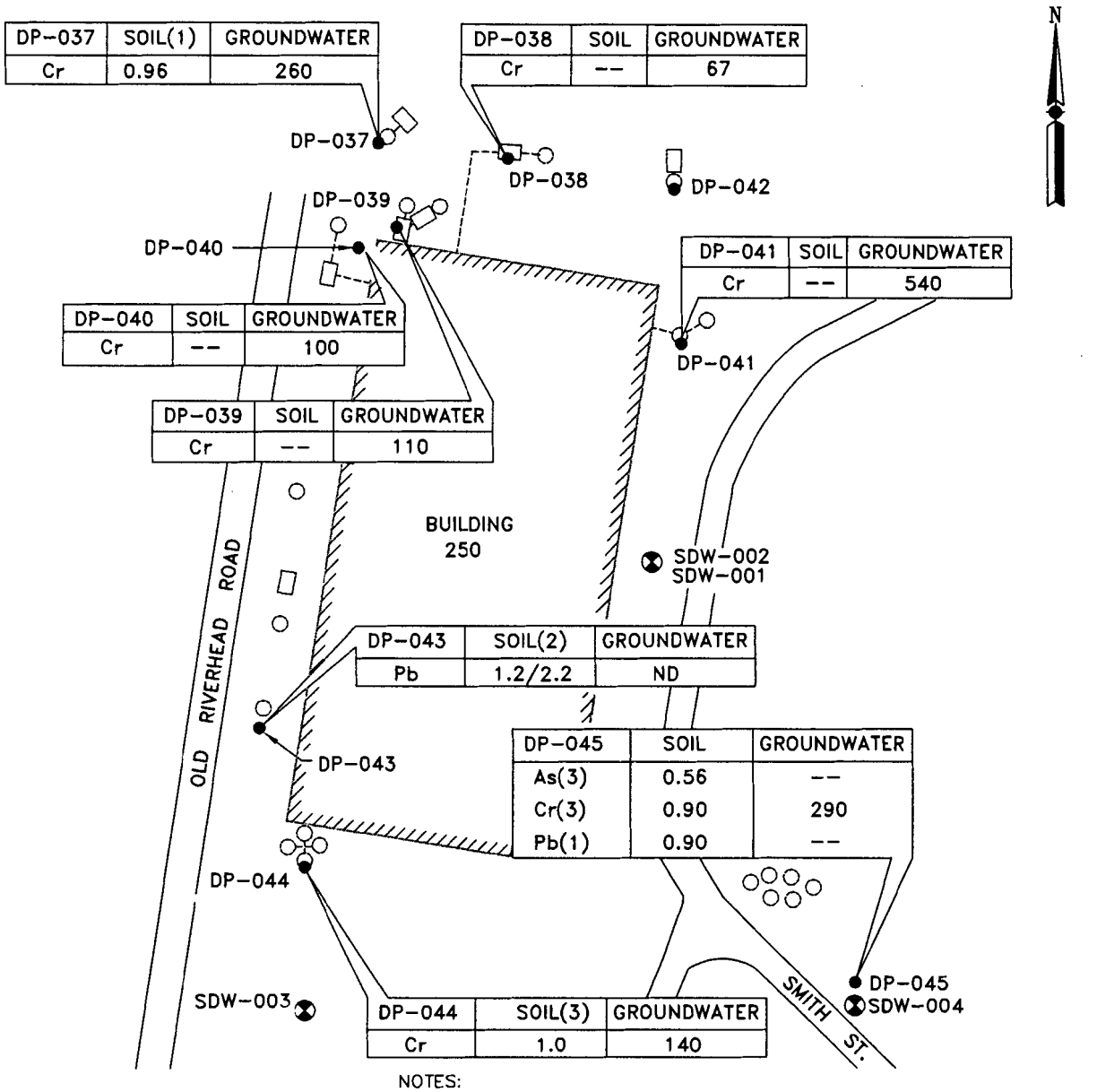
monitoring wells. A summary of the results is shown on Figure 2.11. ABB-ES attributed the higher chromium concentrations in the direct-push groundwater samples to the collection methodology which resulted in elevated concentrations of suspended sediment. Presumably, adsorbed chromium entrained with the suspended sediment entered solution when the samples were preserved, resulting in the detection of elevated concentrations of chromium (ABB-ES 1997). The Site Investigation recommended that no further field investigation be conducted at Site 8 - Cell 1.

Site 8 - Cell 2

PCE and fuel-related compounds exceeded NYSDEC Action Levels in groundwater samples (DP-046, SDW-005) collected north and south of Building 230 (Figure 2.12). The source of this contamination was not identified, and the horizontal and vertical extent was not defined. PCE was not detected in downgradient, Cell 3 monitoring wells SDW-007, SDW-008, and SDW-009 (ABB-ES 1997).

Metals were detected in subsurface soil samples at concentrations above previous NYSDEC Action Levels, but within background levels for the eastern United States. Therefore, no further investigation was recommended for metals at Cell 2 (ABB-ES 1997).

The Site Investigation suggested that contamination at Cell 2 was the result of two separate sources: wastewater discharges in the vicinity of Building 230, and migration of a plume from the county-operated portion of Suffolk County Airport located upgradient (north) of the site (ABB-ES 1997). Site Investigation data suggested that the Suffolk County Plume extended onto base property at least 220 ft, but the leading edge was not well defined during the Site Investigation. Documentation was not available to PEER regarding the county-initiated recovery system developed to address this contamination (ABB-ES 1997).



LEGEND

- ● DIRECT PUSH BORING
- ⊗ MONITORING WELL
- ○ CESSPOOL
- □ SEPTIC TANK
- -- BELOW ACTION LEVEL OR NOT DETECTED.

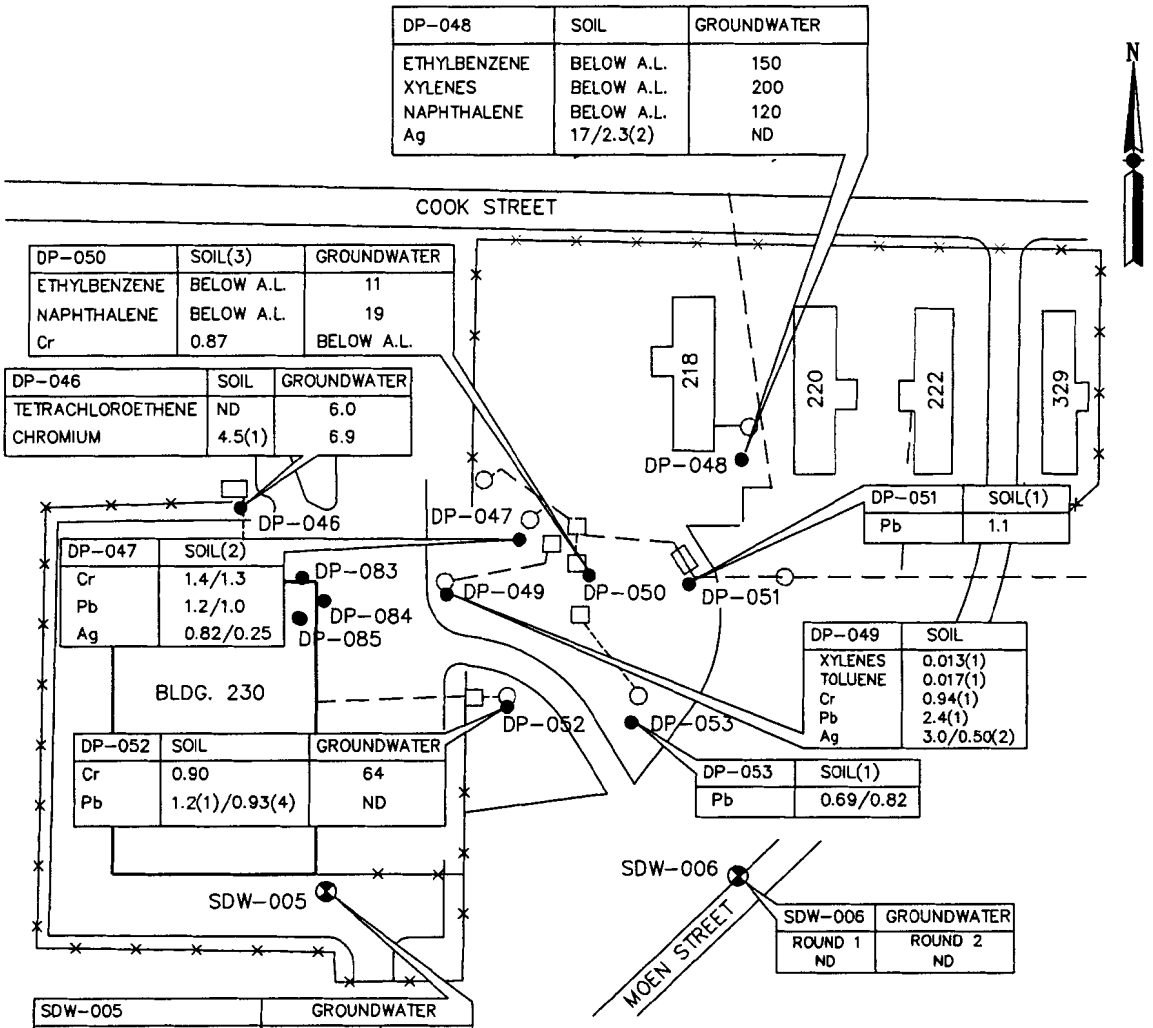
NOTES:

1. INORGANIC COMPOUND RESULTS IN SUBSURFACE SOIL COMPARED TO BACKGROUND CONCENTRATIONS (ABB-ES 1997)
2. GROUNDWATER RESULTS COMPARED TO FEDERAL AND NEW YORK STATE DRINKING WATER STANDARDS.
3. (1) 20-22 FT BGS
   (2) 20-22 FT BGS/30-32 FT BGS
   (3) 30-32 FT BGS
4. SOIL RESULTS REPORTED IN mg/kg
5. GROUNDWATER RESULTS REPORTED IN ug/L

60 0 60
SCALE IN FEET

SOURCE: ADAPTED FROM ABB-ES, 1997

PEER PROJ./1566-053 SITE-8-FIG-2.11.R2	SITE 8 - CELL 1 - 1994 DIRECT PUSH SOIL AND GROUNDWATER RESULTS 106th RESCUE WING, NEW YORK AIR NATIONAL GUARD FRANCIS S. GABRESKI AIRPORT WESTHAMPTON BEACH, NEW YORK	FIGURE 2.11



DP-048	SOIL	GROUNDWATER
ETHYLBENZENE	BELOW A.L.	150
XYLENES	BELOW A.L.	200
NAPHTHALENE	BELOW A.L.	120
Ag	17/2.3(2)	ND

DP-050	SOIL(3)	GROUNDWATER
ETHYLBENZENE	BELOW A.L.	11
NAPHTHALENE	BELOW A.L.	19
Cr	0.87	BELOW A.L.

DP-046	SOIL	GROUNDWATER
TETRACHLOROETHENE	ND	6.0
CHROMIUM	4.5(1)	6.9

DP-047	SOIL(2)
Cr	1.4/1.3
Pb	1.2/1.0
Ag	0.82/0.25

DP-051	SOIL(1)
Pb	1.1

DP-049	SOIL
XYLENES	0.013(1)
TOLUENE	0.017(1)
Cr	0.94(1)
Pb	2.4(1)
Ag	3.0/0.50(2)

DP-052	SOIL	GROUNDWATER
Cr	0.90	64
Pb	1.2(1)/0.93(4)	ND

DP-053	SOIL(1)
Pb	0.69/0.82

SDW-006	GROUNDWATER	
	ROUND 1	ROUND 2
	ND	ND

SDW-005	GROUNDWATER	
	ROUND 1	ROUND 2
1,2-DICHLOROBENZENE	BELOW A.L.	190
1,3-DICHLOROBENZENE	18	81
1,4-DICHLOROBENZENE	13	82
ETHYLBENZENE	BELOW A.L.	7.7
TETRACHLOROETHENE	14	36
NAPHTHALENE	BELOW A.L.	16
As	BELOW A.L.	27

NOTES:
1. RESULTS FOR INORGANIC COMPOUNDS IN SOIL COMPARED TO BACKGROUND CONCENTRATIONS (ABB-ES 1997).
2. GROUNDWATER RESULTS COMPARED TO FEDERAL AND NEW YORK STATE DRINKING WATER STANDARDS.
3. RESULTS FOR ORGANIC COMPOUNDS IN SOIL COMPARED TO NYSDEC GUIDANCE LEVELS (ABB-ES 1997).
4. (1) 20-22 FT BGS
   (2) 20-22 FT BGS/27-29 FT BGS
   (3) 32-34 FT BGS
   (4) 31-33 FT BGS
5. SOIL RESULTS REPORTED IN mg/kg
6. GROUNDWATER RESULTS REPORTED IN ug/L

LEGEND
- ● DIRECT PUSH BORING
- ⊗ MONITORING WELL
- ○ CESSPOOL
- □ SEPTIC TANK
- A.L. ACTION LEVEL
- ND NOT DETECTED
- BGS BELOW GROUND SURFACE

SOURCE: ADAPTED FROM ABB-ES, 1997

60 0 60
SCALE IN FEET

PEER
PROJ./1566-053
SITE-8-FIG-2.12.R2

SITE 8 - CELL 2 - 1994 DIRECT PUSH SOIL AND GROUNDWATER RESULTS
106th RESCUE WING, NEW YORK AIR NATIONAL GUARD
FRANCIS S. GABRESKI AIRPORT
WESTHAMPTON BEACH, NEW YORK

FIGURE 2.12

Site 8 - Cell 3

PCE was detected at a level slightly above NYSDEC Action Levels in one direct-push groundwater sample (DP-057) collected east of Building 358 at Cell 3. The compound was also found in a groundwater sample from one well, but below NYSDEC Action Levels, as shown on Figure 2.13. PCE was not detected at Site 2 upgradient of Site 8 - Cell 3, suggesting the source area was associated with the Site 8G cesspool, rather than from the Suffolk County Airport Plume. PCE was not detected in Site 4 groundwater, downgradient of Cell 3 to the south/southeast, indicating that the contamination had not migrated beyond its source area (ABB-ES 1997).

Site 8 - Cells 4 and 5

Fuel-related compounds were detected during the 1994 Site Investigation above NYSDEC Action Levels in subsurface soil collected at Cells 4 and 5. This contamination may have been associated with wastewater discharges to cesspools located between Buildings 276 and 280. TCE was detected in groundwater from monitoring wells at Cells 4 and 5 at concentrations above the NYSDEC Action Level. Benzene was also detected in groundwater at the NYSDEC Action Level. Metals were detected in subsurface soil samples collected at Cells 4 and 5 at concentrations above NYSDEC Action Levels, but within eastern United States background levels. The contaminants detected in soil and groundwater are shown on Figure 2.14 for Cell 4, and on Figure 2.15 for Cell 5 (ABB-ES 1997).

1998 Remedial Investigation

S&W conducted further investigations of Site 8 during 1998, as documented in the revised Draft RI Report (S&W 1999). S&W collected samples of surface and subsurface soil and groundwater using direct-push methodology at Site 8 - Cell 2, Site 8 - Cell 3, and Site 8 - Cells 4 and 5. The samples were analyzed for volatile and semivolatile organic compounds and metals.

S&W's investigations at Site 8 included the following activities:

- Cell 1 was not investigated, since further investigation was not recommended in the Site Investigation Report.

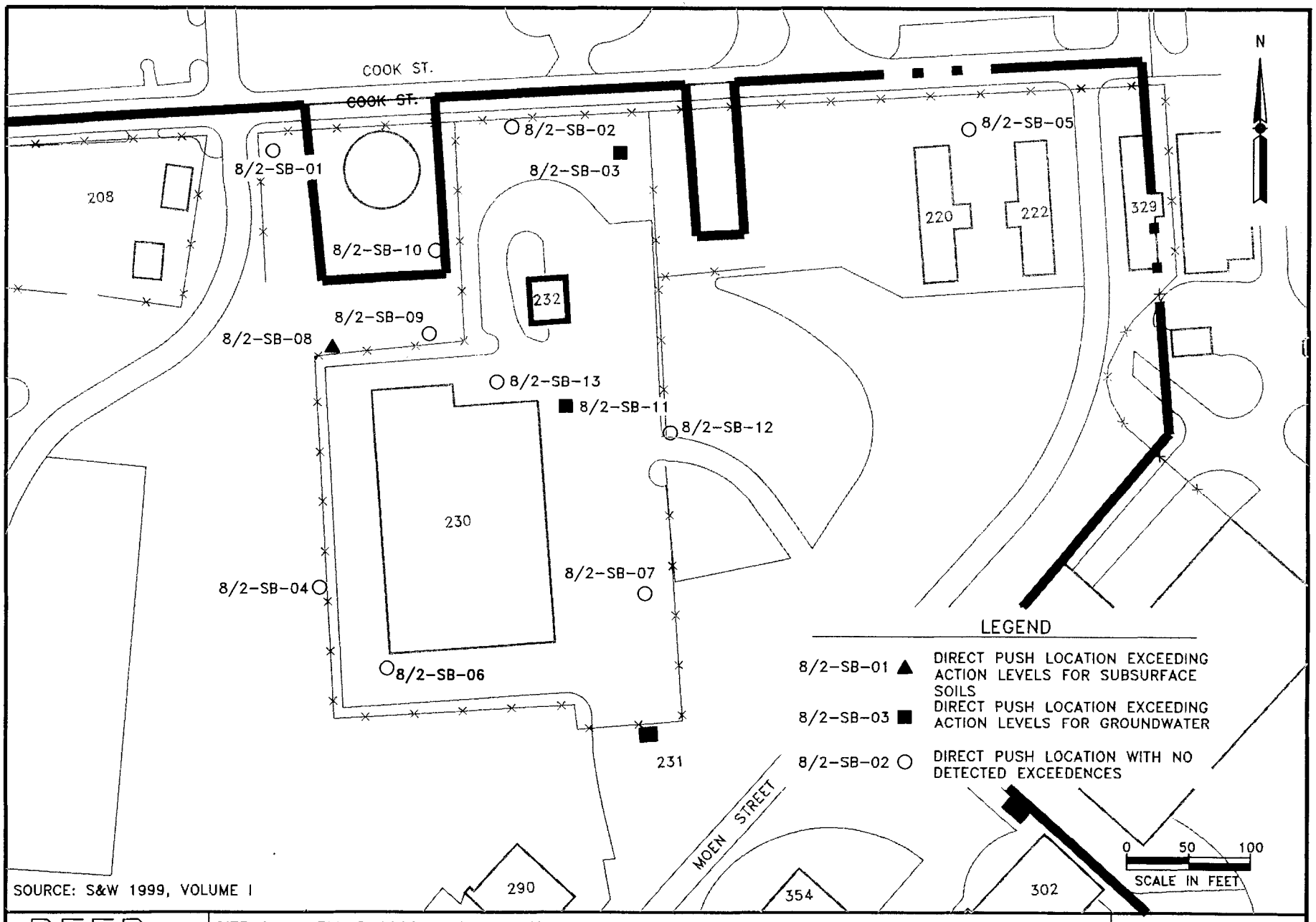
- Cell 2 was investigated for the nature and extent of contamination by volatile and semivolatile organic compounds in surface and subsurface soils and groundwater. Metals contamination was not investigated as per the recommendation in the Site Investigation Report.

