Report

DRAFT

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

Rebuild Now - NY
Empire State Development

May 2003

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. They took title to the property in 1970 from the US Air Force.

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,as approved by the New York State Department of Environmental Conservation (NYSDEC), was prepared by O'Brien & Gere Engineers, Inc. and outlined the 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 (U.S. EPA) for the previous ReBuild NOW-N.Y. project in Buffalo, New York. This report documents the activities completed and provides a summary of the findings.

Consistent with the Rebuild NOW-NY program objectives, work efforts necessary to address any 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. 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 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

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 PX 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 Figure 3.

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
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

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.
- 6,000 gallon fuel oil - south of Building #140 (32)
- 5,000 gallon fuel oil reclaim tank - southeast of Building #140 (32)
- 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

Approximate locations of the larger tanks are provided on Figure 3.

Historically, the primary method for disposal of sanitary, storm water, and industrial wastewater was through the use of on-site septic tanks and cesspools. Locations of these features are approximated on Figure 3. It should be noted that the septic tank and cesspool information was transferred to this figure from several different sources, which were provided by SCHD. Some of these maps did not contain legends or scales. Therefore, the existence and exact 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.

As stated previously, the ADD Site is bounded to the north by the Airport service road, on the south by Cook Street, on the west by County Route 31, and on the east by Sheldon Avenue. 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 USAF, up until 1969, the 5,000 gallon tank located along Cook Ave in the vicinity of Building 140 was used to hold JP-4 while truck tankers underwent maintenance. Following completion of repairs, the JP-4 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 (ATSs). 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 JP-4 and, therefore, was the responsibility of USAF.

- 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 ground water monitoring program was subsequently initiated to define the extent of impacted ground water.

- Free product was observed to be present on the ground water 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 Figure 4. 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 JP-4 fuel with a smaller fraction of diesel and possible small amounts of other petroleum products. A copy of pertinent portions of this report is provided in Exhibit 1.

- 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.

- 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 (Figure 5).

  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 RQW, with no evidence of leakage observed. Recently, the sump contained about ½ in. of water (Lt Col Webb, 106th RQW 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 ground water information provided in the Peer report included a ground water quality data collected from wells MW-002, MW-003 and SW-001 which are located across Cook Street from the Building 140 area as shown on Figure 5. The ground water 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 ground water quality data*

VOCs (ppb)	SW-01 (Rd 1)	SW-01 (Rd 2)	MW-02 (Rnd 2)	MW-03 (Rnd 1)	MW-03 (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).

A site-wide ground water 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 5. 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. Ground water samples collected from these wells were analyzed for: volatile organic compounds,. semivolatile organic compounds,. BTEX, TPH (GRO and DRO),. tris(o-cresyl)phosphate (TCP), remediation parameters, and 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 ug/L in SW-001, which is above the NYSDEC Action Level of 50 ug/L, but below the MCL of 100 ug/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 ground water above action levels on the ADD property.

2. Site investigation

The site investigation was completed in 2 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 below grade surface (bgs) or to the ground water. 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

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

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

- Completion of a site survey to prepare a base map of the site and to document the location of soil borings, monitoring wells, 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 feet into the groundwater table (about 40 feet). 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 5. 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 feet 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. Ground water 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 5 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 feet bgs and then again from approximately 10 ft above the water table (estimated to be at 30 to 40 feet 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 feet of well screen was installed, with the bottom of the screen set approximately ten feet 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 feet 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 feet bgs. Groundwater was encountered between 32 and 38 ft below grade. The locations of the monitoring wells are shown on Figure 5. 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. Ground water 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. Ground water sampling logs are presented in Appendix D. Ground water sample analytical data is provided in Tables 9 through 20.

2.3. 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 5.

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 ground water 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 (1) 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.

2.4. 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.

2.5. 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 feet based on the NAD 83 datum. A notch was etched in the interior casings to provide a reference point for all future ground water elevation measurements. The base map is presented in Figure 5.

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 1600 ft below grade at a well located 18 miles west of the ADD property (Peer, 2002). A geologic column is provided as Figure 6.

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 in. 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 include 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 1600 ft below mean sea level (MSL). These rocks are either metamorphosed Precambrian or early Paleozoic Age sediments. Two deep borings

penetrated bedrock at a depth of approximately 1600 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 6illustrates the relationship of these aquifers to the geologic units discussed in section 3.1.2 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 of the outwash deposits is estimated to be about 2000 gpd/ft2 (9.4 x 10-2 cm/s) (ABB-ES 1997), and transmissivity is approximately 200 gpd/ft (2.9 x 10-1 cm2/s) (Peer, 2002).

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.

Gardiners clay

This clay is of low permeability and constitutes a confining layer between the surficial aquifer and the underlying 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 cm2/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 ground water 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.