- Cell 3 was investigated for subsurface and groundwater contamination by volatile organic compounds and lead. One new monitoring well, SW-4, was installed and sampled. Surface soils were not investigated due to the presence of paving. Semivolatile organic compounds were not investigated based on the recommendation of the Site Investigation Report.

- Cells 4 and 5 were investigated for surface and subsurface soils and groundwater contamination by volatile and semivolatile organic compounds.

Site 8 - Cell 2

Cell 2 had three contaminants of concern (COCs) identified in surface soil, consisting of the PAHs benzo(a)pyrene, chrysene, and benzo(a)pyrene; four COCs identified in direct-push groundwater, consisting of the volatile and semivolatile organic compounds ethylbenzene, xylenes (total), phenol, and naphthalene; and three COCs were identified in monitoring well groundwater, consisting of the volatile organic compounds benzene, ethylbenzene, and xylenes (total). The COCs were identified in the vicinity of Building 230, Vehicle Maintenance (S&W 1999). The 1998 sample locations at Site 8 - Cell 2 are shown on Figure 2.16. Exceedances of NYSDEC Action Levels for the 1998 soil samples are summarized on Table 2.16, and for the 1998 direct-push groundwater samples on Table 2.17.



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PROJ./1566-053

FILE: FIG 2.16GW.DWG

SITE 8 – CELL 2 1998 DIRECT PUSH BORING LOCATIONS
106th RESCUE WING, NEW YORK AIR NATIONAL GUARD
FRANCIS S. GABRESKI AIRPORT
WESTHAMPTON BEACH, NEW YORK

FIGURE
2.16

Table 2.16
Site 8 - Cell 2 - Shallow Surface Soil Contamination
106th Rescue Wing
New York Air National Guard
Francis S. Gabreski Airport
Westhampton Beach, New York

Sample	Action Levels		8/2-SB-08
Depth (BGS)	Saturated	Unsaturated	0 - 3 in.
Semivolatile Organic Compounds (µg/kg)			
Benzo(a)anthracene	330	300	**800**
Chrysene	400	400	**980**
Benzo(a)pyrene	0.33	330	**750**

Source: Revised Draft Remedial Investigation, Sites 4, 5, 8, and 9, S&W 1999, Volume II, Appendix C.

BGS Below ground surface.

Notes:

1. Action Levels from ABB-ES 1997, and NYS-TAGM #4046.

Table 2.17
Site 8 - Cell 2 - Direct-Push Groundwater Contamination - 1998 RI
106th Rescue Wing
New York Air National Guard
Francis S. Gabreski Airport
Westhampton Beach, New York

Sample	Action Levels		8/2-SB-03	8/2-SB-11
Depth BGS	NYS	MCL	29 - 33 ft BGS	29 - 33 ft BGS
Volatile Organic Compounds (µg/L)				
Ethylbenzene	5	700	29	76
Total Xylenes	5	10,000	71 J	180 J
Phenol	1	NA	2 J	ND
Semivolatile Organic Compounds (µg/kg)				
Naphthalene	10	NA	15	44

Source: Revised Draft Remedial Investigation, Sites 4, 5, 8, and 9, S&W 1999, Volume II, Appendix C.

BGS Below ground surface.
J Estimated value.
MCL USEPA maximum contaminant level.
NA Not applicable.
ND Not detected.
NYS New York State, TAGM #4049.

Note:

1. Action Levels from ABB-ES 1997, and NYS-TAGM #4046.

In the Revised Draft RI Report, S&W speculated that the maintenance and parking areas in and around Building 230, and the presence of the cesspool at the site may have contributed to contamination identified in soil at this site. Site 8 - Cell 2 was the most upgradient site included in the RI conducted by S&W (S&W 1999). The presence of groundwater contamination in on-site borings indicated the potential for the upgradient and off-site contribution of contamination to the site. PAHs were detected in shallow surface soil samples in grassy areas adjacent to a paved parking lot. Runoff from vehicle maintenance activities inside Building 230 and precipitation runoff in the external parking areas surrounding this building may have been the source of PAHs in surface soil. Elevated concentrations of soil contamination by PAHs contamination were detected at a topographic low point in the vicinity of Building 230 (S&W 1999).

Site 8 - Cell 3

S&W's investigation of Site 8 - Cell 3 found no exceedances of NYSDEC Action Levels by any analytes. Although lead was detected in subsurface soils, it did not exceed NYS background concentrations. No exceedances occurred in either direct-push or monitoring well groundwater samples. Sample locations at Site 8 - Cell 3 are shown on Figure 2.17.

Site 8 - Cells 4 and 5

S&W's investigation of Site 8 - Cells 4 and 5 found one semivolatile organic compound, the PAH pyrene, that exceeded its NYSDEC Action Level, in shallow surface soil. The semivolatile organic compound naphthalene exceeded NYSDEC Action Level in one direct-push groundwater sample. No exceedances occurred in subsurface soils or in the single monitoring well groundwater sample. S&W theorized that the presence of petroleum and other chemicals at the site may have resulted in the introduction of pyrene to the surface soil (S&W 1999). Sample locations at Site 8 - Cells 4 and 5 for S&W's investigation are shown on Figure 2.18, and exceedances in surface soils and groundwater are summarized on Tables 2.18 and 2.19, respectively.

No volatile or semivolatile organic compounds, which are typically associated with solvent or fuel contamination, were detected in soil samples collected from this site. Arsenic, chromium, and lead were detected in exceedance of previous NYSDEC Action Levels in subsurface soils collected from this site. However, since none of the metals detected exceeded the range of average concentrations in the eastern United States or NYS background soils, these metals were considered to be naturally occurring soil (ABB-ES 1997). Figure 2.21 presents the results of the previous investigation graphically and shows the locations of the previously installed soil borings.

Chromium was the only analyte detected above previous NYSDEC Action Levels in subsurface soils collected from this site. However, the level detected was below the average range of concentrations detected in NYS background soils; therefore, the metal was deemed to be naturally occurring (ABB-ES 1997).

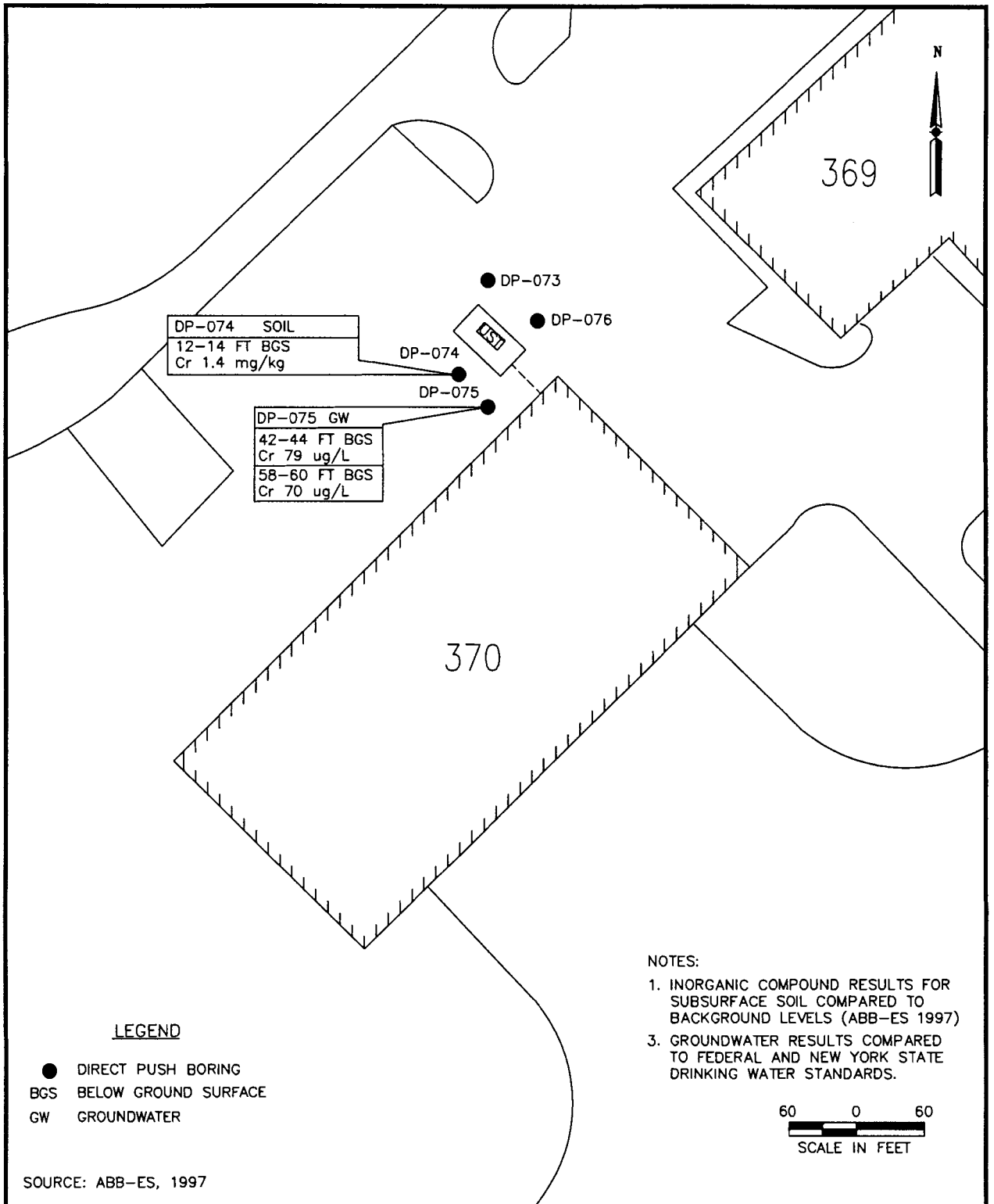
PCE was detected in three unsaturated soil samples at 7, 14, and 16 ft BGS, and in groundwater. The chemical was not detected in soil samples collected at 30 ft BGS, which was interpreted to suggest that the overlying soils may not be the source of PCE in groundwater at Site 10. None of the detected concentrations of PCE exceeded applicable guidance levels (ABB-ES 1997).

Chromium was the only analyte detected above NYSDEC Action Levels and MCLs in groundwater. However, the sample was collected from a direct-push boring and not a monitoring well, therefore, the level of metal detected was attributed to the high levels of suspended sediments (ABB-ES 1997).

The Site Investigation recommended no further action at Site 10.

2.3.2.10 Site 11, Trench Drain Sump, Building 230

The site was not addressed in the Phase I Records Search, but was added to the IRP in 1992. A Site Investigation was performed in 1994 (ABB-ES 1997).



PEER PROJ./1566-053 SITE-10-FIG-2.21.R2	SITE 10 - 1994 DIRECT PUSH SOIL AND GROUNDWATER RESULTS 106th RESCUE WING, NEW YORK AIR NATIONAL GUARD FRANCIS S. GABRESKI AIRPORT WESTHAMPTON BEACH, NEW YORK	FIGURE 2.21

During renovations in 1994 at Building 230, an underground cylindrical structure measuring approximately 2 ft in diameter and 18 ft deep, then assumed to be a waste oil vessel, was discovered beneath the floor on the northeast corner of the building. An unknown quantity of oil and/or water was found to be contained in the cylindrical structure. The sump has recently been determined to be constructed of ¼-in steel pipe, with a welded steel bottom and a bolt-down steel plate cap. Traces of an asphalt lining are visible as is minor corrosion. A fill pipe enters the sump at approximately 6 ft above the bottom, and is connected to the former trench drain system that served the floor jacks. The 106th RQW has removed residual liquids and steam-cleaned the sump. Currently, the sump contains about ½ in. of water. No evidence of leakage from the sump has been observed. The sump appears sound and intact (Lt Col Jerry Webb, personal communication, 2000). Because the trench drain sump received runoff that could have included hydraulic oil, PCB contamination is of concern at this site.

Three direct-push soil borings were installed during the Site Investigation at Site 11, to assess the impact of any possible release of waste oil on subsurface soils and groundwater. Two of the soil borings were completed at 30 ft BGS and did not encounter groundwater. One boring that was driven to 35 ft BGS encountered groundwater at 33 ft BGS. The metals chromium and lead were detected in subsurface soils exceeding previous NYSDEC Action Levels at all three of the borings, while arsenic exceeded previous NYSDEC Action Levels at two borings. The metal chromium was detected exceeding the previous NYSDEC Action Levels in the single direct-push groundwater sample. Tables 2.23 and 2.24 summarize the analytes detected above action limits at Site 11 (ABB-ES 1997).

No volatile or semivolatile organic compounds, which are typically associated with solvent or fuel contamination, were detected in soil samples collected from this site. Arsenic, chromium, and lead were detected in exceedance of previous NYSDEC Action Levels in subsurface soils collected from this site. However, since none of the metals detected exceeded the range of average concentrations in the eastern United States or NYS background soils, these metals were considered to be naturally occurring constituents of the soil (ABB-ES 1997). Figure 2.22 shows the previous direct-push sample locations at Site 11.

Table 2.23
Subsurface Soil Results Above Action Levels [a]
Site 11 – Trench Drain Sump, Building 230
106th Rescue Wing
New York Air National Guard
Westhampton Beach, New York

Analyte	Previous Action Level (mg/kg)	Depth (ft BGS)	Sample Location	Concentration (mg/kg)
Arsenic	0.20	29 – 30	DP-083	0.28
	0.20	15 – 17	DP-084	0.22
	0.20	29 – 30	DP-084	0.24
Chromium	0.84	8 – 10	DP-083	1.3
	0.84	8 – 10	DP-084	1.7
	0.84	15 – 17	DP-084	0.97
	0.84	8 – 10	DP-085	0.85
Lead	0.65	8 – 10	DP-083	0.78
	0.65	29 – 30	DP-083	0.65
	0.65	8 – 10	DP-084	1.3
	0.65	15 – 17	DP-084	0.75
	0.65	8 – 10	DP-085	0.84

Source: ABB-ES 1997.

DP Direct probe.
BGS Below ground surface.

Note:

1. Only exceedances shown.

Table 2.24
Groundwater Results Above Action Levels [a]
Site 11 – Trench Drain Sump, Building 230
106th Rescue Wing
New York Air National Guard
Westhampton Beach, New York

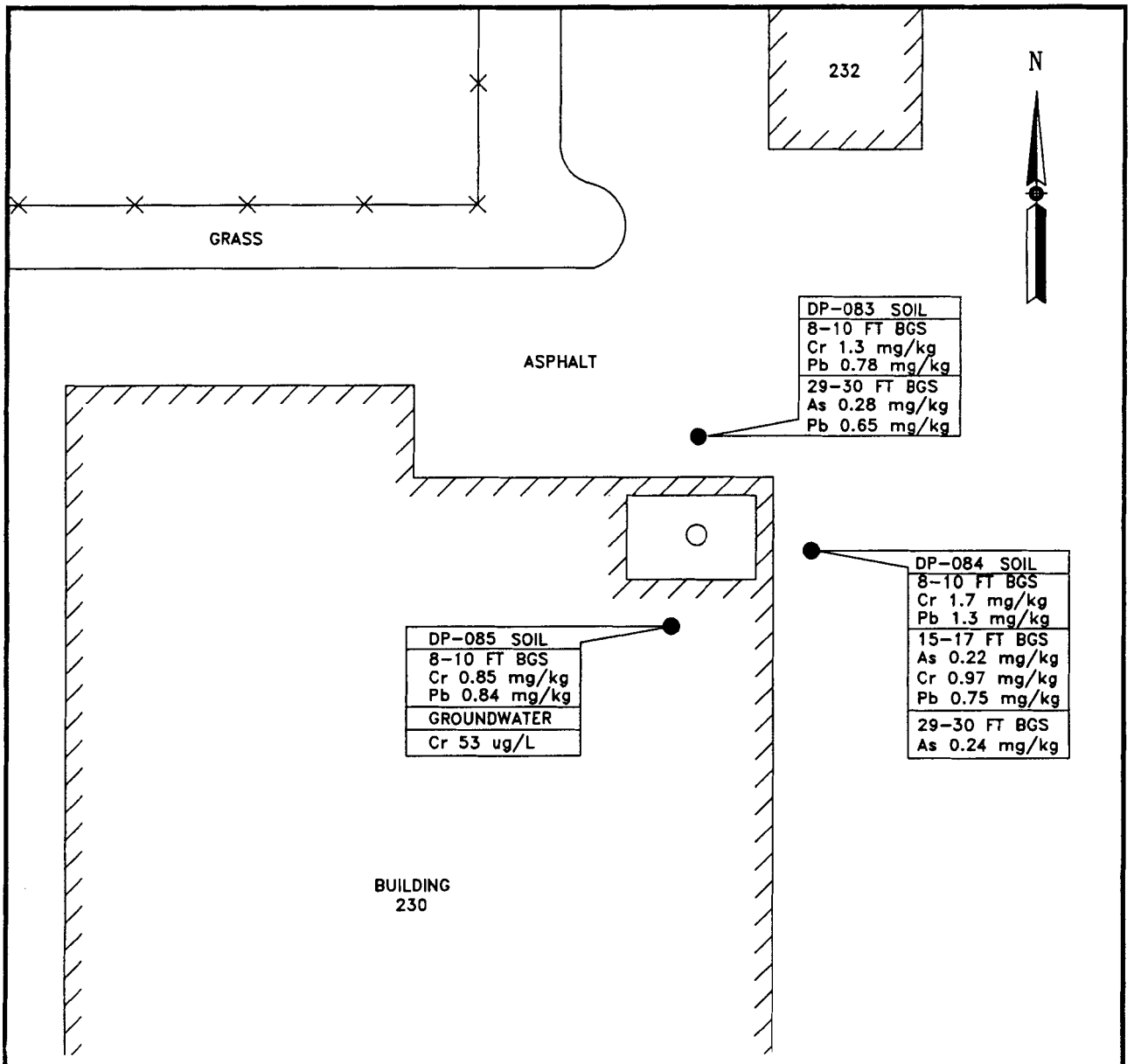
Analyte	Action Level (µg/L)	Depth (ft BGS)	Sample Location	Concentration (µg/L)
Chromium	50	8 – 10	DP-085	53

Source: ABB-ES 1997.

DP Direct probe.
BGS Below ground surface.

Note:

1. Only exceedances shown.



LEGEND

- DIRECT PUSH BORING
- FENCE
- WASTE OIL VESSEL

BGS BELOW GROUND SURFACE

NOTES:

1. SUBSURFACE SOIL RESULTS COMPARED TO BACKGROUND CONCENTRATIONS (ABB-ES 1997)
2. GROUNDWATER RESULTS COMPARED TO FEDERAL AND NEW YORK STATE DRINKING WATER STANDARDS

15 0 15
SCALE IN FEET

SOURCE: ABB-ES, 1997

PEER PROJ./1566-053 SITE-11-FIG-2.22.R2	SITE 11 - 1994 DIRECT PUSH SOIL AND GROUNDWATER SAMPLING RESULTS 106th RESCUE WING, NEW YORK AIR NATIONAL GUARD FRANCIS S. GABRESKI AIRPORT WESTHAMPTON BEACH, NEW YORK	FIGURE 2.22

Chromium was the only analyte detected above the reporting limits and exceeding the NYSDEC Action Level in groundwater. However, the sample was collected from a direct-push boring and not a monitoring well. Therefore, the level of chromium detected was attributed to the high levels of suspended sediments (ABB-ES 1997).