Ground water 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. Ground water 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, ground water levels have dropped approximately 3-ft over the past several years.

Ground water flow maps were developed using the elevation data collected in July and September 2002 and are included as Figures 7 and 8. As illustrated on the figures, during the both the July and September sampling events, the ground water 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, storm water 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. 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 impacted fill material. The test pits were advanced using a rubber tire, extended reach, Case 590 Super L backhoe. The length and depth of the test pits were dependent on the features being investigated. The locations of these test pits are presented on Figure 5.

Test pit materials were visually described. This information was documented on test pit logs. Material removed from the test pits was placed adjacent to the excavation and replaced following test pit completion. Field notes and test pit logs are included as Appendix G.

There was no evidence of soil contamination (stained soil, elevated PID readings, or strong odor) encountered during the visual field inspection of the test pits. TP-4 was located at a magnetic anomaly, which suggested the presence of underground storage tank (UST) in the parking lot of A&M Electronics. However, the only feature observed was a six-inch steel pipe encountered at approximately three ft bgs..

One-soil/sediment sample was collected from the bottom of manhole MH-1 in the area of TP-1, which was excavated in the northern area of the site. The sample was collected to assess an oily residue observed within the structure. This sample was analyzed for Target Compound List (TCL) volatile organic compounds (VOCs), TCL semi-volatile organic compounds (SVOCs) and TAL metals.

3.4. 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.

3.5. 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 are 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.

Lead concentrations exceeded Eastern US background concentrations of 14 ppm at four soil boring locations. Concentrations of lead ranged from 6 to 81.2 ppm. 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, however, the U.S. EPA considers a cleanup standard of 400 ppm to be appropriate for residential areas.

3.6. 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 are associated with those present within the ground water rather than vertical migration from an above-grade 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 boring 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.

3.7. 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 VOC 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. Although a TAGM 4046 level for lead does not exist, USEPA uses 400 ppm as a screening value for soils in residential areas. The concentration of lead observed in this sample was 46.8 ppm.

3.8. Ground water

Several issues were addressed as part of the ground water 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 ground water 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.

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 4. 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.

A soil gas survey was conducted in 1988 under direction of the USAF (UNC report dated October 3, 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 JP-4 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 ground water 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 2002 were provided by SCHD for review in preparation of this report. Product thickness data from 2001 and 2002 are included as Exhibit 1.

Based on review of the data, the product thickness measured in the well in any given year decreased as the water level dropped. This is likely due to smearing of the LNAPL within the newly formed unsaturated zone. The maximum LNAPL thickness recorded in each well during 2002 was used to prepare a distribution map, which is included as Figure 9.

Review of the LNAPL data indicates that thickness varies from month to month as well as seasonally. Since 1997, PZ-05, located on the

northeast corner of the Bldg. 140 garage, is the only location that contained detectable LNAPL on at least one occasion per year. The source of LNAPL in this area is not evident UNC Geotech report suggests that a UST was present on the north side of Building 140 in 1985 and 1986 which would be upgradient of PZ-05 area. However, the source was not identified in this document. (UNC Geotech 1988).

In 2002, PZ-27 and PZ-28 also contained less than approximately 0.6 ft of measurable product. These two locations are along Cook Street. Well ERM-07 is located between these piezometers and the other piezometers that contained free product. This well did not contain free product in 2002. The LNAPL plume does not currently appear to be contiguous. As the UNC Geotech report indicated that all of the product samples collected from the water table were the same, the currently observed distribution of LNAPL likely represents residual pockets from the original pool resulting from the manual removal operations that have occurred.

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.

Review of soil boring logs completed during this investigation indicate that there were no or low PID readings observed within the unsaturated soils in this area. In addition, as stated in Section 3.6, the unsaturated soil sample from ERM-07 (31to32 ft) did not contain detectable levels of VOCS. This information suggests that there is limited distribution of impacted unsaturated soil remaining in the area. This may be due to degradation of the volatile constituents present within the unsaturates soil as the loss occurred prior to 1986 or possibly the source was not located in the immediate area of investigation.

Ground Water Quality

As part of this program ground water samples were collected on two separate dates in 2002, 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.

Ground water sample results were compared to current New York State Class GA Ground Water 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 Ground Water Effluent Limitations*.

VOCs

The only well that contained detectable concentrations of VOCs in the ground water 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 ground water 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.

Ground water samples were also collected from PZ-08 and PZ-17 during the second ground water 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 3300 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, ground water quality information was provided in the Peer report (Peer, 2002) for three wells that located on the ANG property immediately downgradient of the petroleum plume. Ground water data indicated detectable concentrations of VOCs in these wells in 1998. However, a ground water sample collected from one of the wells, SW-001, in 2001as part of the Remedial Investigation contained no detectable VOCs. This suggests that the downgradient extent of the dissolved VOC plume is limited.