The Site Investigation recommended no further action at Site 11.

2.3.2.11 Site 12, Spill Site Northwest of Building 370

Contamination was detected in May 1999 when workers noted what was described as a "strange smell" or a "musty/petroleum" odor while working in an excavation installing a forced-main sewer line, at a depth from 8 ft to 15 ft BGS, on the northwest side of Building 370. Contamination persisted from 8 ft BGS to the total depth of the excavation at 15 ft BGS. The nature and extent of the contamination was unknown. A preliminary subsurface direct-push soil investigation was performed by the SCDHS, with collection of samples from three direct-push borings (I-2573, I-2574, and I-2575). Sample analyses tentatively identified isomers of TCP, a component of high temperature hydraulic fluid, at estimated concentrations of 100 µg/kg. However, subsequent samples did not confirm the previous tentative detections of TCP (I-5004). SCDHS sampling also identified PAHs exceeding Action Levels (I-5004). Table 2.25 presents the available data for Site 12. Figure 2.23 shows the approximate locations of the three SCDHS preliminary direct-push soil samples (I-2573, I-2574, and I-2575). Given the available documentation, PEER was not able to locate the subsequent sample (I-5004).

The nature and extent of contamination in soil and groundwater was unknown. No other investigations have been conducted at Site 12.

2.3.2.12 Basewide Groundwater

During the 1998 RI, 17 existing ,monitoring wells and 10 newly installed monitoring wells were sampled for analyses of volatile and semivolatile organic compounds. Two rounds of samples

Table 2.25
Direct-Push Soil Sample Analytical Results
Site 12 Spill Site Northwest of Building 370
106th Rescue Wing
New York Air National Guard
Westhampton Beach, New York

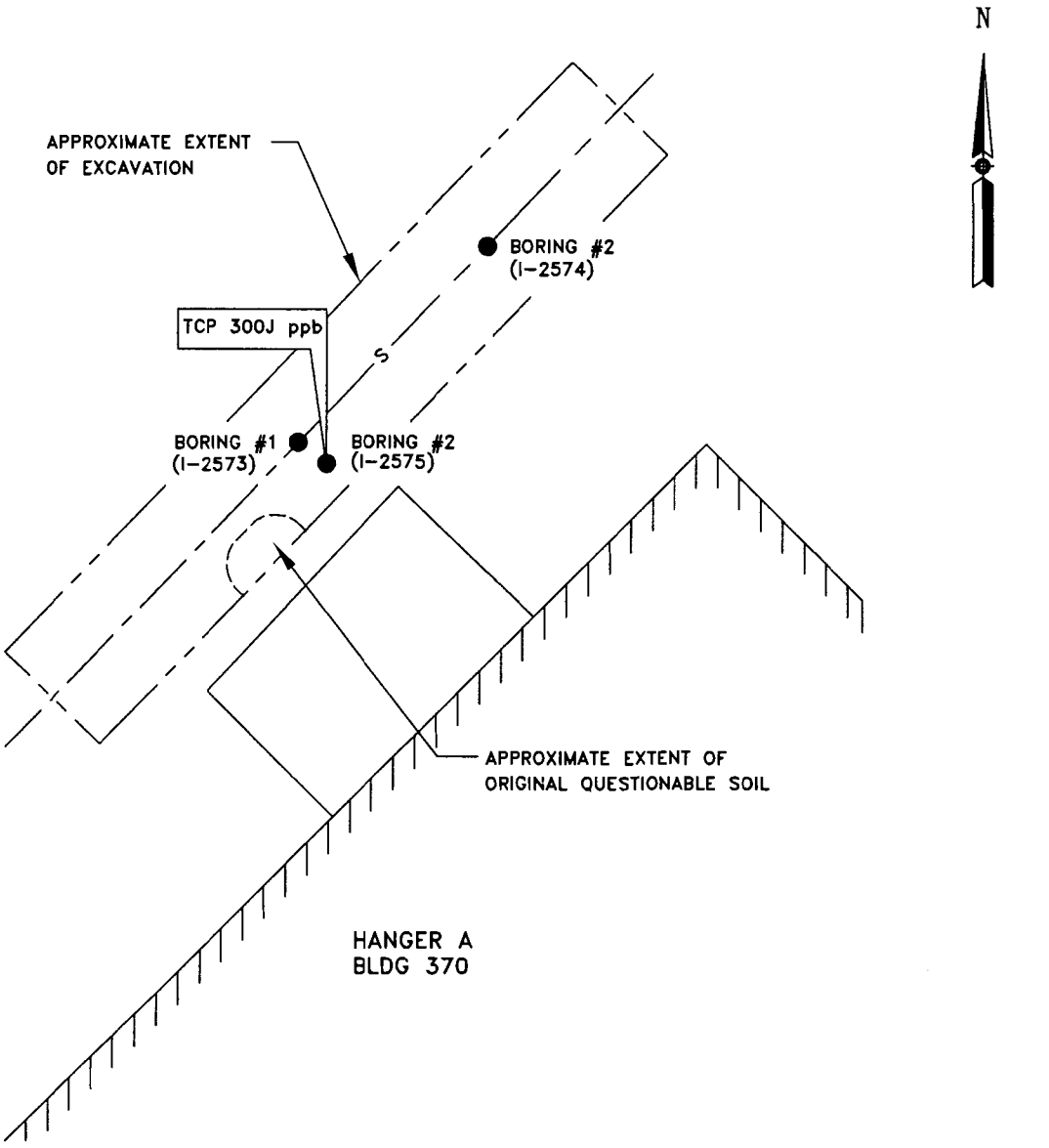
Analyte (ppb)	Action Levels	SCDHS Sample Identification				
		Probe No. 1 (I-2573)	Probe No. 2 (I-2574)	Probe No. 3 (I-2575)	I-5004	I-5004
		-1, -2, -3, -4, -5	-1, -2	-1	-1	-2
Acenaphthylene	41,000	NR	NR	NR	112	ND
Phenanthrene	50,000	NR	NR	NR	625	ND
Anthracene	50,000	NR	NR	NR	211	ND
Fluoranthene	50,000	NR	NR	NR	1,890	56.4 J
Pyrene	50,000	NR	NR	NR	2,020	ND
Benzo(a)anthracene	300	NR	NR	NR	**1,140**	ND
Chrysene	400	NR	NR	NR	**1,020**	ND
bis(2-ethyl hexyl)phthalate	50,000	NR	NR	NR	85.2 J	ND
Benzo(b)fluoranthene	1,100	NR	NR	NR	626	ND
Benzo(k)fluoranthene	1,100	NR	NR	NR	**1,440**	ND
Benzo(a)pyrene	60.9	NR	NR	NR	**1,080**	ND
Indeno(1,2,3-cd)pyrene	3,200	NR	NR	NR	425	ND
Dibenz(a,h)anthracene	14	NR	NR	NR	**190**	ND
Benzo(g,h,i)perylene	50,000	NR	NR	NR	360	ND
Tri-ortho cresyl phosphate	NA	ND	ND	300 J [(a)]	ND	ND
Gasoline	NA	NR	NR	NR	ND	ND
Lubricating Oil	NA	NR	NR	NR	ND	ND
Kerosene/Jet Fuel	NA	NR	NR	NR	ND	ND
Diesel Fuel, Fuel Oil #2	NA	NR	NR	NR	ND	ND
Fuel Oil #4	NA	NR	NR	NR	ND	ND
Fuel Oil #6	NA	NR	NR	NR	ND	ND

Source: SCDHS Memorandum, 1999.

J Indicates an estimated concentration.
NA Not applicable.
ND Not detected.
NR Not reported.

Notes:

1. Three isomer peaks tentatively identified, at 100 ppb each.
2. Shading and bolding indicate exceedances of action levels.



PEER PROJ./1566-053 SITE-12-FIG-2.23.R2	SITE 12 - APPROXIMATE LOCATIONS OF 1999 SCDHS SOIL BORINGS AND CONCENTRATIONS OF CONTAMINANTS 106th RESCUE WING, NEW YORK AIR NATIONAL GUARD FRANCIS S. GABRESKI AIRPORT WESTHAMPTON BEACH, NEW YORK	FIGURE 2.23

were collected from all 32 wells. The wells sampled corresponded in some cases to individual sites discussed previously in this section. However, the previously discussed results are included in this section as well, so as to provide continuity and clarity to the discussion of basewide groundwater results in this section.

The results of the basewide groundwater sampling for each round are discussed below.

Round 1

Six volatile organic compounds, 1,2-dichloroethylene (1,2-DEC), 1,1,1-TCA, PCE, toluene, and ethylbenzene; and five semivolatile organic compounds, 1,2-dichlorobenzene (1,2-DCB), 1,3-dichlorobenzene (1,3-DCB), 1,4-dichlorobenzene (1,4-DCB), naphthalene, and BEHP exceeded Action Levels in one or more groundwater samples collected during the Round 1 monitoring well sampling. Monitoring well locations sampled during Rounds 1 and 2 are shown in the 1998 RI Report (S&W 1998). Round 1 groundwater exceedances from 1998 are summarized on Table 2.26. Of the 32 wells sampled, 11 had one or more volatile or semivolatile organic compounds in exceedance of NYSDEC Action Levels. The monitoring wells with exceedances in Round 1 were: SDW-05, SDW-17, SDW-23, MW-03, PZ-04, SW-01, SW-02, SW-06, SW-07, SW-08, and SW-09.

Round 2

Five volatile organic compounds, benzene, ethylbenzene, toluene, and total xylenes; and four semivolatile organic compounds, 1,2-DCB, 1,3-DCB, 1,4-DCB, and naphthalene exceeded NYSDEC Action Levels in one or more groundwater samples collected during the Round 2 monitoring well sampling. Round 2 groundwater exceedances are summarized on Table 2.27. Of the 32 wells sampled, 12 had one or more volatile or semivolatile organic compounds in exceedance of action levels. The monitoring wells with exceedances in Round 2 were: SDW-005, SDW-023, MW-02, MW-03, PZ-02, PZ-04, SW-01, SW-02, SW-06, SW-07, SW-08, and SW-09.

Table 2.26
Basewide Groundwater Sample Results - Round 1 - 1998 RI
106th Rescue Wing
New York Air National Guard
Francis S. Gabreski Airport
Westhampton, New York

Sample	Action Levels		GAB-MWSD5	GAB-MWSD17	GAB-MWSD23	GAB-MWMW3	GAB-MWPZ4	GAB-MWSW1	GAB-MWSW2	GAB-MWSW6
Depth (BGS)	**NYS**	**MCL**	**37 ft**	**39 ft**	**31 ft**	**37 ft**	**40 ft**	**37 ft**	**50 ft**	**30 ft**
Volatile Organics (µg/L)										
1,2-dichloroethene (Total)	5	5	**15 J**	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	5	**11**	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	5	700	ND	ND	**10**	**72**	ND	**140**	ND	**150**
Total Xylenes	5	10,000	ND	ND	**43 J**	**570 J**	**6 J**	**50 J**	**30 J**	**1400 J**
Toluene	5	1000	ND	ND	ND	**230**	ND	ND	ND	**170**
1,1,1-Trichloroethane	5	200	ND	ND	ND	**14 J**	ND	ND	ND	ND
Semivolatile Organics (µg/L)										
1,3-Dichlorobenzene	5	5	**18**	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	4.7	75	**17**	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	4.7	5	**32**	ND	ND	ND	ND	ND	ND	ND
Bis(2-Ethylhexyl)phthalate	50	6	ND	**140**	ND	ND	ND	ND	ND	ND
Naphthalene	10	NA	ND	ND	ND	**28**	ND	ND	ND	**68**

Source: Revised Draft Remedial Investigation, Sites 4, 5, 8, and 9, S&W 1999, Volume II, Appendix C.

BGS Below ground surface.
J Estimated value.
MCL Maximum contaminant level.
ND Not detected.
NYS New York State Recommended Soil Cleanup Objectives.

Note:

1. Shading and bolding indicate exceedances of Action Levels.

Table 2.26 (Continued)
Basewide Groundwater Sample Results - Round 1 - 1998 RI
106th Rescue Wing
New York Air National Guard
Francis S. Gabreski Airport
Westhampton, New York

Sample	Action Levels		GAB-MWSW7	GAB-MWSW8	GAB-MWSW9
Depth (BGS)	NYS	MCL	35 ft	50 ft	50 ft
Volatile Organics (µg/L)					
1,2-dichloroethene (Total)	5	5	ND	ND	ND
Tetrachloroethene	5	5	ND	ND	ND
Ethylbenzene	5	700	**210**	**230**	**18**
Total Xylenes	5	10,000	**1900 J**	**770 J**	**77 J**
Toluene	5	1000	**14 J**	ND	ND
1,1,1-Trichloroethane	5	200	ND	ND	ND
Semivolatile Organics (µg/L)					
1,3-Dichlorobenzene	5	5	ND	ND	ND
1,4-Dichlorobenzene	4.7	75	ND	ND	ND
1,2-Dichlorobenzene	4.7	5	ND	ND	ND
Bis(2-Ethylhexyl)phthalate	50	6	ND	ND	ND
Naphthalene	10	NA	**40**	**58**	ND

Source: Revised Draft Remedial Investigation, Sites 4, 5, 8, and 9, S&W 1999, Volume II, Appendix C.

BGS Below ground surface.
J Estimated value.
MCL Maximum contaminant level.
ND Not detected.
NYS New York State Recommended Soil Cleanup Objectives.

Note:

1. Shading and bolding indicate exceedances of Action Levels.

Table 2.27
Basewide Groundwater Sample Results - Round 2 - 1998 RI
106th Rescue Wing
New York Air National Guard
Francis S. Gabreski Airport
Westhampton, New York

Sample	Action Levels		GAB-MWSD5	GAB-MWSD23	GAB-MWMW2	GAB-MWMW3	GAB-MWPZ2	GAB-MWPZ4	GAB-MWSW1	GAB-MWSW2	GAB-MWSW6
Depth (BGS)	**NYS**	**MCL**	**37 ft**	**31 ft**	**55 ft**	**38 ft**	**38 ft**	**40 ft**	**37 ft**	**50 ft**	**30 ft**
Semivolatile Organics (µg/kg)											
Benzene	0.7	5	ND	ND	ND	ND	ND	ND	ND	**2 J**	ND
1,2-Dichloroethene (Total)	5	5	6 J	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	5	1000	ND	ND	**13**	**970**	ND	ND	ND	ND	**200**
Ethylbenzene	5	700	ND	**22 J**	**10 J**	**440 J**	**5 J**	**2 J**	**5 J**	**60**	**160**
Total Xylenes	5	10,000	ND	**110 J**	**44 J**	**2100 J**	**31 J**	**18 J**	**37 J**	**9 J**	**1600 J**
Semivolatile Organics (µg/L)											
1,3-Dichlorobenzene	5	5	7 J	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	4.7	75	6 J	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	4.7	5	7 J	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	10	NA	ND	ND	ND	110	ND	ND	ND	ND	ND

Source: Revised Draft Remedial Investigation, Sites 4, 5, 8, and 9, S&W 1999, Volume II, Appendix C.

BGS Below ground surface.
J Estimated value.
MCL Maximum contaminant level.
ND Not detected.
NYS New York State Class GA Groundwater.

Notes:

1. Action Levels from ABB-ES 1997, and NYSDEC TAGM #4046.
2. Bolding and shading indicate concentrations at or above Action Levels.

Table 2.27 (Continued)
Basewide Groundwater Sample Results - Round 2 - 1998 RI
106th Rescue Wing
New York Air National Guard
Francis S. Gabreski Airport
Westhampton, New York

Sample	Action Levels		GAB-MWSW7	GAB-MWSW8	GAB-MWSW9
Depth (BGS)	NYS	MCL	30 ft	50 ft	50 ft
Volatile Organics (µg/L)					
1,2-dichloroethene	5	5	ND	ND	ND
Toluene	5	1000	ND	ND	ND
Ethylbenzene	5	700	**110**	**71**	ND
Total Xylenes	5	10,000	**1300 J**	**210 J**	**25 J**
Semivolatile Organics (µg/L)					
1,3-Dichlorobenzene	5	5	ND	ND	ND
1,4-Dichlorobenzene	4.7	75	ND	ND	ND
1,2-Dichlorobenzene	4.7	5	ND	ND	ND
Naphthalene	10	NA	**74**	**40**	**5 J**

Source: Revised Draft Remedial Investigation, Sites 4, 5, 8, and 9, S&W 1999, Volume II, Appendix C.

BGS Below ground surface.
J Estimated value.
MCL Maximum contaminant level.
ND Not detected.
NYS New York State Class GA Groundwater.

Notes:

1. Action Levels from ABB-ES 1997, and NYSDEC TAGM #4046.
2. Bolding and shading indicate concentrations at or above Action Levels.

which exceeds the ULBC of 6.1 mg/kg (ABB-ES 1997). Chromium was also detected in BK-DP02 at 0 to 2 ft BGS, at a concentration of 6.7 mg/kg, which exceeds the ULBC of 0.84 mg/kg (ABB-ES 1997). Lead was detected in the surface soil sample (0 to 0.3 ft) from BK-DP02 at a concentration of 12 mg/kg, which exceeds the NYSDEC RSCO of 4.4 mg/kg.

5.2.4 Background Groundwater Monitoring

Groundwater samples were collected during Rounds 1 and 2 from two on-base, upgradient monitoring wells, SDW-019 and SDW-020, and analyzed for:

- volatile organic compounds;
- semivolatile organic compounds;
- BTEX, TPH (GRO and DRO);
- tris(o-cresyl)phosphate (TCP), remediation parameters; and
- TAL metals.

Table 5.7 presents the results of volatile and semivolatile organic compounds analyses for the background samples and all other site-specific groundwater monitoring samples (except for Site 7) collected during this RI. As shown on Table 5.7, no volatile or semivolatile organic compounds were detected above the NYSDEC Action Levels at the background groundwater location; and no BTEX compounds, TPH, or TCP were detected in any of the samples.

Table 5.8 summarizes the results of TAL metals analyses for the background samples and all other site-specific groundwater monitoring samples (except for Site 7) collected during this RI. Chromium was detected at a concentration of 75 µg/L, which is above the NYSDEC Action Level of 50 µg/L, but below the MCL of 100 µg/L (Table 5.8). No other TAL metals were detected above the NYSDEC Action Levels. Figure 5.7 shows analytes with exceedances of NYSDEC Action Levels at the on-site background site.