SVOCs

Ground water 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 from ERM-05 collected in September did not contain detectable concentrations of SVOCs. No SVOCs were detected in ERM-07 during the July sampling event.

The following 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
Ground water 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 Class GA standard in six samples. The Class GA Standard for Sodium is 20,000. This is likely due to the proximity of the site to the Atlantic Ocean.

Natural Attenuation
Ground water samples were analyzed for natural attenuation parameters to evaluate biodegradation potential of the hydrocarbon compounds found in the ground water on-site. Natural attenuation parameter analytical data are presented on Tables 19 and 20. Table 19 consists of laboratory-generated data and Table 20 provided 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 ground water.

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 ground water 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 is likely the result of aerobic biological activity, which would use DO The concentrations of DO upgradient of the plume indicates that there is a reasonable amount of DO available to feed the biological activity within the plume at this time.

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. 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 discussed in Section 1.3 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 are naturally occurring.

A total of twenty soil borings (SB-14 through SB-33) were completed within the south-central area. A total of 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 ground water 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 ground water 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 ground water 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 ground water samples collected from ERM-01, ERM-03, and ERM-07. Iron exceeded Class GA Standard in the ERM-07 ground water 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 Cook Street. These are likely residual pockets of the original LNAPL pool. Information from wells located downgradient of this area on the ANG property do not indicate the presence of free product on the water table. This suggests that downgradient extent of the LNAPL does not extend off-site onto ANG property to the south. Recent measured thickness of free product in the LNAPL area is generally between 0.6 and 1 ft. This likely equates to between 0.15 and 0.25 ft of product on the water table.

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. 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 ground water 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 ground water 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, MH-1, collected from a manhole in the northern area of the site and area in the south-central portion of the site where the LNAPL plume is located. The following presents potential migration and exposures that have been identified 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 it is the manhole was and may still be connected to a cesspool or dry well rather than a sewerline to a publicly-owned treatment works (POTW). As such there is potential for constituents within the residual material to become suspended within storm water flowing though the system. The suspended materials could then migrate to the soil within and surrounding the drywell. There is a potential that inorganics may leach from the solids and enter the ground water, although this pathway does not appear to be complete based on the ground water 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 ground water in this area of the site. The impacted area is confined to the area 70 ft wide by 120 ft long within the ADD property. Based on information obtained from the ANG property, there are no current observations of LNAPL or dissolved VOCs. 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, the source of the petroleum was near the ground surface suggesting that impacted unsaturated soils may be present. Fingerprinting analysis completed on free product indicates that the product consists primarily of

JP-4 with minor amount of heavier fuel oils. Ground water analyses reveal the presence of ethylbenzene, isopropylbenzene, toluene, xylene, and naphthalene at concentrations above the Class GA ground water 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. The current distribution of the LNAPL is slightly larger than that observed in 1986. However, LNAPL was not observed in well SW-001 located downgradient of the area and on the ANG property.

Fate and transport

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 event capillary forces. The hydraulic gradient at the site is very flat (0.001 ft/ft). Although the measured thickness of the product is on the order of 1 ft, the actual thickness of the product within the aquifer is likely no more than 3 or 4 inches in even the thickest areas of the LNAPL pool. This thickness has been highly variable, likely due to smearing within aquifer in the zone of the water table fluctuation. The head or thickness of the LNAPL, which is another driving force of the LNAPL pool, therefore limited.

The professional literature on LNAPL documents that the migration of residual LNAPL can be restricted by the water in the pore spaces of both the capillary fringe and below the water table (Newell et.al, 1995; Charbeneau, 1999; Huntley and Beckett, 2002; and Sale, 2003). Because of the water in pore spaces and the lack of a driving force, residual LNAPL will not flow vertically or any appreciable distance horizontally. In these cases the LNAPL encountered in a monitoring well reflects the residual LNAPL present in the immediate vicinity of the well and not a larger body of LNAPL capable of horizontal flow. This restriction in horizontal migration provides an explanation for the limited LNAPL recovery of some recovery systems. Even with active ground water depression, pore spaces can still retain enough water to prevent the horizontal migration of residual LNAPL to a recovery well.

The site data suggest that the LNAPL observed represents residual LNAPL and not a larger mobile body of LNAPL. Typically if there has been a significant period of time since the last LNAPL release to the environment, the LNAPL will cease migration and will become residual. This is because the driving force that caused the LNAPL to migrate dissipates. 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. The last characteristic is critical since limited and variable recovery results over time at the site suggest that LNAPL mobility is limited. If the LNAPL were mobile, then the current recovery activities would have resulted in regular recovery of LNAPL. Under such conditions ground water depression could be expected to increase the rate of LNAPL

migration to the well. The site data indicate that LNAPL recovery and even the 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. The use of ground water depression at the site may provide a brief and limited increase in recovery, but could not be expected to show a significant improvement over the current recovery operations. For residual LNAPL, recovery efforts are most efficiently addressed by passive recovery at each monitoring well.