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Table 5.7
Sites 1, 2, 3, 10, 11, 12, and Background
Rounds 1 and 2 Analytical Results -
Groundwater Monitoring - Volatile and Semivolatile Organic Compounds
106th Rescue Wing
New York Air National Guard
Westhampton Beach, New York

Parameter	Action Levels		Concentration Location [a]																		
			Background				Site 1			Site 2											
	NYS [b]	MCL [c]	SDW019-01	SDW019-02	SDW020-01	SDW020-02	S1MW01-01	S1MW01-02	S1MW02-01	SDW007-01	SDW007-02	SDW008-01	SDW008-R1	SDW008-02	SDW008-R2	SDW010-01	SDW010-02	SW04-02	S2MW01-01	S2MW01-02
BTEX (µg/L)																					
Toluene	5	1000	ND	ND	ND	ND	0.42	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND
m/p-Xylenes	5	10,000	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.47	ND
Volatile Organic Compounds (µg/L)																					
Carbon Disulfide	50	--	ND	ND	13	ND	0.7	ND	3	14	ND	2	4	ND	ND	0.4	ND	ND	0.9 J	5.0	
Chloroform	7	80	ND	ND	ND	ND	ND	ND	ND	5	0.6 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Tetrachloroethene	5	5	1B	ND	0.7 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.8 J	0.5 J	ND	ND	ND	
Toluene	5	1000	0.4 BJ	ND	0.6 BJ	ND	ND	ND	0.5 BJ	ND	0.7 J	0.5 J	0.6 BJ	ND	ND	0.2 J	ND	ND	ND	ND	
1,1,1-Trichloroethane	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.0	2	ND	
Trichloroethene	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2 J	ND	ND	ND	ND	
Total Xylenes	5	10,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.3 J	ND	
Semivolatile Organic Compounds (µg/L)																					
1,4-Dichlorobenzene	4.7	75	ND	ND	ND	ND	ND	0.8 BJ	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4 BJ	
Diethyl Phthalate	50 [d]	--	ND	ND	ND	ND	ND	ND	ND	2.0 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Di-n-octyl phthalate	50 [d]	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2 J	ND	ND	ND	ND	ND	
1,2,4-Trichlorobenzene	50 [e]	70	ND	ND	ND	ND	ND	0.9 BJ	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4 BJ	
TPH-GRO (µg/L)	--	--	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	
TPH-DRO (mg/L)	--	--	ND	ND	ND	ND	0.23	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.60	ND	
TCP (mg/L)	--	--	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

Parameter	Action Levels		Concentration Location [a]																		
			Site 3				Site 10					Site 11					Site 12					
	NYS [b]	MCL [c]	SDW004-01	SDW004-02	S3MW01-01	S3MW01-02	S10MW01-01	S10MW01-02	S10MW02-01	S10MW02-02	S10MW02-22 (Dup)	S11MW01-01	S11MW01-R1	S11MW01-R1D (Dup)	S11MW01-02	S11MW01-R2	S12MW01-01	S12MW01-21 (Dup)	S12MW01-02	S12MW02-01	S12MW02-02	S12MW02-22 (Dup)
BTEX (µg/L)																					
Toluene	5	1000	NA	NA	ND	ND	ND	ND	NA	NA	NA	ND	NA	NA	ND	NA	ND	ND	ND	NA	NA	NA
m/p-Xylenes	5	10,000	NA	NA	ND	ND	ND	ND	NA	NA	NA	ND	NA	NA	ND	NA	ND	ND	ND	NA	NA	NA
Volatile Organic Compounds (µg/L)																					
Carbon Disulfide	50	--	0.4 J	ND	0.6 J	7.0	ND	ND	ND	ND	ND	2	0.2 J	0.4 J	ND	ND	ND	0.3 J	ND	0.3 J	ND	ND
Chlorobenzene	5	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2 BJ	ND	ND	ND	ND
Chloroform	7	80	ND	ND	ND	ND	ND	ND	0.3 J	ND	0.5 J	ND	ND	ND	ND	ND	0.3 J	0.2 BJ	0.5 J	ND	0.6 J	0.6 J
1,2-Dichloroethene (Total)	5 [e] [f]	[f]	ND	ND	ND	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2 J	ND	ND	ND	ND
Methylene Chloride	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.3 BJ	ND	ND
Tetrachloroethene	5	5	ND	ND	ND	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.6 J	ND	ND
Toluene	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.7 BJ	0.7 BJ	ND	ND	ND	ND	ND	0.6 BJ	ND	ND
1,1,1-Trichloroethane	5	200	ND	ND	ND	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.3 J	0.4 BJ	ND	0.5 J	ND	ND
Total Xylenes	5	10,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2 BJ	ND	ND	ND	ND
Semivolatile Organic Compounds (µg/L)																						
2-Methylnaphthalene	50 [g]	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TPH-GRO (µg/L)	--	--	NA	NA	ND	ND	ND	ND	NA	NA	NA	ND	NA	NA	ND	NA	ND	ND	ND	NA	NA	NA
TPH-DRO (mg/L)	--	--	NA	NA	1.6	0.44 J	0.16	ND	NA	NA	NA	0.73	NA	NA	0.21 J	NA	1.9	2.1	0.21 J	NA	NA	NA
TCP (mg/L)	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND

Notes:

B	Analyte is also detected in method blank.
BTEX	Benzene, toluene, ethylbenzene, and xylenes.
Dup	Duplicate.
J	Estimated value.
NA	Not analyzed.
ND	Not detected.
TCP	Tri(o-cresyl)phosphate.
TPH-DRO	Total petroleum hydrocarbons - diesel range organics.
TPH-GRO	Total petroleum hydrocarbons - gasoline range organics.
--	No applicable action level.

Shading and bolding indicate exceedance of action levels.

(a) "SDW" refers to small-diameter well; "SW" refers to Stone & Webster well; "MW" refers to monitoring well; "-01" refers to Round 1 sampling, February - March 2001; "-02" refers to Round 2 sampling, May - June 2001; "R" refers to replicate sample collected at top of well screen.
(b) New York State (NYS), Class GA Groundwater; NYSDEC TAGM #4046.
(c) Maximum Contaminant Level (MCL), United States Environmental Protection Agency.
(d) Guidance value.
(e) Compound is a Principal Organic Compound (POC). Under New York State Drinking Water Standards, a general standard of 5 µg/L applies to all POCs unless a more stringent compound specific standard has been set (ABB-ES 1994).
(f) MCL is 70 µg/L for cis-1,2-dichloroethene, and 100 µg/L for trans-1,2-dichloroethene.
(g) Compound is an Unspecified Organic Contaminant. Under New York Drinking Water Standards, a general standard of 50 µg/L applies.

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Table 5.8
Sites 1, 2, 3, 10, 11, 12, and Background
Rounds 1 and 2 Analytical Results -
Groundwater Monitoring - Metals
106th Rescue Wing
New York Air National Guard
Westhampton Beach, New York

Parameter	Action Levels NYS [b]	Action Levels MCL [c]	Concentration Location [a] Background SDW019-01	Background SDW019-02	Background SDW020-01	Background SDW020-02	Site 1 S1MW01-01	Site 1 S1MW01-02	Site 1 S1MW02-01	Site 2 SDW007-01	Site 2 SDW007-02	Site 2 SDW008-01	Site 2 SDW008-R1	Site 2 SDW008-02	Site 2 SDW008-R2	Site 2 SDW010-01	Site 2 SDW010-02	Site 2 SW04-02	Site 2 S2MW01-01	Site 2 S2MW01-02
Metals (µg/L)																				
Aluminum	--	--	2200	890	2900	1700	4800	2800	ND	3600	740	6900	3000	1800	1500	1400	1000	2700	2400	1600
Arsenic	25	50 [d]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.6	ND	ND
Barium	--	--	48	62	39	31	56	26	12	170 E	77	34	49	27	27	9.1	7.5	35 E	67	61
Cadmium	10	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5	1.0	ND	ND	ND
Calcium	--	--	18,000	33,000	7900	2800	4500	5500	5400	18,000 E	7200	17,000	21,000	15,000	15,000	17,000	18,000	33,000	19,000	24,000
Chromium	50	100	19	**75**	7.4	5.0	13	5.8	ND	9.3	2.3	14	6.4	5.0	4.5	3.9	5.1	**70**	7.2	5.0
Cobalt	--	--	ND	ND	NU	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.5	5.7
Copper	--	1300 [e]	ND	ND	ND	ND	7.2	ND	ND	8.1	ND	8.6	ND	ND	ND	ND	ND	ND	6.2	ND
Iron	--	--	3800 E	2000	4200 E	2500	9300	4700	170	5000 E	1100	9700 E	4700	3300	2900	1200 E	1400	3300 E	5000	2900
Lead	25	15 [e]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium	--	--	6700	13,000	2100	780	2700	2400	1600	3400	1300	5700	6000	3800	3800	2900	3300	5800	4500	5100
Manganese	--	--	120 E	44	150 E	90	390	200	11	730 E	240	260 E	110	83	84	20 E	12	270	110	73
Nickel	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium	--	--	1700	2300	2600	2510	1200	920	580	16,000	10,000	3100	2800	1800	2000	1900	1300	2900	1600	1800
Sodium	--	--	130,000	210,000	26,000	45,000	12,000	7300	12,000	46,000	67,000	33,000	91,000 N	ND	ND	32,000	31,000	40,000	24,000	33,000
Thallium	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	38,000	39,000	ND	ND	ND	5.2	ND
Vanadium	--	--	8.4	ND	6.7	ND	20	10	ND	12	ND	18	9.2	5.5	ND	ND	ND	6.9	9.4	5.2
Zinc	--	--	ND	30	67	130	ND	ND	ND	66	75	64	ND	55	92	55	42	28	48	ND

Parameter	Action Levels NYS [b]	Action Levels MCL [c]	Concentration Location [a] Site 3 SDW004-01	Site 3 SDW004-02	Site 3 S3MW01-01	Site 3 S3MW01-02	Site 10 S10MW01-01	Site 10 S10MW01-02	Site 10 S10MW02-01	Site 10 S10MW02-02	Site 10 S10MW02-22	Site 11 S11MW01-01	Site 11 S11MW01-R1	Site 11 S1MW01-R1D (Dup)	Site 11 S11MW01-02	Site 11 S11MW01-R2	Site 12 S12MW01-01	Site 12 S12MW01-21 (Dup)	Site 12 S12MW01-02	Site 12 S12MW02-01	Site 12 S12MW02-02	Site 12 S12MW02-22 (Dup)
Metals (µg/L)																						
Aluminum	--	--	3100	1600	ND	2200	ND	1900	ND	1200	1800	13,000	770	980	2100	1300	350	430	410	210	1100	1000
Arsenic	25	50 [d]	ND	ND	ND	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	9.0	ND	ND	7.9
Barium	--	--	12	11	33	49	18	36	52	41	46	60	30	32	23 E	21 E	21	22	22 E	56	25 E	24 E
Cadmium	10	5.0	ND	ND	ND	ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	--	--	13,000	11,000	9400	9800	6200	4900 N	11,000	9100 N	9300 N	22,000	22,000	22,000	19,000	18,000	6600	6500	6500	9100	6500	6400
Chromium	50	100	6.1	5.5	6.5	8.7	2.6	7.6	ND	2.9	4.9	22	2.8	3.8	4.4	3.6	5.8	6.2	3.4	8.0	5.8	6.0
Cobalt	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	--	1300 [e]	11	ND	ND	ND	ND	ND	ND	ND	ND	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	--	--	4200	2500	120	3500	180	3700	64	2100	3200	14,000	700	880	1900 E	1200 E	520	710	830 E	230	2200 E	2200 E
Lead	25	15 [e]	ND	ND	ND	ND	ND	ND	ND	ND	ND	**17**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium	--	--	4800	3500	2900	3300	1600	1500	1700	1800	1900	5800	4400	4500	3400	3300	1800	1800	1800	2600	1700	1500
Manganese	--	--	29	56	17	91	5.2	29 N	8.8	130 N	180 N	100	8.9	10	14	9.4	34	41	33	56	95	84
Nickel	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium	--	--	1000	1600	1600	1300	680	1200	1600	1200	1300	3300	1300	1400	1300	1500	1500	1500	1800	990	1600	1800
Sodium	--	--	40,000	7800	37,000	53,000	13,000	62,000 N	34,000	32,000 N	33,000 N	40,000 N	38,000 N	40,000	20,000	20,000	24,000	23,000	22,000	58,000	22,000	22,000
Thallium	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	--	--	17	17	ND	6.3	ND	6.3	ND	ND	ND	29	ND	ND	6.2	ND	ND	ND	ND	ND	ND	ND
Zinc	--	--	66	42	ND	ND	ND	ND N	30	57 N	100 N	140	41	43	ND	64	ND	ND	ND	ND	ND	ND

Notes:

Dup Duplicate sample.
E Estimated value or not reported due to the presence of interferences.
N Spike sample recovery is not within quality control limits.
ND Not detected.

-- No applicable action level.

Shading and bolding indicates exceedance of action level.

(a) "SDW" refers to small-diameter well; "MW" refers to monitoring well; "SW" refers to Stone & Webster well; "R" refers to replicate sample collected at the top of the well screen; "-01" Refers to Round 1 sampling, February - March 2001; "-02" Refers to Round 2 sampling, May - June 2001.

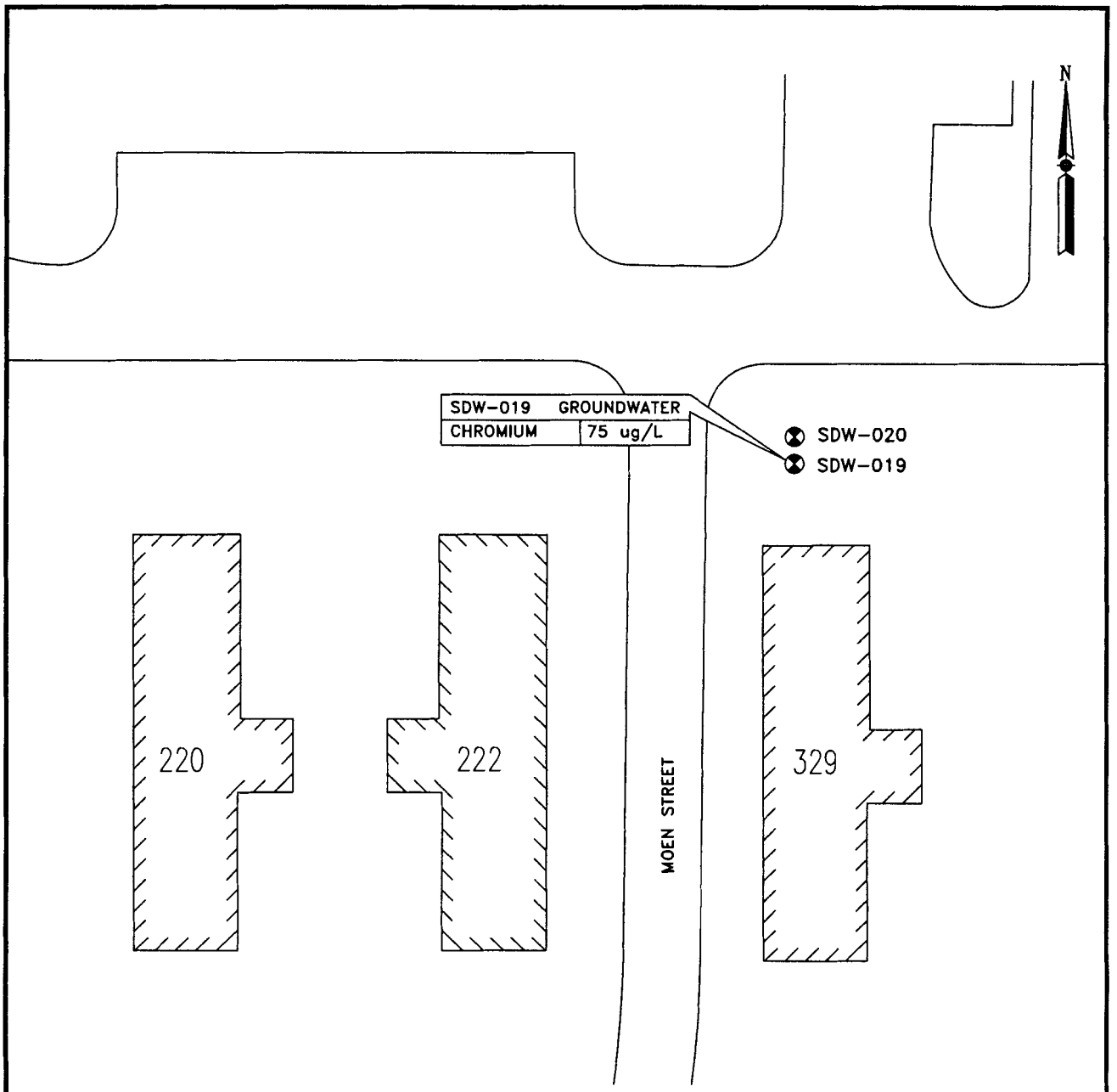
(b) New York State (NYS), Class GA Groundwater; NYSDEC TAGM #4046.

(c) Maximum Contaminant Level (MCL), United States Environmental Protection Agency.

(d) Federal MCL is under review.

(e) Treatment Technique Action Level. Federal MCL is concentration in water collected from tap.

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PEER PROJ./1566-053 FILE:BKG-FIG-5.7R1	CONTAMINANTS IN GROUNDWATER AT ON-SITE BACKGROUND WELLS SDW-019 AND SDW-020 106th RESCUE WING, NEW YORK AIR NATIONAL GUARD FRANCIS S. GABRESKI AIRPORT WESTHAMPTON BEACH, NEW YORK	FIGURE 5.7

5.2.5 Background Sampling Findings

The findings of the background soil and groundwater investigations indicate that concentrations of the metals chromium and lead may exceed NYSDEC Action Levels set for Class A groundwater, as well as previous and revised NYSDEC Action Levels for soils (ABB-ES 1997). These results from upgradient locations are not related to the 106th RQW site or Francis S. Gabreski Airport. They, therefore, indicate that the concentrations detected are representative of background conditions.

5.3 SITE 1 - AVIATION GAS (AVGAS) SPILL SITE

The investigatory activities conducted at Site 1 are listed in Section 4.6.1. Figure 4.1 depicts the sampling locations. The Site 1 findings are presented in the following subsections.

5.3.1 Site 1 Geologic and Hydrologic Results

The geologic investigation of Site 1 consisted of three direct-push borings and two HSA well borings. Two Shelby tube samples were collected at 4 to 6 ft BGS, and at 8 to 9.5 ft BGS. The soil borings at Site 1 found medium sands with some gravel and traces of silt, with traces of iron staining noted. No odors or stains indicative of chemical contamination were noted. No elevated PID readings were observed.

Saturation was encountered from 32 ft BGS at S1-DP01 to 33.15 ft BGS at S1-DP03. Observed groundwater elevations were consistent with the basewide groundwater elevations, hydraulic gradient, and groundwater flow direction.

5.3.2 Site 1 Soil and Groundwater Screening

During direct-push sampling, soil and groundwater sample aliquots were submitted for screening analysis by the on-site laboratory for BTEX, with no compounds detected in any of the samples (Appendix H). The soil samples were also screened during sample collection using the PID. The PID screening results are provided in Table 5.4 for the direct borings, and Table 5.9 for the HSA borings.

5.3.5 Site 1 Findings

The findings for Site 1 are as follows:

- There were no odors, stains, elevated PID readings, or product observed in the soils.
- There was no odor, sheen, product, or indications of active bioremediation observed in the groundwater.
- Analytical results showed only trace levels of toluene and TPH-DRO in groundwater.
- Surface soils have been impacted by semivolatile organic compounds (PAHs) and metals in a limited area of the former drainage swale.

5.4 SITE 2 - FORMER HAZARDOUS WASTE STORAGE AREA

The investigatory activities conducted at Site 2 are described in Section 4.6.2. Figure 4.2 depicts the sampling locations. The Site 2 findings are presented in the following subsections.

5.4.1 Site 2 Geologic and Hydrologic Results

Site 2 geologic and hydrologic investigation included three direct-push borings and one HSA well boring. Soils observed were medium sands with some gravel and traces of silt. No odors or elevated PID readings were observed. A pink stain was observed in soil boring S2-SB01 at 12 to 14 ft BGS, not associated with odor or elevated PID readings. A grayish-green stain was observed at 15 to 16 ft BGS at direct probe S2-DP01, but not associated with any odor. No other staining indicative of chemical contamination was observed.

Saturation was observed from 31 ft BGS at S2-SB01 to 33.5 ft BGS at S2-DP03. Observed groundwater elevations were consistent with the basewide hydraulic gradient and groundwater flow direction.

5.4.2 Site 2 Soil and Groundwater Screening Samples

During direct-push activities, soil and groundwater screening samples were submitted for fast turnaround analysis of volatile organic compounds at an off-site laboratory. Concentrations of four compounds (cis-1,2-dichloroethene, TCE, toluene, and PCE) were detected in soil screening samples from S2-DP01 and S2-DP03, but did not exceed NYSDEC Action Levels. Laboratory reports for screening sample analyses are provided in Appendix H. The soil samples were also screened during sample collection using the PID. The PID results are provided in Table 5.4 for the direct-push borings and Table 5.9 for the well boring.

5.4.3 Site 2 Confirmatory Soil Samples

Confirmatory soil samples were collected from three direct-push borings (S2-DP01, S2-DP02, and S2-DP03), and one well boring (S2-SB01), and analyzed for:

- volatile and semivolatile organic compounds;
- PCBs; and
- TAL metals.

Results for volatile and semivolatile organic compounds analyses of Site 2 confirmatory soil samples are presented in Table 5.13. Acetone and methylene chloride were detected in several samples, but are considered laboratory contamination, as discussed in QA/QC results, Appendix J. Analytes with exceedances of NYSDEC Action Levels are shown graphically on Figure 5.9.

The volatile organic compounds cis-1,2-dichloroethene, TCE, toluene, and PCE that were detected in the fast turnaround time screening analysis soil screening soil samples were not confirmed by the state-certified laboratory analyses of the confirmatory soil samples. No volatile or semivolatile compounds were detected above the NYSDEC Action Levels in the confirmatory soil samples.

Table 5.13
Site 2
Round 1 Analytical Results - Confirmatory Soils-Volatile and Semivolatile Organic Compounds
106th Rescue Wing
New York Air National Guard
Westhampton Beach, New York

Parameter	Action Levels [b]		Concentration Location/Depth/Type [a]										
	Saturated [c]	Unsaturated [d]	SS01-01 (0-0.3 ft)-U	DP01-01 (0-2 ft)-U	DP01-02 (18-20 ft)-U	DP01-03 (32-36 ft)-S	DP02-01 (0-2 ft)-U	DP02-02 (32-36 ft)-S	DP03-01 (0-4 ft)-U	DP03-02 (34-36 ft)-S	SB01-01 (0-2 ft)-U	SB01-02 (12-14 ft)-U	SB01-03 (30-34 ft)-S
Volatile Organic Compounds (µg/kg)													
Benzene	0.6	60	ND	1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	3.0	300	ND	ND	ND	ND	ND	1 J	ND	ND	ND	ND	ND
Toluene	15	1500	ND	3 J	ND	ND	2 J	ND	ND	ND	2 J	ND	ND
Total Xylenes	12	1200	ND	1 J	ND	ND	2 J	ND	ND	ND	1 J	ND	ND
Semivolatile Organic Compounds (µg/kg)													
Di-n-octyl phthalate	1200	80,000	ND	ND	ND	ND	ND	ND	ND	530	ND	ND	ND
PCBs (µg/kg) [e]	1000 (Surface)	10,000 (Subsurface)	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	1000 (Surface)	10,000 (Subsurface)	39 J	17 J	ND	ND	NA	NA	NA	NA	NA	NA	NA

Notes:

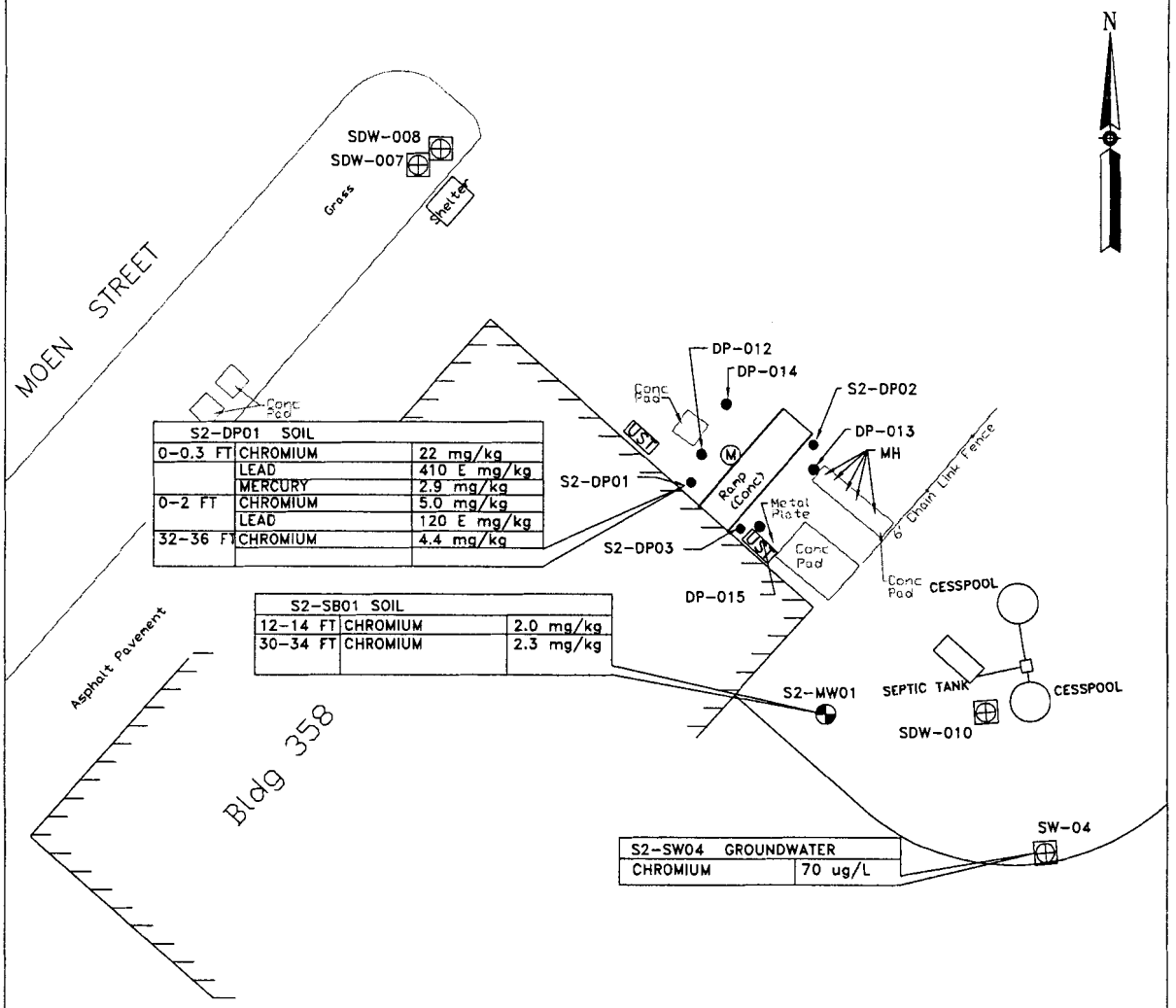
B Analyte is also found in associated blank.
J Estimated value.
NA Not analyzed.
ND Not detected.

-- No applicable action level.

Shading and bolding indicate exceedance of Action Levels.

(a) Location "DP0X-SS0X" refers to surface soil sample at direct-push location 0X, at depth specified in feet below ground surface (BGS): DP01-SS01 is direct-push surface soil sample (first sample) at location DP01 at depth of 0-0.3 ft BGS. Location "DP0X-0X" refers to sample number collected at location DP0X, at depth specified in ft BGS; DP02-03 is the third direct-push sample collected from location DP02 at a depth of 8-12 ft BGS. Type: S = saturated; U = unsaturated.
(b) Recommended Soil Cleanup Objectives, NYSDEC, TAGM 4046.
(c) Soil in direct contact with groundwater.
(d) Greater than 5 ft above the water table.
(e) Recommended Cleanup Objectives for PCBs in Surface and Subsurface Soils, NYSDEC, TAGM 4046.

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LEGEND

- ● S2-DP02 — DIRECT PUSH PROBE AND IDENTIFIER
- NEW MONITORING WELL AND IDENTIFIER
- Ⓜ — MANHOLE COVER
- UST — UNDERGROUND STORAGE TANK
- EXISTING MONITORING WELL AND IDENTIFIER (APPROXIMATE)

ACTION LEVELS				
ANALYTE	SURFACE (1) SOIL (mg/kg)	SUBSURFACE (1) SOIL (mg/kg)	SOIL (3) (SATURATED) (ug/kg)	GROUNDWATER(2) (ug/L)
CHROMIUM	6.1	0.84	–	50
LEAD	4.4	2.7	–	15
MERCURY	0.1	0.20	–	–
METYLENE CHLORIDE	–	–	1.0	–
ACETONE	–	–	1.1	–

1. NYSDEC, TOGs 1991.
2. FEDERAL DRINKING WATER STANDARDS MAXIMUM CONTAMINANT LEVELS.
3. NYSDEC TAGM#4046

GRAPHIC SCALE (IN FEET)
0 20 40 80

SOURCE: EWELL W. FINLEY P.C. SURVEYORS, 2001, AND ABB-ES, 1997

PEER
PROJ./1566-053
FILE:FIG-5.9-SITE-2

SITE 2 – SOIL AND GROUNDWATER RESULTS (RI, 2000-2001)
106th RESCUE WING, NEW YORK AIR NATIONAL GUARD
FRANCIS S. GABRESKI AIRPORT
WESTHAMPTON BEACH, NEW YORK

FIGURE 5.9

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Table 5.14 presents the results of TAL metals analyses of the Site 2 confirmatory soil samples. Chromium was detected in samples collected from S2-DP01, S2-DP03, and S2-SB01. The surface soil sample collected at S2-DP01 (SS01-1 and DP01-01) had chromium detected at 22 mg/kg, which exceeds the NYSDEC RSCO of 10 mg/kg. Subsurface soil samples collected at S2-DP01, S2-DP03, and S2-SB01 exceeded the subsurface UBLC for chromium. Sample DP03-01 was not within QC limits, and is not considered further. Chromium in surface and subsurface soils and groundwater at Site 2 is naturally occurring, as shown by the background sample results. Mercury was also detected in S2-SS01-01 at a concentration of 2.9 mg/kg, which exceeds the NYSDEC RSCO of 0.1 mg/kg. Lead was detected in samples from DP-01 at concentrations exceeding the NYSDEC RSCO, at estimated values. Cadmium also exceeded its NYSDEC RSCO of 1.0 mg/kg at S2-SS01 and S2-DP01, at 4.5 and 2.5 mg/kg, respectively.

Zinc was detected in the surface and shallow samples from S2-DP01 at concentrations exceeding the NYSDEC RSCO, but the value was reported by the laboratory as an estimated value. Zinc is likely to be naturally occurring, and these estimated values are not considered further.

5.4.4 Site 2 Groundwater Samples

5.4.4.1 Direct-Push Confirmatory Groundwater Samples

Direct-push groundwater confirmatory samples were collected from three direct-push borings (S2-DP01, S2-DP02, and S2-DP03), including a duplicate sample, and submitted for confirmatory analysis of volatile and semivolatile organic compounds at the state-certified laboratory. Results of the confirmatory state-certified laboratory analysis of direct-push groundwater samples are summarized on Table 5.12. No compounds were detected above the NYSDEC Action Levels.

Table 5.14
Site 2
Round 1 Analytical Results - Confirmatory Soils - Metals
106th Rescue Wing
New York Air National Guard
Westhampton Beach, New York

Parameter	Action Levels		Concentration Location/Depth [a]										
	NYSDEC RSCO [b]	BKG [c] or ULBC [d]	SS01-01 (0-0.3 ft)	DP01-01 (0-2 ft)	DP01-02 (18-20 ft)	DP01-03 (32-36 ft)	DP02-01 (0-4 ft)	DP0-02 (32-36 ft)	DP03-01 (0-4 ft)	DP03-02 (34-36 ft)	SB01-01 (0-2 ft)	SB01-02 (12-14 ft)	SB01-03 (30-34 ft)
Metals (mg/kg)													
Aluminum	SB	33,000	2300 E	1500 E	360	280	680 E	260 E	850 N*	350 N*	490 E	300 E	320 E
Barium	300	15 - 600	28	9.8	1.3	1.4	1.3	0.89	1.6	1.6	1.8	21	1.9
Cadmium	1 or SB	0.39/0.27 [d]	**4.5**	**2.5**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	SB	130 - 35,000	5200 E	13,000 E	910	ND	120 E	ND E	140 *	ND *	1,300	ND	ND
Chromium	10 or SB	6.1/0.84 [d]	**22**	5.0	**2.2**	**4.4**	ND	ND	**2.4 ***	ND *	ND	**2.0**	**2.3**
Copper	25 or SB	1 - 50	41	18	ND	ND	2.1	ND	ND	ND *	ND	ND	2.5
Iron	2000 or SB	2000 - 550,000	4800 E	3100 E	2100	1000	900 E	520 E	1300 E	560 E	730 E	710 E	810 E
Lead	SB [e]	4.4/0.27 [d] [e]	**410 E**	**120 E**	ND	ND	ND E	ND E	ND *	ND *	ND	ND	ND
Magnesium	SB	100 - 5000	1200 E	6800 E	550	50	69 E	51 E	68 *	150 *	110	49	64
Manganese	SB	50 - 5000	93	48	20	6.4	8.2	8.1	12 N	12 N	12	14	22
Mercury	0.1	0.001 - 0.2	**2.9**	0.099	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	13 or SB	0.5 - 25	6.0	2.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	SB	6000 - 8000	120	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	150 or SB	1 - 300	13	3.9	1.9	2.1	2.7	ND	3.2	1.4	1.5	1.7	2.0
Zinc	20 or SB	9 - 50	**830 E**	**94 E**	2.7	1.8	4.6 E	1.5 E	6.2 *	2.3 *	2.7	2.1	2.0

* Analysis is not within quality control limits.
BKG Background.
E Estimated value or not reported due to the presence of interferences.
N Spike sample recovery is not within quality control limits.
ND Not detected.
SB Soil background.

-- No applicable action level.

Notes:

Shading and bolding indicate exceedance of Action Levels.

(a) Location "DP0X-SS0X" refers to surface soil sample at direct-push location 0X, at depth specified in feet below ground surface (BGS): DP01-SS01 is direct-push surface soil sample (first sample) at location DP01 at depth of 0-0.3 ft BGS. Location "DP0X-0X" refers to sample number collected at location DP0X, at depth specified in ft BGS; DP02-03 is the third direct-push sample collected from location DP02 at a depth of 8-12 ft BGS.
(b) New York State (NYS), Recommended Soil Cleanup Objectives, NYSDEC, TAGM #4046.
(c) Eastern USA Background, NYSDEC, TAGM #4046 (surface/subsurface).
(d) Upper limits of background concentration for surface/subsurface metals in soils; see Section 6.0.
(e) Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4 - 61 ppm (mg/kg). Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200 to 500 ppm (mg/kg) (TAGM #4046).

5.4.4.2 Groundwater Monitoring Samples

Groundwater monitoring samples were collected from five monitoring wells at Site 2: SDW-007, SDW-008, SDW-010, SW-04, and newly installed monitoring well S2-MW01. Groundwater monitoring samples were analyzed for:

- volatile and semivolatile organic compounds;
- bioremediation parameters, including BTEX, TPH (GRO and DRO), methane, chloride, alkalinity, and sulfate from monitoring well S2-MW01 only; and
- TAL metals.

Analytical results for Site 2 groundwater monitoring samples are included in Table 5.7 for organics and Table 5.8 for metals. No volatile organic compounds were detected above the NYSDEC Action Levels. The semivolatile organic compound BEHP was detected, but is considered a sampling artifact, as discussed in Appendix J. TPH-DRO was detected in this well during Round 1 at a concentration of 0.6 mg/L, but was not detected in Round 2. NYSDEC Action Levels have not been established for TPH.

Chromium was detected in SW-04 at a concentration of 70 µg/L, which is above the NYSDEC Action Level of 50 µg/L, but below the MCL of 100 µg/L (Table 5.8). No other metals were detected above the NYSDEC Action Levels. Chromium is naturally occurring, as shown by the background sampling results.

Duplicate samples collected from SDW-008 during Round 1 were comparable for volatile and semivolatile organic compounds, but varied considerably for metals. However, during Round 2, the duplicate samples were comparable for both organics and metals.

5.4.5 Site 2 Findings

The findings at Site 2 are as follows:

- Volatile and semivolatile organic compounds are not present in the soils at levels exceeding NYSDEC Action Levels.
- Volatile and semivolatile organic compounds are not present in groundwater at concentrations exceeding the NYSDEC Action Levels.
- Cadmium and mercury were detected exceeding NYSDEC Action Levels in surface soil.
- The groundwater monitoring samples from Site 2 had no exceedances for metals.

5.5 SITE 3 - FORMER WASTE STORAGE AREA

The investigatory activities conducted at Site 3 are listed in Section 4.6.3. Figure 4.3 depicts the sampling locations. The Site 3 findings are discussed in the following subsections.

5.5.1 Site 3 Geologic and Hydrologic Results

A layer of dark yellowish-brown medium sand from 0 to 1.7 ft BGS was observed to have a fetid odor at S2-DB01, but had no associated elevated PID readings. The surface soil at S3-DP02 was observed to be a dark gray, loose, dry mix of medium and fine sand and silt. This soil had accumulated on top of the deteriorated asphalt paving at the southwest corner of the site. This soil appeared suspicious due to its dark gray to black color, oily appearance, and its very fine-grained texture, and was therefore sampled for analysis.

Subsurface soils at Site 3 were light gray to pale yellow gravelly medium sands. No odors, elevated PID readings, or stains other than rare iron stain were noted. Saturation was encountered at 35 ft BGS at S2-SB01 to 36 ft BGS at S3-DP02.

No BTEX compounds or TPH-GRO were detected in the bioremediation samples from S10-MW01 during either round. TPH-DRO was detected in S10-MW01 during Round 1 at 0.16 mg/L, but was not detected during Round 2.

5.7.5 Site 10 Findings

Findings at Site 10 include:

- There were no exceedances of NYSDEC Action Levels in the groundwater monitoring samples from S10-MW01 and S10-MW02.
- No observations indicative of contamination were noted in the field from the direct-push borings and soil borings or from the groundwater screening and groundwater monitoring samples.
- Three PAHs exceeded NYSDEC RSCOs in the shallow soil interval at S10-SB01.
- Lead exceeded NYSDEC RSCOs in the shallow soil intervals at S10-DP03 and S10-SB01.
- Lead exceeded its ULBC and NYSDEC RSCO in the surface soil interval at S10-SB01 and S10-DP03.