Potential exposures

The depth of the water table at the site will limit direct contact to the LNAPL and the VOCs. Furthermore, the absence of free product and VOCs in the closest ANG wells suggests that offsite migration is limited. Therefore, the potential for offsite exposures are limited. There is a potential for 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 ground water 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 storm water 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 completed and characteristics of residuals within MH-1 may be representative of residuals at other structures. In general, the groundwater data from the site do not suggest that these structures represent a general source of ground water contamination. However, if these structures are no longer in use, they should be decommissioned. Therefore, it will be prudent to initiate an appropriate management plan that includes characterization and disposal of the residuals present.

2. South-Central Area. – The southern portion of this area has been impacted by historically petroleum product losses. Review of information collected during this investigation and historical data suggests that the sources of LNAPL t have been removed. There were no indications of impacted soils within the unsaturated soils, either through analytical or PID screening data.

   As previously stated, LNAPL monitoring and removal actions have been ongoing since at least 1997. Current data suggests that there are two general areas that contain LNAPL. One is located on the northeast side of Bldg. 140. The second area is located along Cook Street. The downgradient extent of the LNAPL appears to be limited to the ADD property. Recent measured thickness of free product in these areas is generally between 0.6 and 1 ft. This likely equates to between 0.15 and 0.25 ft of product on the water table.

   The dissolved-phase VOCs found in the LNAPL area are also limited to the ADD property. This suggests that migration is limited and attenuation of the dissolved plume may be occurring.

   Although based on limited temporal data, it appears that natural attenuation process is occurring within the plume area. 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 ground water quality will provide additional documentation and allow for the assessment of the need for the addition of oxygen to the system.

Table 3

Product 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	
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

Gabreski Airport

Sampling and Analysis Summary

		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

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

* - No samples were collected for analysis at this location

Table 8

Water Level 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.

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Table 9
Gabreski Airport
Surface 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	SB-05 0.3 - 0.5 ft 06/19/02 mg/Kg SOLID	SB-06 0.3 - 0.8 ft 06/19/02 mg/Kg SOLID	SB-07 0.3 - 0.8 ft 06/20/02 mg/Kg SOLID	SB-10 0.0 - 0.5 ft 07/11/02 mg/Kg SOLID	SB-11 0.0 - 0.5 ft 07/10/02 mg/Kg SOLID	SB-16 0.0 - 0.5 ft 07/01/02 mg/Kg SOLID	SB-17 0.0 - 0.5 ft 06/28/02 mg/Kg SOLID	SB-31 0.0 - 0.5 ft 06/26/02 mg/Kg 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.

File Number: 10569/25466

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O'BRIEN & GERE
ENGINEERS, INC.

Table 3 9
Gabreski Airport
Surface 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	SB-33 0.0 - 0.5 ft 06/24/02 mg/Kg SOLID	SS-01 0.0 - 0.5 ft 09/23/02 mg/Kg SOLID	SS-02 0.0 - 0.5 ft 09/23/02 mg/Kg SOLID	SS-03 0.0 - 0.5 ft 09/23/02 mg/Kg SOLID	SS-04 0.0 - 0.5 ft 09/23/02 mg/Kg 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	0.00150 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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O'BRIEN & GERE ENGINEERS, INC.

Table X 10
Gabreski Airport
Surface 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-05 0.3 - 0.5 ft 06/19/02 mg/Kg SOLID	SB-06 0.3 - 0.8 ft 06/19/02 mg/Kg SOLID	SB-07 0.3 - 0.8 ft 06/20/02 mg/Kg SOLID	SB-10 0.0 - 0.5 ft 07/11/02 mg/Kg SOLID	SB-11 0.0 - 0.5 ft 07/10/02 mg/Kg SOLID	SB-16 0.0 - 0.5 ft 07/01/02 mg/Kg SOLID	SB-17 0.0 - 0.5 ft 06/28/02 mg/Kg SOLID	SB-31 0.0 - 0.5 ft 06/26/02 mg/Kg 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 X 12
Gabreski Airport
Surface 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-33 0.0 - 0.5 ft 06/24/02 mg/Kg 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	1350
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 U
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 5 (1)
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	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	MH-1 5.0 - 5.0 ft 09/23/02 mg/Kg SOLID	SB-02 31.0 - 32.0 ft 06/18/02 mg/Kg SOLID	SB-07 27.0 - 28.0 ft 06/20/02 mg/Kg SOLID	SB-08 35.0 - 36.0 ft 06/20/02 mg/Kg SOLID	SB-09 39.0 - 41.0 ft 07/11/02 mg/Kg SOLID	SB-10 27.0 - 28.0 ft 07/11/02 mg/Kg 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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O'BRIEN & GERE ENGINEERS, INC.