5.8 SITE 11 - TRENCH DRAIN SUMP, BUILDING 230

The investigatory activities conducted at Site 11 are listed in Section 4.6.5 Figure 4.6 depicts the sampling locations. The Site 11 findings are discussed in the following subsections.

5.8.1 Site 11 Geologic and Hydrogeologic Results

Geology and hydrogeology information was obtained at Site 11 from the installation of three direct-push borings, one HSA well boring, and installing one new monitoring well. One direct-push boring, S11-DP01, was located inside Building 230 and, therefore, was performed by hand.

Although this boring was advanced to only 19 ft, it reached native soil adjacent to the trench drain sump. The remaining direct-push borings and HSA boring proceeded normally.

Dark yellowish-brown, slightly gravelly sandy fill to a depth of approximately 17 ft BGS was encountered at S11-DP01. The fill material showed bands of oily-appearing dark gray stain from 13 to 15 ft BGS, associated with an indistinct odor, but with no associated elevated PID readings. The fill material also contained wooden fragments, possibly the remnants of cribbing or a form. After native soil was reached, the soil color changed to very pale brown. Saturation was not reached.

At direct-push borings S11-DP02 and S11-DP03, similar dark yellowish-brown soil, also interpreted as fill material, was encountered to depths of 15 ft BGS and 17.5 ft BGS, respectively. Dark brown staining was noted at 13 to 15 ft BGS in S10-DP02, and dark gray staining was noted at 13.5 to 14.5 ft BGS in S11-DP03. Brown stains were noted at 8.7 and 10.7 ft BGS at S11-SB01, associated with a menthol-like odor, but with no elevated PID readings.

Perched saturation was noted at 8.6 to 9.6 ft BGS at S11-DP02. The top of true saturation was encountered at 31 ft BGS at S11-SB01 and 33 ft BGS at S11-DP03. Groundwater elevations were consistent with the basewide groundwater elevations. No evidence of contamination was observed from groundwater screening and monitoring samples.

5.8.2 Site 11 Soil and Groundwater Screening Samples

During direct-push sampling, soil and groundwater screening samples from S11-DP02, S11-DP03, and S11-SB01 were submitted to the off-site screening laboratory for screening analysis of Method 8260 volatile organic compounds (Appendix H). The soil samples were also screened during sample collection using the PID. The PID screening results are provided in Table 5.4 for the direct probes, and Table 5.9 for the well boring.

Volatile organic compounds detected in the soil screening samples included PCE and toluene (Appendix H). Toluene was detected at estimated values and was also detected by the confirmatory soil sample fixed- laboratory analysis, but also at estimated values. PCE was detected in soil screening samples from S11-DP02 and S11-DP03 at concentrations up to 6 µg/kg and 48 µg/kg, respectively. The concentrations of PCE detected at S11-DP03 exceeded NYSDEC Action Levels in the shallow screening soil sample (22 µg/kg) and the 12- to 14-ft sample, in probable fill material. However, PCE was not detected in the confirmatory soil samples.

5.8.3 Site 11 Confirmatory Soil Samples

Soil samples were collected from direct-push borings S11-DP01, S11-DP02, and S11-DP03, and well boring S11-SB01. The soil samples were analyzed for:

- volatile and semivolatile organic compounds;
- TPH (GRO and DRO) (one sample only);
- PCBs (one direct push boring only); and
- TAL metals.

Analytical results for Site 11 confirmatory soil sample volatile and semivolatile organic compounds are summarized on Table 5.24. Acetone, 2-butanone, and methylene chloride were detected, but are considered laboratory contamination or sampling artifacts. See discussion of these compounds in Appendix J. PCE, which was detected in the soil screening samples, was not detected in the state-certified laboratory analyses of the confirmatory soil samples.

The PAHs benzo(a)anthracene and chrysene were detected above NYSDEC Action Levels in the soil interval of 0 to 2 ft BGS from S11-DP03. However, the values were reported as estimated values by the laboratory.

Table 5.24
Site 11
Round 1 Analytical Results - Confirmatory Soils -
Volatile and Semivolatile Organic Compounds
106th Rescue Wing
New York Air National Guard
Westhampton Beach, New York

Parameter	Action Levels [b]		Concentration Location/Depth/Type [a]													
	Saturated [c]	Unsaturated [d]	DP01-01 (1-3 ft) -U	DP01-02 (13-15 ft) -U	DP01-03 (17-19 ft) -U	DP02-01 (0-2 ft) -U	DP02-02 (12-14 ft) -U	DP02-21 (12-14 ft) -U	DP02-03 (32-36 ft) -S	DP03-01 (0-2 ft) -U	DP03-02 (12-14 ft) -U	DP03-03 (32-34 ft) -S	SB01-01 (0-2 ft) -U	SB01-02 (8-10 ft) -U	SB01-03 (14-16 ft) -U	SB01-04 (32-34 ft) -S
Volatile Organic Compounds (µg/kg)																
Ethylbenzene	55	5500	ND	ND	ND	ND	ND	1 J	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	15	1500	1 J	1 J	ND	3 J	1 J	3 J	ND	ND	ND	ND	ND	ND	1 BJ	ND
Total Xylenes	12	1200	ND	ND	ND	2 J	1 J	5 J	1 J	ND	ND	ND	ND	ND	ND	ND
Semivolatile Organic Compounds (µg/kg)																
Benzo(a)anthracene	330	330	ND	ND	ND	ND	ND	ND	ND	**420 J**	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	330	1100	ND	ND	ND	ND	ND	20 J	ND	530 J	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	330	1100	ND	ND	ND	7 J	ND	7 J	ND	280 J	ND	ND	ND	ND	ND	ND
Benzo(ghi)perylene	8000	50,000	ND	ND	ND	ND	ND	ND	ND	180 J	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	330	330	ND	ND	ND	13 J	ND	13 J	ND	310 J	ND	ND	ND	ND	ND	ND
Chrysene	330	400	18 J	ND	ND	ND	ND	ND	ND	**480 J**	ND	ND	ND	ND	ND	ND
Fluoranthene	19,000	50,000	23 J	ND	ND	ND	ND	ND	ND	740 J	ND	ND	ND	ND	ND	ND
Ideno(1,2,3-cd)pyrene	330	3200	ND	ND	ND	ND	ND	ND	ND	170 J	ND	ND	ND	ND	ND	ND
Phenanthrene	22,000	50,000	ND	ND	ND	ND	ND	ND	ND	410 J	ND	ND	ND	ND	ND	ND
Pyrene	6650	50,000	34 J	ND	ND	ND	ND	ND	ND	720 J	ND	ND	ND	ND	ND	ND
TPH-GRO (mg/kg)	--	--	NA	0.47 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH-DRO (mg/kg)	--	--	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs [e] (µg/kg)	1000 (Surface)	10,000 (Subsurface)	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

B Analyte is also found in associated blank.
J Estimated value.
NA Not analyzed.
ND Not detected.
PCBs Polychlorinated biphenyls.
TPH-DRO Total petroleum hydrocarbons - diesel range organics.
TPH-GRO Total petroleum hydrocarbons - gasoline range organics.

-- No applicable Action Level.

Notes:

Shading and bolding indicate exceedance of Action Levels.

(a) Location "DP0X-SS0X" refers to surface soil sample at direct-push location 0X, at depth specified in feet below ground surface (BGS): DP01-SS01 is direct-push surface soil sample (first sample) at location DP01 at depth of 0-0.3 ft BGS.

Location "DP0X-0X" refers to sample number collected at location DP0X, at depth specified in ft BGS; DP02-03 is the third direct-push sample collected from location DP02 at a depth of 8-12 ft BGS.

Type: S = Saturated; U = Unsaturated.

(b) Recommended Soil Cleanup Objectives, NYSDEC, TAGM #4046.

(c) Soil in direct contact with groundwater.

(d) Greater than 5 ft above the water table

(e) Recommended Cleanup Objectives for PCBs for Surface and Subsurface soils, NYSDEC, TAGM #4046.

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Analytical results for TAL metals analyses of Site 11 soil samples are summarized on Table 5.25. Figure 5.13 shows graphically those analytes with exceedances of action levels in soil and groundwater from Site 11. Chromium was detected above the ULBCs in subsurface soil samples from S11-DP01, S11-DP02, and S11-DP03. All of these samples were collected between 13 and 19 ft BGS, in probable fill material.

Lead exceeded the ULBC in the shallow soil sample from S11-DP03, and at S11-DP03 and S11-SB01 between 12 to 16 ft BGS, in probable fill soil.

5.8.4 Site 11 Groundwater Samples

5.8.4.1 Direct-Push Groundwater Confirmatory Samples

Direct-push groundwater confirmatory samples were collected from borings S11-DP02 and S11-DP03 and submitted for confirmatory analysis of volatile and semivolatile organic compounds. Direct-push confirmatory sample results are summarized in Table 5.12. 1, 2-DCB was detected in the groundwater screening sample from S11-DP02 at an estimated value of 5 J µg/L, which is above the NYSDEC Action Level, but below the MCL. The detection of 1,2-DCB was not confirmed by the monitoring well groundwater samples collected at Site 11.

5.8.4.2 Groundwater Monitoring Samples

A total of five groundwater monitoring samples were collected from one newly installed monitoring well, including two replicate samples and one duplicate sample, and analyzed for:

- volatile and semivolatile organic compounds;
- remediation parameters, including BTEX, TPH-GRO and DRO, methane, alkalinity, chloride, and sulfate (monitoring well S11-MW01 during each sampling round), and
- TAL metals.

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Table 5.25
Site 11
Round 1 Analytical Results - Confirmatory Soils - Metals
106th Rescue Wing
New York Air National Guard
Westhampton Beach, New York

Parameter	Action Levels		Concentration Location/Depth [a]													
	NYSDEC [b] RSCO	BKG [c] or ULBC [d]	DP01-01 (1-3 ft)	DP01-02 (13-15 ft)	DP01-03 (17-19 ft)	DP02-01 (0-2 ft)	DP02-02 (12-14 ft)	DP02-21 (12-14 ft)	DP02-03 (32-36 ft)	DP03-01 (0-2 ft)	DP03-02 (12-14 ft)	DP03-03 (32-34 ft)	SB01-01 (0-2 ft)	SB01-02 (8-10 ft)	SB01-03 (14-16 ft)	SB01-04 (32-34 ft)
Metals (mg/kg)																
Aluminum	SB	33,000	1600 E	1100 E	3000 E	2500	2400	2600	350	1800	2000	270	1500 E	4300 E	3400 E	250 E
Barium	300 or SB	15 - 600	3.1	3.8	2.4	11	5.0	9.9	1.6	5.0	6.0	ND	3.7 N	7.4 N	7.8 N	ND N
Calcium	SB	130 - 35,000	140	200	ND	12,000	650	10,000	ND	950	230	ND	250 N	190 N	320 N	ND N
Chromium	10 or SB	6.1/0.84 [d]	2.3	**3.5**	**3.4**	5.5	**4.3**	4.8	ND	2.4	**2.7**	ND	2.9 N	5.7 N	5.9 N	ND N
Copper	25 or SB	1 - 50	ND	2.3	ND	6.3	2.4	5.0	ND	3.3	2.9	ND	3.1 N	2.5 N	4.6 N	ND N
Iron	2000 or SB	2000 - 550,000	1800 E	1300 E	2200 E	4500 E	2600 E	4400 E	630 E	1800	1700	380	2300 E	3800 E	4100 E	490 E
Lead	SB [e]	4.4/2.7 [d, e]	ND	ND	ND	ND	ND	ND	ND	**6.1**	**7.3**	ND	ND N	ND N	**14 N**	ND N
Magnesium	SB	100 - 5000	120	81	68	540	170	460	63	170	105	44	310 NE	210 N	920 E	53 NE
Manganese	SB	50 - 5000	15	11	6.8	47	19	47	3.6	22	24	2.4	22 N	14 N	34 N	5.4 N
Nickel	13 or SB	0.5 - 25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.0	ND
Sodium	SB	6000 - 8000	ND	ND	ND	130	110	110	ND	ND	ND	ND	ND	130	ND	ND
Vanadium	150 or SB	1 - 300	3.3	2.2	3.7	5.8	4.9	5.7	2.5	3.7	3.7	1.4	5.2	7.3	8.6	1.4
Zinc	20 or SB	9 - 50	4.0	11	3.7	8.2	5.6	7.7	1.9	6.2	91	1.8	6.1 NE	60 NE	110 NE	2.8 NE

E Estimated value or not reported due to the presence of interferences.
N Spike sample recovery is not within quality control limits.
NA Not analyzed.
ND Not detected.
SB Soil background.

Notes:

Shading and bolding indicate exceedance of Action Levels.

(a) Location "DP0X-SS0X" refers to surface soil sample at direct-push location 0X, at depth specified in feet below ground surface (BGS): DP01-SS01 is direct-push surface soil sample (first sample) at location DP01 at depth of 0-0.3 ft BGS.

Location "DP0X-0X" refers to sample number collected at location DP0X, at depth specified in ft BGS; DP02-03 is the third direct-push sample collected from location DP02 at a depth of 8-12 ft BGS.

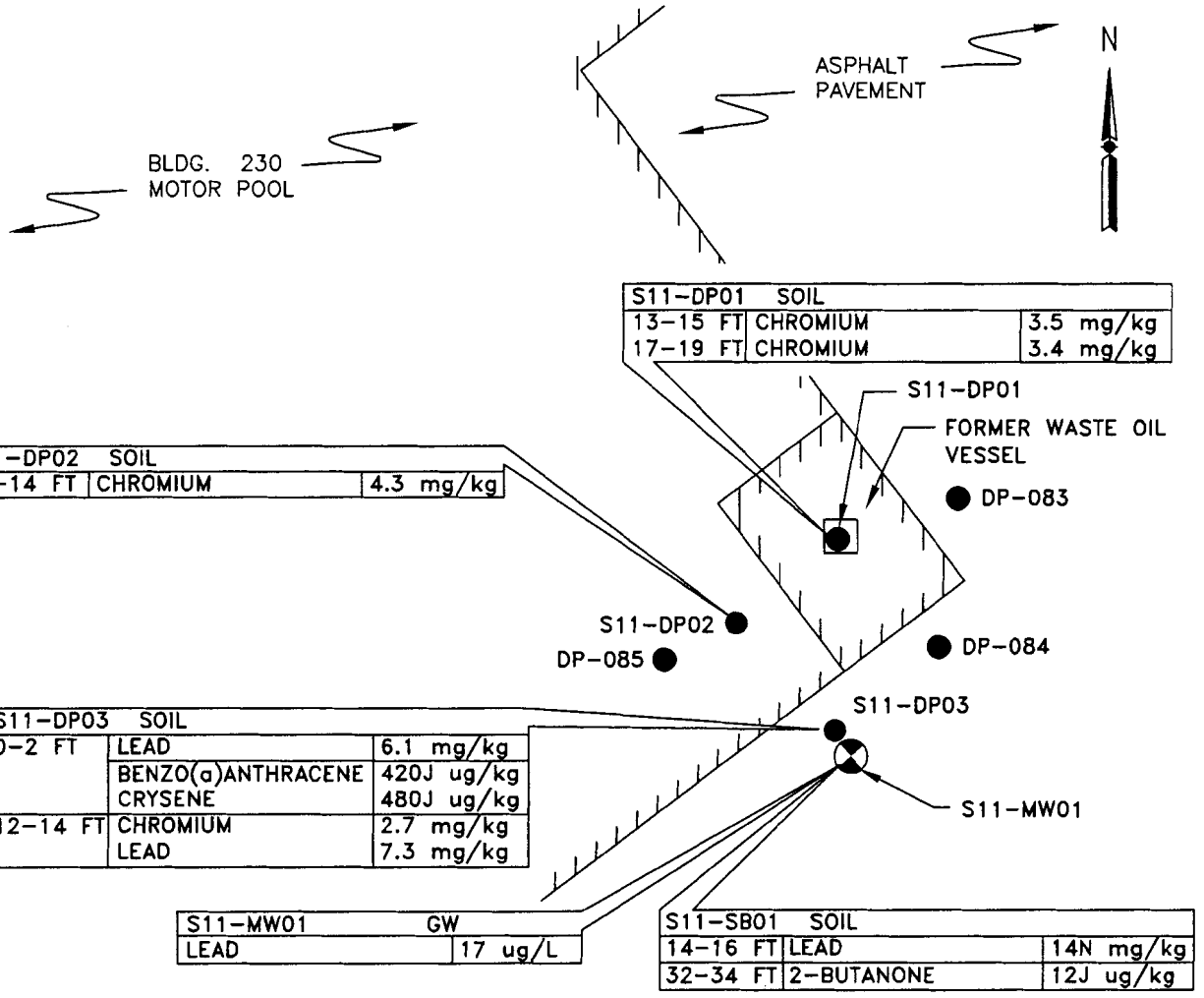
(b) New York State (NYS) Recommended Soil Cleanup Objectives, NYSDEC, TAGM #4046.

(c) Eastern USA Background, NYSDEC, TAGM #4046.

(d) Upper limits of background concentration for surface/subsurface metals in soils; see Section 6.0.

(e) Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4 to 61 ppm (mg/kg). Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200 to 500 ppm (mg/kg) (TAGM 4046).

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ACTION LEVELS					
ANALYTE	SURFACE SOIL (1) (mg/kg)	SUBSURFACE SOIL (1) (mg/kg)	SOIL (2) (UNSATURATED) (ug/kg)	SOIL (2) (SATURATED) (ug/kg)	GW (3) (ug/L)
CHROMIUM	6.1	0.84	–	–	50
LEAD	4.4	2.7	–	–	15
BENZO(a)ANTHRACENE	–	–	330	330	–
CRYSENE	–	–	400	330	–
2-BUTANONE	–	–	300	3	–

LEGEND

- DIRECT PUSH BORING
- MONITORING WELL
- GW GROUNDWATER

NOTES:
(1) NYSDEC, TOGs 1991
(2) NYSDEC, TAGM #4046
(3) NEW YORK STATE AND FEDERAL DRINKING WATER STANDARDS

10 0 10
GRAPHIC SCALE

SOURCE: EWELL W. FINLEY P.C. SURVEYORS, 2001, AND ABB-ES, 1997

PEER
PROJ./1566-053
SITE-11-FIG5.13R1

SITE 11 - SOIL AND GROUNDWATER SAMPLE RESULTS (RI, 2000-2001)
106th RESCUE WING, NEW YORK AIR NATIONAL GUARD
FRANCIS S. GABRESKI AIRPORT
WESTHAMPTON BEACH, NEW YORK

FIGURE 5.13

Analytical results for volatile and semivolatile organic compounds analyses of Site 11 groundwater monitoring samples are summarized in Table 5.7. No volatile or semivolatile organic compounds were detected above NYSDEC Action Levels in groundwater samples collected from Site 11.

Analytical results for TAL metals analyses of Site 11 groundwater monitoring samples are summarized in Table 5.8. The only TAL metal detected above the MCL was lead, which was detected at a concentration of 17 µg/L in well S11-MW01 during Round 1, but did not exceed the NYSDEC Action Level. Lead was not detected in the Round 2 sample. Results from the Round 1 and Round 2 replicate samples and the Round 1 duplicate replicate sample also had no detections of lead. Since the initial detection was unconfirmed by the subsequent samples, lead in groundwater is not considered to be a COPC. However, lead in groundwater at Site 11 will be considered during the risk assessment so as to be conservative.