Table 1
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
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 5 (1)
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 8.11
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	0.01100 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 5(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-19	SB-20	SB-21	SB-22	SB-23	SB-24	SB-25	SB-26
	Sample Depth			15.0 - 16.0 ft	26.0 - 28.0 ft	31.0 - 32.0 ft	6.0 - 8.0 ft	31.0 - 32.0 ft	8.0 - 9.0 ft	11.0 - 12.0 ft	31.0 - 32.0 ft
	Sample Date			07/02/02	07/02/02	07/10/02	07/10/02	07/08/02	07/08/02	07/03/02	07/03/02
	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	0.01000 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-Trichlom-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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O'BRIEN & GERE
ENGINEERS, INC.

Table 1
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
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	0.01100 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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O'BRIEN & GERE ENGINEERS, INC.

Table 1
Gabreski Airport
Subsurface Soil Samples
Volatile Organic Compound Data

Compound	Sample ID	Avg. Eastern US Background Concentrations	NYS TAGM 4046 Recommended Soil Cleanup	SB-27	SB-28	SB-29	SB-30	SB-31	SB-32	SB-33
	Sample Depth			28.0 - 29.0 ft	30.5 - 31.5 ft	31.0 - 32.0 ft	30.0 - 31.0 ft	27.0 - 28.0 ft	30.0 - 31.0 ft	27.0 - 28.0 ft
	Sample Date			06/27/02	07/02/02	06/26/02	06/27/02	06/26/02	06/24/02	06/24/02
	Units	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
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
1,1,2-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	Avg. Eastern US Background Concentrations	NYS TAGM 4046 Recommended Soil Cleanup	SB-27	SB-28	SB-29	SB-30	SB-31	SB-32	SB-33
	Sample Depth			28.0 - 29.0 ft	30.5 - 31.5 ft	31.0 - 32.0 ft	30.0 - 31.0 ft	27.0 - 28.0 ft	30.0 - 31.0 ft	27.0 - 28.0 ft
	Sample Date			06/27/02	07/02/02	06/26/02	06/27/02	06/26/02	06/24/02	06/24/02
	Units	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
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 6 of 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	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	MH-1 5.0 - 5.0 ft 09/23/02 mg/Kg SOLID	SB-07 27.0 - 28.0 ft 06/20/02 mg/Kg SOLID	SB-08 35.0 - 36.0 ft 06/20/02 mg/Kg SOLID	SB-09 39.0 - 41.0 ft 07/11/02 mg/Kg SOLID	SB-10 27.0 - 28.0 ft 07/11/02 mg/Kg SOLID	SB-11 27.0 - 28.0 ft 07/10/02 mg/Kg 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 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
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 6.12
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 X-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
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 K-2
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.
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O'BRIEN & GERE ENGINEERS, INC.

Table K-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-26 31.0 - 32.0 ft 07/03/02 mg/Kg SOLID	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-31 27.0 - 28.0 ft 06/26/02 mg/Kg SOLID	SB-33 27.0 - 28.0 ft 06/24/02 mg/Kg 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 7 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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Table 8 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	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	MH-1 5.0 - 5.0 ft 09/23/02 mg/Kg SOLID	SB-07 27.0 - 28.0 ft 06/20/02 mg/Kg SOLID	SB-08 35.0 - 36.0 ft 06/20/02 mg/Kg SOLID	SB-09 39.0 - 41.0 ft 07/11/02 mg/Kg SOLID	SB-10 27.0 - 28.0 ft 07/11/02 mg/Kg SOLID	SB-11 27.0 - 28.0 ft 07/10/02 mg/Kg 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	46.7	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	([77 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	([191 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	Avg. Eastern US Background	NYS TAGM 4046 Recommended	SB-12	SB-14	SB-15	SB-16	SB-20	SB-21	SB-27	SB-31
	Sample Depth	Concentrations	Soil Cleanup	36.0 - 37.0 ft	39.0 - 40.0 ft	39.0 - 40.0 ft	39.0 - 40.0 ft	26.0 - 28.0 ft	31.0 - 32.0 ft	28.0 - 29.0 ft	27.0 - 28.0 ft
	Sample Date			06/21/02	06/25/02	06/25/02	07/01/02	07/02/02	07/10/02	06/27/02	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	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	0.051	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.
* - 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-32 30.0 - 31.0 ft 06/24/02 mg/Kg 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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Table 9 ١٢
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.
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O'BRIEN & GERE
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Table 8.15
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
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

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O'BRIEN & GERE
ENGINEERS, INC.

Table 2 (5)
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 8 of 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

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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
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	—

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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)	PZ-08	PZ-17
	Sample Depth			
	Sample Date		09/25/02	09/25/02
	Units	ug/L	ug/L	ug/L
	Matrix		WATER	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.
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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)	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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O'BRIEN & GERE ENGINEERS, INC.

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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O'BRIEN & GERE ENGINEERS, INC.

Table 12 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 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
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	13.6	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 1A 1B
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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O'BRIEN & GERE ENGINEERS, INC.

Table 18 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	—	1.5	—	—
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 14
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

O'BRIEN & GERE ENGINEERS, INC.

Table 1 6 / 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	1	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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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
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 5.21

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.

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O'BRIEN & GERE ENGINEERS, INC.

Table D 21

Gabreski Airport
Ground Water Samples
Maximum and Minimum Detected Concentrations

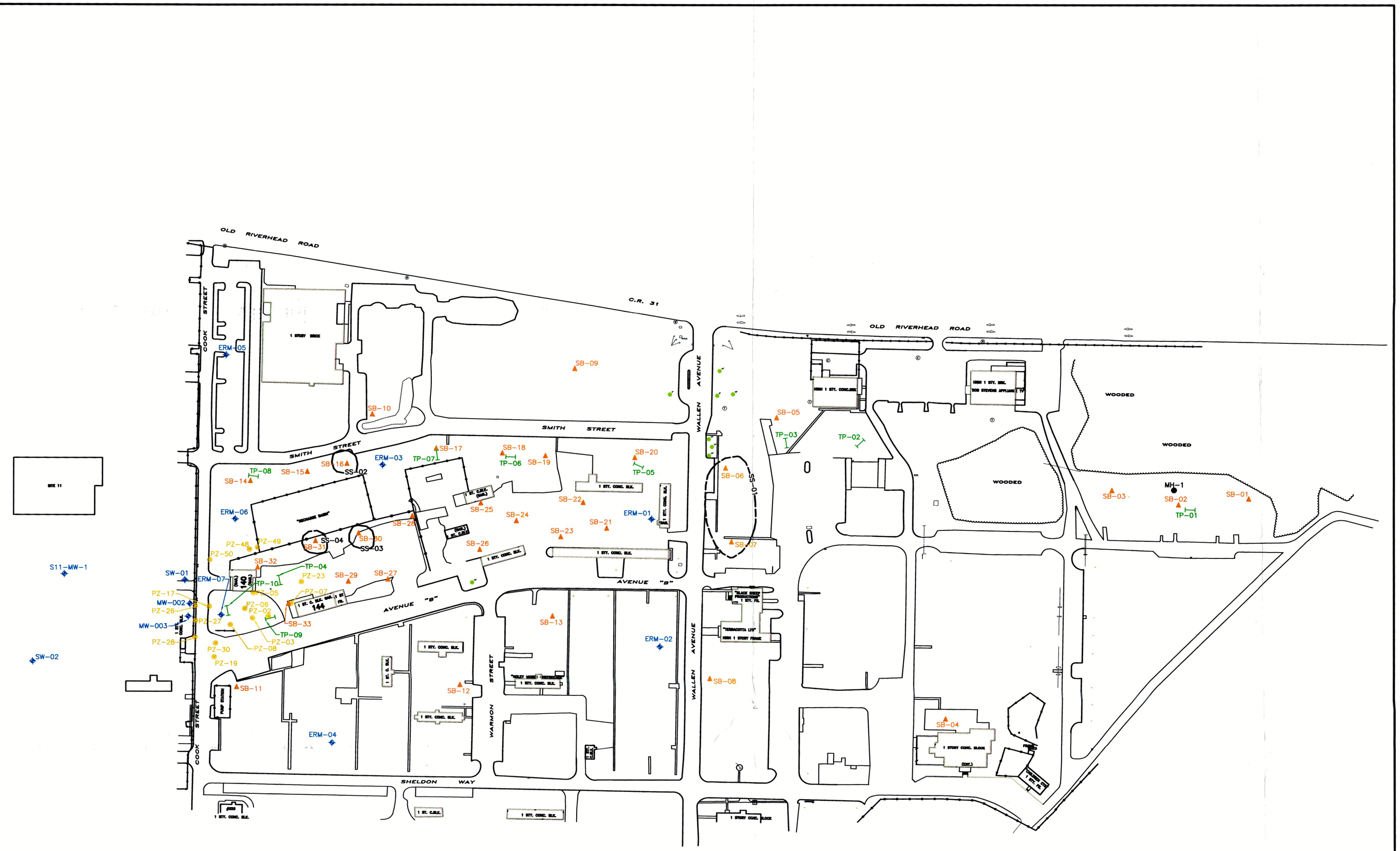
Parameter	NY State Class GA Standards	Average Eastern U.S. Background Concentrations	# of Samples/ # of Detects	Minimum Detected Concentration	Maximum Detected Concentration
INORGANICS (ug/L)					
Aluminum	NC	NC	10/3	37.3	91.6
Arsenic	25	NC	10/3	3.4	4.1
Barium	1000	NC	10/6	25.7	56.9
Cadmium	5	NC	10/1	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.