No BTEX compounds or TPH-GRO were detected in the samples from S11MW01 during either round. TPH-DRO was detected at 0.73 mg/L in Round 1, and at 0.21 J (estimated value) in Round 2.

5.8.5 Site 11 Findings

Findings for Site 11 investigation include:

- Soils beneath the area of investigation appear to be fill, extending from the surface to depths of 15 to 17 ft BGS.
- Stains and odors were observed from subsurface fill soils, but no elevated PID readings were recorded.
- PAHs exceeded action levels in the shallow fill soil interval at S11-DP03. This sample was collected beneath an area of asphalt paving, a potential source of PAHs cross-contamination.
- Lead exceeded the ULBCs in the shallow soil interval at S11-DP03, and from 12 to 16 ft BGS at S11-DP03 and S11-SB01, within the fill interval.

- Chromium exceeded the ULBCs in the subsurface fill soil interval from about 13 to 19 ft BGS, but did not exceed NYSDEC RSCOs. Chromium is occurs naturally in local soils.
- 1,2-DCB was detected, exceeding its action level in the groundwater screening sample from S11-DP02, but was not confirmed by the groundwater monitoring samples.

5.9 SITE 12 - SPILL SITE NORTHWEST OF BUILDING 370

The investigatory activities conducted at Site 12 are listed in Section 4.6.6. Figure 4.7 depicts the sampling locations. The Site 12 findings are discussed in the following subsections.

5.9.1 Site 12 Geologic and Hydrologic Results

Geology and hydrogeology information was obtained at Site 12 from 10 direct-push borings, 2 HSA well borings, and by installing and monitoring two new monitoring wells. Native soils were observed to be typical pale yellow to light gray medium sands, with some gravel and traces of fines.

Fill material was noted to depths of 14.5 ft BGS, 17 ft BGS, and 8.6 ft BGS at borings S12-DP03, S12-DP05, and S12-DP10, respectively. Boring S12-DP01 may have also had fill to about 12 ft BGS. Possible indications of contamination observed in the field included:

- Faint metallic, pungent or musty odors from borings S12-DP01, S12-DP02, and S12-DP03 at depths between 16 to 24 ft BGS, but with no associated stain or elevated PID readings.
- Purple to pinkish gray staining/discoloration from 8 to 16 ft BGS at S12-DP04, but with no associated odor or elevated PID readings. This stain appeared to be a vertical vein or stringer, approximately 1 cm thick, of stronger purple color, surrounded by a halo of pale pinkish gray that faded away within 1 or 2 cm around the vein. Traces of

5.9.5 Site 12 Findings

Findings for Site 12 include:

- Evidence suggestive of soil contamination observed in the field consisted of scattered staining and faint odors, but showed little correlation with sample analyses.
- No evidence suggestive of groundwater contamination was observed in the field.
- TCP and PCBs were not detected in any samples.
- Lead exceeded the ULBCs in shallow soil at S12-SB02, but was not detected at most other locations.

5.10 BASEWIDE GROUNDWATER MONITORING SAMPLE RESULTS

As part of the current RI, a synoptic sampling of all monitoring wells was planned and performed in Round 2. Groundwater samples from Round 2 specific to the sites investigated during the current RI are included in the previous sections, while the remaining basewide groundwater sampling results are discussed in this section.

5.10.1 Hydrogeology

Basewide hydrogeology was investigated during Round 2 when 26 of 31 preexisting monitoring wells were sampled at the base. Hydrogeologic conditions, such as groundwater elevations, gradients, and flow directions, are discussed in Section 5.1.2.

Observations specific to the basewide monitoring wells included:

- Pale yellow and dark green matter, believed to be bacterial in origin, were noted at SDW-001.
- Bright yellowish-red matter, believed to be bacterial in origin, and a faint musty odor was noted at SDW-021.

- Oily/musty odor was noted at SDW-023.
- Very faint musty odor was noted at SDW-024.
- Strong oily odor, light spotty sheen, and pale greenish-gray color, possibly indicative of bacterial activity, was noted at SW-06.
- Oily/musty to distinct oily odor , very light spotty sheen and greenish gray color, possibly indicative of bacterial activity, was noted at SW-07.
- Faint oily/musty odor and copious dark green matter, believed to be bacterial in origin, was noted at SW-08.
- Faint musty to distinct oily odor and rust red and greenish black matter, believed to be bacterial in origin, was noted at SW-09.
- No visible signs of contamination were noted from the remaining wells. None of the remaining monitoring wells displayed elevated PID readings during headspace screening.
- Measured ORP shows a negative correlation with observed signs of contamination. The monitoring wells with the lowest measured ORPs were SW-06, SW-07, SW-08, and SW-09, at 67 mV, 4 mV, -48 mV, and -39 mV, respectively. Average ORP for all wells sampled was 176 mV.
- DO was also lower at wells with signs of contamination. Monitoring wells SW-06, SW-07, SW-08, and SW-09 had DO readings of 8.8 mg/L, 7.7 mg/L, 8.0 mg/L, and 6.1 mg/L, respectively. The average DO for all wells tested was 9.6 mg/L.

5.10.2 Basewide Groundwater Monitoring Sampling

A total of 26 existing basewide wells were sampled during Round 2. Some of these wells were poorly constructed, not capped, or not properly protected.

The basewide groundwater monitoring samples were analyzed for:

- volatile and semivolatile organic compounds; and
- TAL metals.

Volatile organic compounds that were detected included ethylbenzene, toluene, and xylenes (total). Ethylbenzene was detected in groundwater samples collected from SDW-023, SW-06, and SW-07 at concentrations above the NYSDEC Action Level (Table 5.28). The concentrations detected in SDW-023 and SW-07 were below the federal MCLs. The ethylbenzene concentration in SW-06, 770 µg/L, is above both the NYSDEC Action Level of 5 µg/L and the MCL of 700 µg/L. Figure 5.15 shows graphically those analytes that exceeded NYSDEC Action Levels in basewide groundwater monitoring samples. Toluene was detected in samples from SDW-023 and SW-06 at concentrations above the NYSDEC Action Level but below the MCL. Xylenes (total) were detected in SDW-023, SW-06, and SW-07 at concentrations above the NYSDEC Action Level but below the MCL.

Semivolatile organic compounds that were detected included naphthalene, 2-methylnaphthalene, and BEHP. Naphthalene was detected in samples from SDW-023, SW-06, and SW-07 above the NYSDEC Action Level. 2-Methylnaphthalene was detected in SW-07 above the NYSDEC Action Level. There are no MCLs for these semivolatiles. BEHP was detected, but is considered a sampling artifact, as discussed in Appendix J.

Arsenic was detected in SW-08 at a concentration above the NYSDEC Action Level, but below the MCL (Table 5.29). Cadmium was detected in SDW-011 at a concentration above the NYSDEC Action Level and MCL. Chromium was detected in SW-001 at a concentration above the NYSDEC Action Level, but below the MCL. Chromium is naturally occurring, as shown by the results of the background sampling.

Table 5.28
Basewide Groundwater Monitoring
Round 2 Analytical Results - Groundwater -
Volatile and Semivolatile Organic Compounds
106th Rescue Wing
New York Air National Guard
Westhampton Beach, New York

Parameter	Action Levels		Concentration											
			Location [a]											
	NYS [b]	MCL [c]	BW-SDW001-02	BW-SDW002-02	BW-SDW005-02	BW-SDW005-22 (Duplicate)	BW-SDW006-02	BW-SDW011-02	BW-SDW013-02	BW-SDW014-02	BW-SDW015-02	BW-SDW017-02	BW-SDW018-02	BW-SDW021-02
Volatile Organic Compounds (µg/L)														
Carbon Disulfide	50	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	7	80	ND	ND	ND	ND	ND	0.2 J	ND	ND	ND	2.0	0.2 J	ND
Ethylbenzene	5	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	5	ND	ND	0.4 J	0.4 J	ND	ND	0.2 J	ND	ND	ND	ND	ND
Toluene	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	200	ND	ND	0.5 J	0.5 J	ND	ND	0.5 J	ND	ND	ND	ND	ND
Trichloroethene	5	5	ND	ND	ND	ND	ND	0.2 J	0.6 J	ND	ND	ND	ND	ND
Vinyl acetate	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	5	10,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.8 J
Semivolatile Organic Compounds (µg/L)														
1,2-Dichlorobenzene	4.7	--	ND	ND	0.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	50 [d]	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	1 [e]	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	50 [f]	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	5 [e]	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	10 [d]	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5 [g]	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Parameter	Action Levels		Concentration														
			Location [a]														
	NYS [b]	MCL [c]	BW-SDW022-02	BW-SDW023-02	BW-SDW024-02	BW-SW001-02	BW-SW005-02	BW-SW006-02	BW-SW07-02	BW-SW08-02	BW-SW09-02	BW-SW10-02	BW-PZ001-02	BW-PZ002-02	BW-PZ003-02	BW-PZ003-22 (Duplicate)	BW-PZ006-02
Volatile Organic Compounds (µg/L)																	
Carbon Disulfide	50	--	ND	ND	ND	ND	0.6 J	ND	3.0/ND	0.8 J	ND	ND	ND	ND	0.2 J	4.0	ND
Chloroform	7	80	ND	ND	ND	0.9 J	ND	ND	ND/ND	ND	ND	ND	ND	ND	0.7 J	0.3 J	ND
Ethylbenzene	5	700	0.3 J	**130 E/91 D**	ND	3.0	ND	**770**	**130 E/140 D**	0.9 J	0.6 J	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	5	ND	ND	ND	ND	ND	ND	ND/ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	5	1000	ND	**9.0/3 DJ**	ND	ND	ND	**670**	4.0/ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	200	ND	ND	ND	ND	ND	ND	ND/ND	ND	ND	ND	ND	ND	1.0	1.0	ND
Trichloroethene	5	5	ND	ND	ND	ND	ND	ND	ND/ND	ND	ND	ND	0.3 J	ND	2.0	2.0	ND
Vinyl acetate	--	--	ND	ND	ND	ND	ND	1100	ND/ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	5	10,000	1.0 J	**630 E/350 D**	ND	1.0 J	0.6 J	**480**	**820 E/710 D**	3.0	0.8 J	ND	ND	ND	ND	ND	ND
Semivolatile Organic Compounds (µg/L)																	
1,2-Dichlorobenzene	4.7	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	50 [d]	--	0.8 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	1 [e]	--	ND	ND	ND	ND	ND	**1.0 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	50 [f]	--	ND	7 J	ND	ND	ND	**57**	28	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	5 [e]	--	ND	ND	ND	ND	ND	4.0 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	10 [d]	--	ND	**11**	ND	ND	ND	**130**	**55**	1.0 J	1.0 J	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5 [g]	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.7 BJ	ND	ND	ND	ND	ND

B Analyte is also found in associated blank.
D Secondary dilution factor.
E Exceeded calibration range of instrument.
J Estimated value.
ND Not detected.

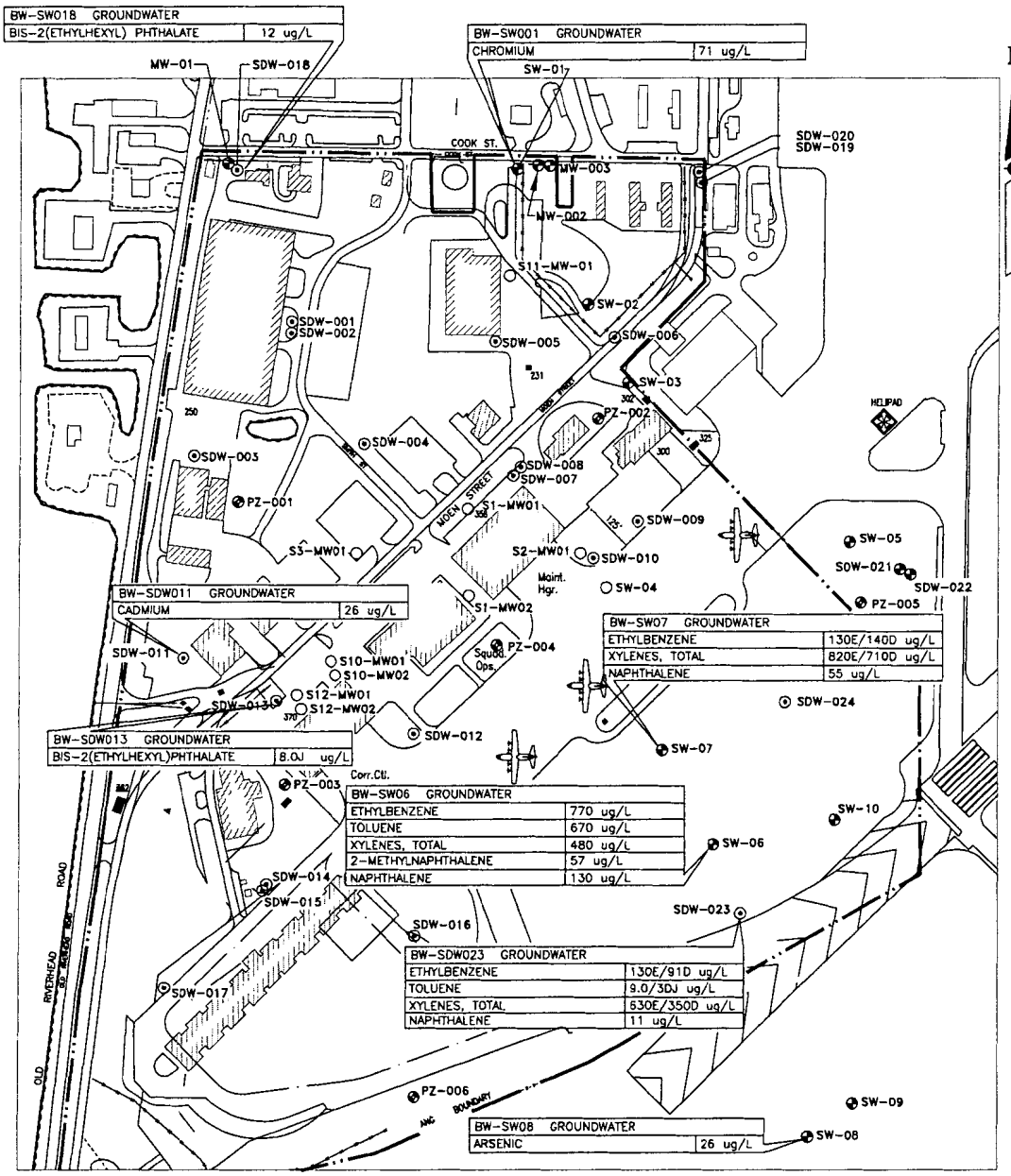
-- No applicable Action Level.

Notes:

Shading and bolding indicate exceedance of Action Levels.

(a) "SDW" refers to small-diameter well; "SW" refers to shallow monitoring well; "PZ" refers to a piezometer.
(b) New York State (NYS), Class GA Groundwater; NYSDEC TAGM #4046.
(c) Maximum Contaminant Level (MCL), United States Environmental Protection Agency.
(d) Guidance Value.
(e) NYS groundwater phenol standard of 1.0 µg/L is for total phenolic compounds.
(f) Compound is an Unspecified Organic Contaminant. Under New York Drinking Water Standards, a general standard of 50 µg/L applies.
(g) Compound is a Principal Organic Contaminant (POC). Under New York State Drinking Water Standards, a general standard of 5 µg/L applies to all POCs unless a more stringent, compound-specific standard has been set (ABB-ES 1994).

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LEGEND

- ⊙ PRE-EXISTING SMALL DIAMETER WELL
- ◕ PRE-EXISTING WELL
- ◕ PRE-EXISTING PIEZOMETER
- ○ NEW MONITORING WELL (RI, 2000-2001)

NOTE: WELL LOCATIONS APPROXIMATE

SOURCE: BASE MAP AND ABB-ES, 1997

0 200 400
SCALE IN FEET

PEER

PROJ./1566-053

FILE:FIG-5.15-BW

BASEWIDE CONTAMINANTS IN GROUNDWATER (RI)
106th RESCUE WING, NEW YORK AIR NATIONAL GUARD
FRANCIS S. GABRESKI AIRPORT
WESTHAMPTON BEACH, NEW YORK

FIGURE
5.15

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Table 5.29
Basewide Groundwater Monitoring
Round 2 Analytical Results - Groundwater - Metals
106th Rescue Wing
New York Air National Guard
Westhampton Beach, New York

Parameter	Action Levels		Concentration											
			Location/Depth [a]											
	NYS [b]	MCL [c]	BW-SDW001-02	BW-SDW002-02	BW-SDW005-02	BW-SDW005-22 (Duplicate)	BW-SDW006-02	BW-SDW011-02	BW-SDW013-02	BW-SDW014-02	BW-SDW015-02	BW-SDW017-02	BW-SDW018-02	BW-SDW021-02
Metals (µg/L)														
Aluminum	--	--	2900	850	1200	1300	2200	1800	1200	2000	600	2600	5300	4700
Arsenic	25	50 [d]	ND	ND	9.7	10	ND	ND	ND	ND	ND	ND	ND	ND
Barium	--	2000	34	85	29	30	40	180	52	21	62	19	170	35
Cadmium	10	5.0	ND	ND	ND	ND	1.1	**26**	ND	ND	ND	ND	ND	ND
Calcium	--	--	14,000	7500	17,000	18,000	64,000	12,000	24,000	12,000	11,000	8200	12,000	5100
Chromium	50	100	11	7.0	3.8	4.3	6.9	8.0	4.6	8.9	2.7	12	30	18
Cobalt	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	--	1300 [e]	ND	ND	ND	13	23	18	ND	ND	ND	ND	14	ND
Iron	--	--	7500	1400	6000	6200	3800	1700	2500	4000	2600	4600	11,000	9800
Lead	25	15 [e]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	ND
Magnesium	--	--	2500	1600	2600	2700	8400	3800	9500	2600	1600	2400	2700	1000
Manganese	--	--	63	75	42	**44**	79	48	93	150	120	220	260	56
Nickel	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	ND
Potassium	--	--	2200	7600	1800	1800	4800	2200	1500	1400	2700	2100	5300	1600
Silver	50	100 [f]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	--	--	28,000	60,000	26,000	26,000	70,000	200,000	36,000	7700	42,000	12,000	153,000	3800
Vanadium	--	--	7.8	ND	ND	ND	11	9.4	ND	7.0	ND	5.6	18	11
Zinc	--	--	88	120	31	43	54	340	ND	54	28	130	450	130

Parameter	Action Levels		Concentration													
			Location/Depth [a]													
	NYS [b]	MCL [c]	BW-SDW022-02	BW-SDW023-02	BW-SDW024-02	BW-SW001-02	BW-SW005-02	BW-SW006-02	BW-SW007-02	BW-SW008-02	BW-SW009-02	BW-SW010-02	BW-PZ001-02	BW-PZ002-02	BW-PZ003-02	BW-PZ003-22 (Duplicate)	BW-PZ006-02
Metals (µg/L)																	
Aluminum	--	--	1600	2100	1900	5100	3800	4100	2200	8100	4000	2200	3300	1900	230	240	330
Arsenic	25	50 [d]	ND	8.1	ND	14	ND	ND	ND	**26**	18	ND	ND	ND	ND	ND	7.1
Barium	--	2000	28	3.1	42	38 E	29	53	34	81	80 E	33	83 E	23 E	8.1	8.1	13 E
Cadmium	10	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	--	--	7800	1900	3000	16,000	16,000	1500	11,000	21,000	12,000	8000	8900	68,000	12,000	11,000	27,000
Chromium	50	100	36	5.3	10	**71**	8.4	31	9.3	27	17	7.5	4.8	5.1	ND	ND	2.3
Cobalt	--	--	ND	ND	ND	ND	ND	ND	ND	5.9	ND	ND	ND	ND	ND	ND	ND
Copper	--	1300 [e]	ND	ND	ND	16	140	11	ND	14	ND	ND	ND	ND	ND	ND	ND
Iron	--	--	1800	26,000	2700	10,000 E	3600	17,000	5200	36,000	32,000 E	2800	4000 E	3100 E	220	260	570 E
Lead	25	15 [e]	ND	ND	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND
Magnesium	--	--	2200	940	700	5300	1800	1100	1000	3200	2400	1800	2000	11,000	2900	2700	1700
Manganese	--	--	380	160	130	86	160	150	38	440	420	47	130	35	19	18	300
Nickel	--	--	ND	ND	ND	140	ND	18	ND	26	12	ND	ND	ND	ND	ND	ND
Potassium	--	--	2100	890	860	2200	1700	760	1400	2600	2800	1100	1700	3000	1400	1300	1700
Silver	50	100 [f]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.0
Sodium	--	--	38,000	3600	4000	77,000	6200	3200	3700	7600	11,000	4000	30,000	61,000	23,000	22,000	3700
Vanadium	--	--	ND	ND	ND	24	6.5	16	8.7	21	12	ND	ND	ND	ND	ND	ND
Zinc	--	--	53	29	87	87	130	ND	ND	48	68	24	53	53	ND	ND	28

E Estimated value or not reported due to the presence of interferences.
ND Not detected.
-- No applicable action level.