Printed: 03/06/03 13:32:33
FXP File: Q:\10569_UNIONSHP\25466\GABRESKIAIRPORT\RISKTABW.FXP
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File Number: 10569.25466

DWG PATH: I:\DIV83\PROJECTS\10569\25466\8 DWG\024.DWG

FIGURE 5



LEGEND

- TP-01 — TEXT PIT LOCATION
- SB-02 — SOIL BORING LOCATION
- ERM-03 — MONITORING WELL LOCATION
- PZ-26 — PIEZOMETER LOCATION
- SS-01 — COMPOSITE SURFACE SAMPLE SAMPLE

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

GABRESKI AIRPORT
WEST HAMPTON, NEW YORK

SAMPLE LOCATION MAP

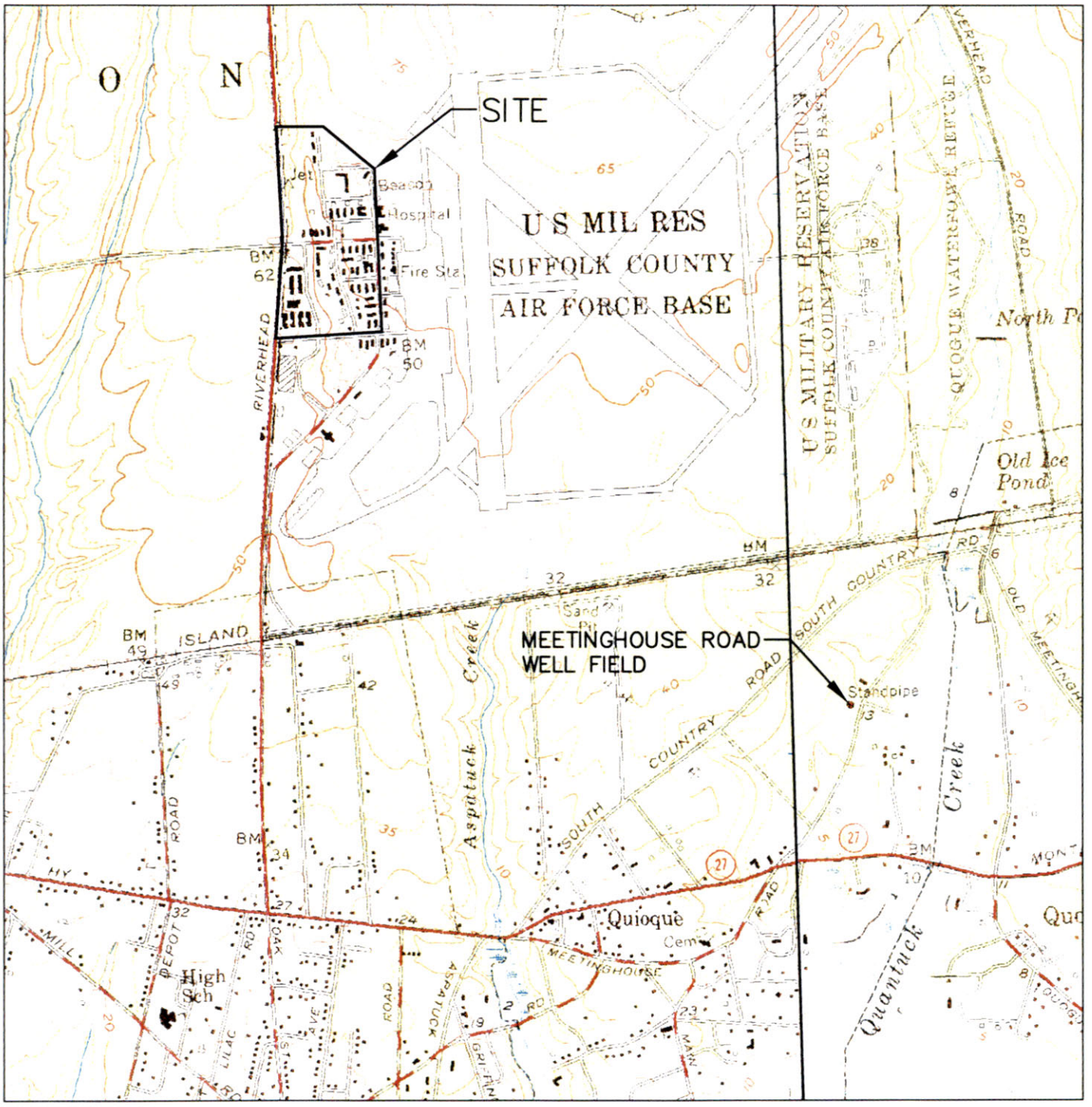
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FILE NO. 10569.25466.024
JANUARY 2003

O'BRIEN & GERE ENGINEERS INC.