Notes:

Shading and bolding indicates exceedance of action level.

(a) "SDW" refers to small-diameter well; "SW" refers to Stone & Webster well; "MW" refers to monitoring well; "-01" refers to Round 1 sampling, February - March 2001; "-02" refers to Round 2 sampling, May - June 2001; "0XR" refers to a replicate (R) sample collected at the top of the screened interval.
(b) New York State (NYS), Class GA Groundwater; NYSDEC TAGM #4046.
(c) Maximum Contaminant Level (MCL), United States Environmental Protection Agency.
(d) Federal MCL is under review.
(e) Treatment Technique Action Level. Federal MCL is concentration in water collected from tap.
(f) Secondary Federal MCL.

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5.10.3 Basewide Groundwater Findings

The findings of the basewide groundwater sampling investigation include:

- Monitoring wells SDW-001, SDW-021, SDW-023, SDW-024, SW-06, SW-07, SW-08, and SW-09, all associated with Site 5, showed indications of possible contamination during sampling, as listed above in Section 5.10.1.
- The volatile organic compounds xylenes (total) and ethylbenzene and the semivolatile organic compound naphthalene exceeded NYSDEC Action Levels at monitoring wells SDW-023, SW-06, and SW-07. All of these wells are associated with Site 4.
- The MCL for ethylbenzene was also exceeded at SW-06, which is associated with Site 4.
- The volatile organic compound toluene exceeded NYSDEC Action Levels at monitoring wells SDW-023 and SW-06, both of which are associated with Site 4.
- The semivolatile organic compound 2-methylnaphthalene exceeded its NYSDEC Action Level at monitoring well SW-07, which is associated with Site 4.
- The metal arsenic exceeded its NYSDEC Action Level at monitoring well SW-08, which is associated with Site 4.
- Cadmium was detected exceeding its NYSDEC Action Level in monitoring wells SDW-011 and SW-001. The MCL was also exceeded at SDW-011. SDW-011 is associated with Site 8 - Cell 4, while SW-001 is associated with Site 8 - Cell 2.

5.11 GROUNDWATER BIOREMEDIATION ANALYTICAL SAMPLES AND FIELD PARAMETERS

Bioremediation parameters were analyzed by the laboratory and measured in the field at Sites 1, 2, 3, 7, 10, 11, and 12, and the on-site groundwater background location. Parameters measured in the field included:

- pH;
- conductivity;
- DO;
- ORP;
- alkalinity; and
- ferrous iron.

Parameters analyzed by the laboratory included:

- alkalinity;
- chloride;
- methane; and
- sulfate.

The results of the groundwater bioremediation samples are presented on Table 5.30.

Bioremediation parameters that were indicative of possible biological activity during Round 1 included:

- Relatively reduced DO at monitoring wells S2-MW01, S10-MW01, S11-MW01, and SDW-019; and
- Below average ORP at monitoring wells S2-MW01 and SDW-019.

Bioremediation parameters that were indicative of possible biological activity during Round 2 included:

- Below average DO at S2-MW01, MW-14, and SDW-020;
- Below average ORP at MW-14; and
- Methane detections at S2-MW01, MW-14, and S11-MW01.

Table 5.30
Bioremediation Parameters
Rounds 1 and 2 - Groundwater Investigation
106th Rescue Wing
Westhampton Beach, New York

Round 1 Remediation Parameters											
Site No.	Monitoring Well ID	Date	pH	Conductivity (mS/sec)	Dissolved Oxygen (mg/L)	ORP (mV)	Alkalinity [(a)] (mg/L) Field/Lab	Ferrous Iron (mg/L)	Chloride (mg/L)	Methane (µg/L)	Sulfate (mg/L)
1	S1-MW01	02/12/01	5.32	.065	9.8	307	51/21	0.9	14	ND	4.4
2	S2-MW01	02/12/01	5.48	.192	6.0	222	68/23	0.8	46	ND	15
3	S3-MW01	02/13/01	5.90	.184	10.2 *	NM	68/17	0.1	65	ND	8.1
7	MW-102	02/26/01	5.19	0.29	8.0	290	34/17	1.0	5.3	ND	ND
10	S10-MW01	02/14/01	5.60	.082	6.5	310	51/15	0.3	24	ND	8.8
11	S11-MW01	02/13/01	5.94	.227	6.7	251	221/21	6.8	55	ND	ND
12	S12-MW01	02/15/01	5.29	.124	8.3	297.6	51/ND	2.9	38	ND	14
BKG	SDW-019	02/18/01	5.74	.424	7.1	210	102/39	0.6	200	ND	4.2
BKG	SDW-020	02/19/01	5.83	.116	6.9	250	68/13	0.8	31	ND	22

Round 2 Remediation Parameters											
Site No.	Monitoring Well ID	Date	pH	Conductivity (mS/sec)	Dissolved Oxygen (mg/L)	ORP (mV)	Alkalinity [(a)] (mg/L) Field/Lab	Ferrous Iron (mg/L)	Chloride (mg/L)	Methane (µg/L)	Sulfate (mg/L)
1	S1-MW01	05/30/01	5.8	0.11	11.1 *	276	34/500	0.4	11	ND	8.1
2	S2-MW01	05/30/01	6.0	0.37	7.9	237	85/26	0.3	46	30	21
3	S3-MW01	05/30/01	6.1	0.38	9.9	226	51/12	0.5	6	ND	11
7	MW-14	06/05/01	5.3	0.091	2.6	83	68/9.7	1.0	11	6.0	4.9
10	S10-MW01	05/25/01	6.3	0.39	11.0 *	297	68/14	1.0	72	ND	13
11	S11-MW01	05/29/01	6.5	0.27	11.9 *	202	102/9.5	0.8	32	2.2	12
12	S12-MW01	05/29/01	5.7	0.22	14.4 *	244	34/6.5	0.4	38	ND	16
BKG	SDW-019	05/17/01	7.3	1.30	8.9	272	170/81	0.7	350	ND	53
BKG	SDW-020	05/17/01	7.1	0.32	7.3	239	68/13	0.8	58	ND	12

MW Monitoring well.
ND Not detected
NM Not measured.
ORP Oxidation/reduction potential.
SDW Small-diameter well.

* Anomalous reading exceeding theoretical DO saturation; most likely due to damaged DO probe. For a discussion of DO readings, please see Section 4.5.3.2.

Note:

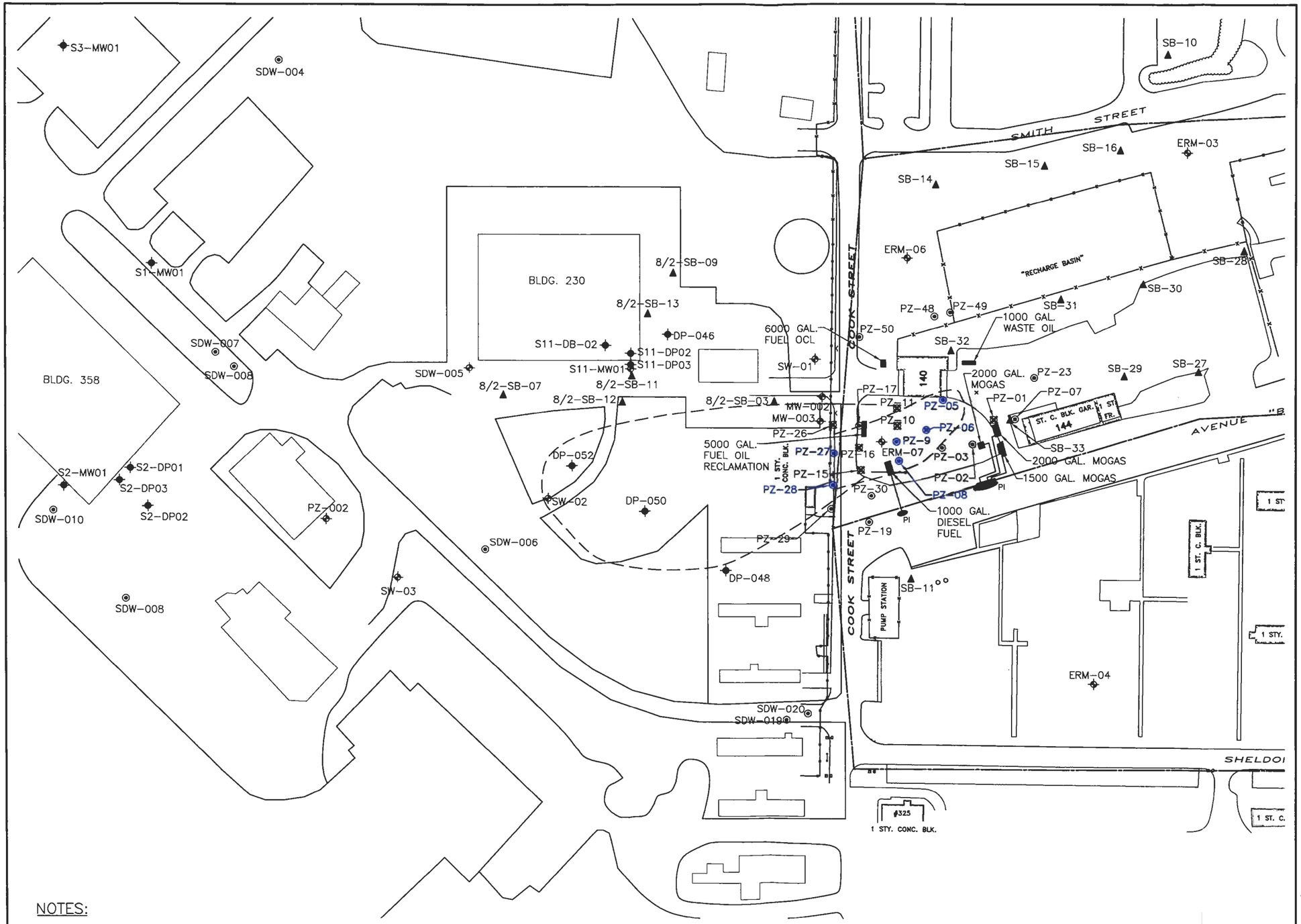
(a) Alkalinity is reported as $CaCO_3$.

Reduced DO indicates that oxygen is being used during aerobic degradation of organic compounds by biological organisms. DO readings recorded in the field frequently approached and exceeded the theoretical saturation limit for DO in water; for a detailed discussion, please see Section 4.5.3.2. Lowered ORP indicates that biological degradation by aerobic processes is using up the available oxygen supply and thereby causing more reducing conditions. The production of methane indicates that anaerobic conditions are present, and that no oxygen is available for biological metabolism.

Alkalinity, pH, and conductivity were within the range of conditions that permit biological activity. Ferrous iron, chloride, and sulfate concentrations were mostly sufficient to support biological activity.

DWG PATH: I:\DIV83\PROJECTS\10569\25466\B DWG\029.DWG

FIGURE E-1



LEGEND

- TP-01 — TEXT PIT LOCATION
- SB-02 — SOIL BORING LOCATION
- ERM-03 — MONITORING WELL LOCATION
- PZ-26 — PIEZOMETER LOCATION
- PZ-28 — PIEZOMETERS WITH LNAPL IN 2002
- PIEZOMETER DESTROYED OR BROKEN AS OF 2002 (NO DATA)
- HYDROCARBON PLUME (DASHED WHERE INFERRED)

NOTES:

1. PIEZOMETERS PZ-9, PZ-10, PZ-11, PZ-15, PZ-16, PZ-29 WERE ADAPTED FROM FIGURE 2-3 OF THE UNC GEOTECH REPORT, 1988.
2. WELLS AND BUILDINGS SOUTH OF COOK STREET ARE APPROXIMATED FROM PEER REPORT AND 1999 AERIAL PHOTOGRAPH.

AIRPORT DEVELOPMENT DISTRICT
FRANCIS S. GABRESKI AIRPORT
WESTHAMPTON, N.Y.

POTENTIAL VOC PLUME

1"=120' 120 0 120

FILE NO. 10569.25466.029
JANUARY 2004

O'BRIEN & GERE ENGINEERS INC.

PLOT DATE: 1/15/04

Exhibit 3

NYSDEC Spill Report Number 8502966

Map Identification Number 11 **AIR NATIONAL GUARD** **Spill Number: 8502966** **Close Date:**
150 OLD RIVERHEAD RD WESTHAMPTON, NY NO ZIP PROVIDED

MAP LOCATION INFORMATION
Site location mapped by: MANUAL MAPPING (6)
Approximate distance from property: 1105 feet to the SSE

ADDRESS CHANGE INFORMATION
Revised street: WESTHAMPTON AFB
Revised zip code: 11978

Source of Spill: MAJOR OIL FACILITY (>400,000 GAL) Spiller: SUFFOLK COUNTY/AIR NATION Spiller Phone:
Notifier Type: HEALTH DEPARTMENT Notifier Name: Notifier Phone:
Caller Name: RICH MACKEL Caller Agency: SUFFOLK COUNTY HEALTH Caller Phone:
DEC Investigator: ACAMPORA WELL MOSF Contact for more spill info: Contact Person Phone:

Spill Class: KNOWN RELEASE THAT CREATES POTENTIAL FOR FIRE OR HAZARD;DEC RESPONSE;UNABLE/UNWILLING RP;CORRECTIVE ACTION TAKEN

Spill Date	Date Cleanup Ceased	Cause of Spill	Resource Affected	Meets Cleanup Standards	Penalty Recommended
11/20/1985		UNKNOWN	GROUNDWATER	NO	NO

Material Spilled	Material Class	Quantity Spilled	Units	Unk Quantity Spilled ?	Quantity Recovered	Units	Unk Quantity Recovered ?
JET FUEL	PETROLEUM	0.000	GALLONS	YES	0.000	GALLONS	YES

Caller Remarks: NO REMARKS GIVEN FOR THIS SPILL

DEC Investigator Remarks: 10/25/83: "Phase I" Evaluation prepared for Attorney General's Office. Have documented spills of commercial aviation gas (Jet A) and military jet fuel (JP4), possibly going back to 1974. Recommend a "Phase II" Evaluation to further investigate the situation at the airport and tank farm, and offsite. 11/19/85: Suffolk County Health checked site wells at tank farm at southeast corner of airport and found large amounts of floating product. BOTH SUFFOLK COUNTY AND AIR NATIONAL GUARD USE THE AIRPORT. There are also wells just south of here installed by NYSDOT. 11/20/85: SCHD notified DEC. SCHD to discuss matter with New York State Attorney General's office. 12/02/85: SCHD internal memo- Indicates that NYS AttGen has been involved. Wells at tank farm were installed by US Justice Dept. 11/29/85: DEC (Licata) note- 3 "County" tanks here (1 25K aboveground 100 octane and 1 25K belowground Jet A used by Air East; 1 12K aboveground used by "Suffolk County Airport") and 3 "Air National Guard" tanks here (1 157K and 1 400K JP4 in use, 1 25K underground "contaminated JP4"). 12/09/85: Licata letters to 1) airport manager and 2) National Guard, cc various- Request investigation and remediation. 12/10/85: Newspaper article- Indicates there have been prior spills here (in) "...the 60s, when as much as 200,000 gallons of fuel from the site leaked..." 01/07/86: SCHD letter to Malloy Air East- One u/g tank "...leased to Malloy..." overdue for testing, and the aboveground tank must be inspected. 01/09/86: SCHD letter to National Guard (Westhampton)- Request various actions (registration, testing, etc). 02/04/86: AttGen letter to National Guard (Westhampton), cc US Dept of Justice- If no action by 19Feb, New York State will investigate, remediate, and seek reimbursement of costs. 02/10/86: DEC Reg Director letter to Suffolk County Executive, cc various- Request remediation. Air Guard has refused. 02/15/86 (A): National Guard letter (responding to 10Feb DEC letter)- Writer did NOT state National Guard refused to remediate. Stated HE did not have the authority to make that decision. 02/15/86 (B): "THE TANK FARM IS ON SUFFOLK COUNTY AIRPORT WITH CERTAIN FACILITIES WITHIN THE TANK FARM UNDER THE CONTROL OF THE NEW YORK AIR NATIONAL GUARD". 03/14/86: National Guard Bureau (Washington) letter- "We maintain that none of the Federal government's tanks are the source of the free floating petroleum..." Their investigation indicates that "....commercial aviation fuel is the prime petroleum product". They will be testing their tanks. 03/20/86: Suffolk County letter- Well vacuuming begun by Fenley & Nicol in February for the County. Due to small amount of product recovered this

way, and only two wells having recoverable product, will switch to hand bailing. 04/04/86: DEC and SCHD on site- 1 25K Jet A at Malloy Air was to be tested. Could not due to leaking flange at manway. 05/06/86: DEC, SCHD, etc on site- 1 25K at Malloy tested tight. 06/03/86: DEC, SCHD, etc on site- 1 25K (County tank) tested tight. 06/24/86: SCHD letter- The 2 25K County tanks tested tight. 07/21/86: DEC letter to airport manager, cc various- State will be installing remediation system. 08/01/86: Fenley & Nicol begins installing system for DEC (product-only ejectors). 10/06/86: Air Guard tanks 4 and 6 tested (see 29Jan87). 10/10/86: DEC letter to airport manager, cc various- Floating plume has extended south of the railroad (which goes along S boundary of site). Plan to install recovery well. 10/27/86: DEC letter to Air Guard (Westhampton)- Have been informed that manway leaks were found upon attempting to test 2 25K tanks. These should be repaired so that the tests can be

DEC Investigator Remarks for this spill continue but are not shown-- Call Toxics Targeting for more information