PLOT DATE: 3/6/03

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

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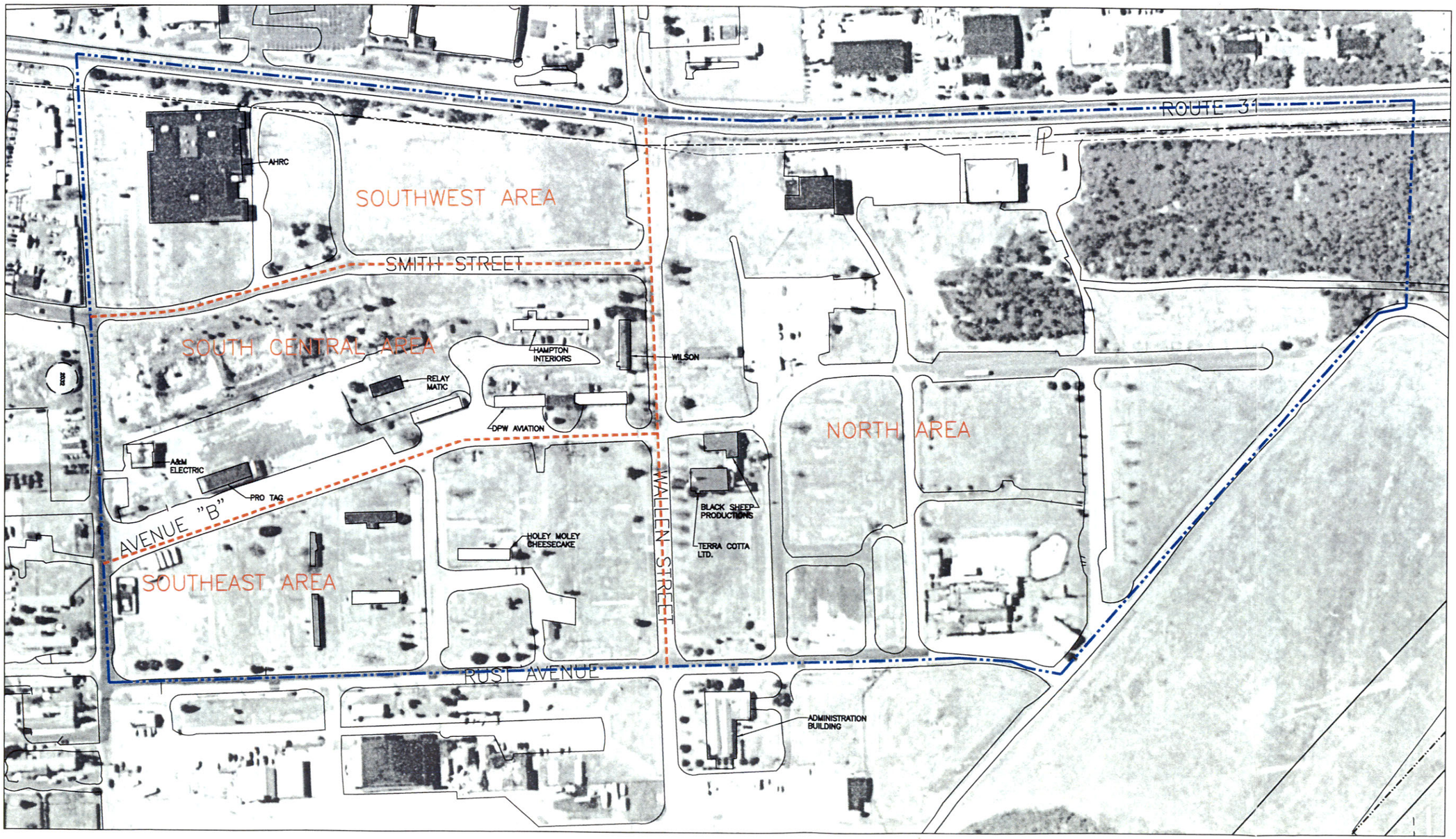
O'BRIEN & GERE ENGINEERS INC.

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PLOT DATE: 5/20/03

PATH: I:\DWG\PROJECTS\10569\25466\DWGS\022.DWG SF-100

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

1"=100' 100 0 100

APPROXIMATE SCALE

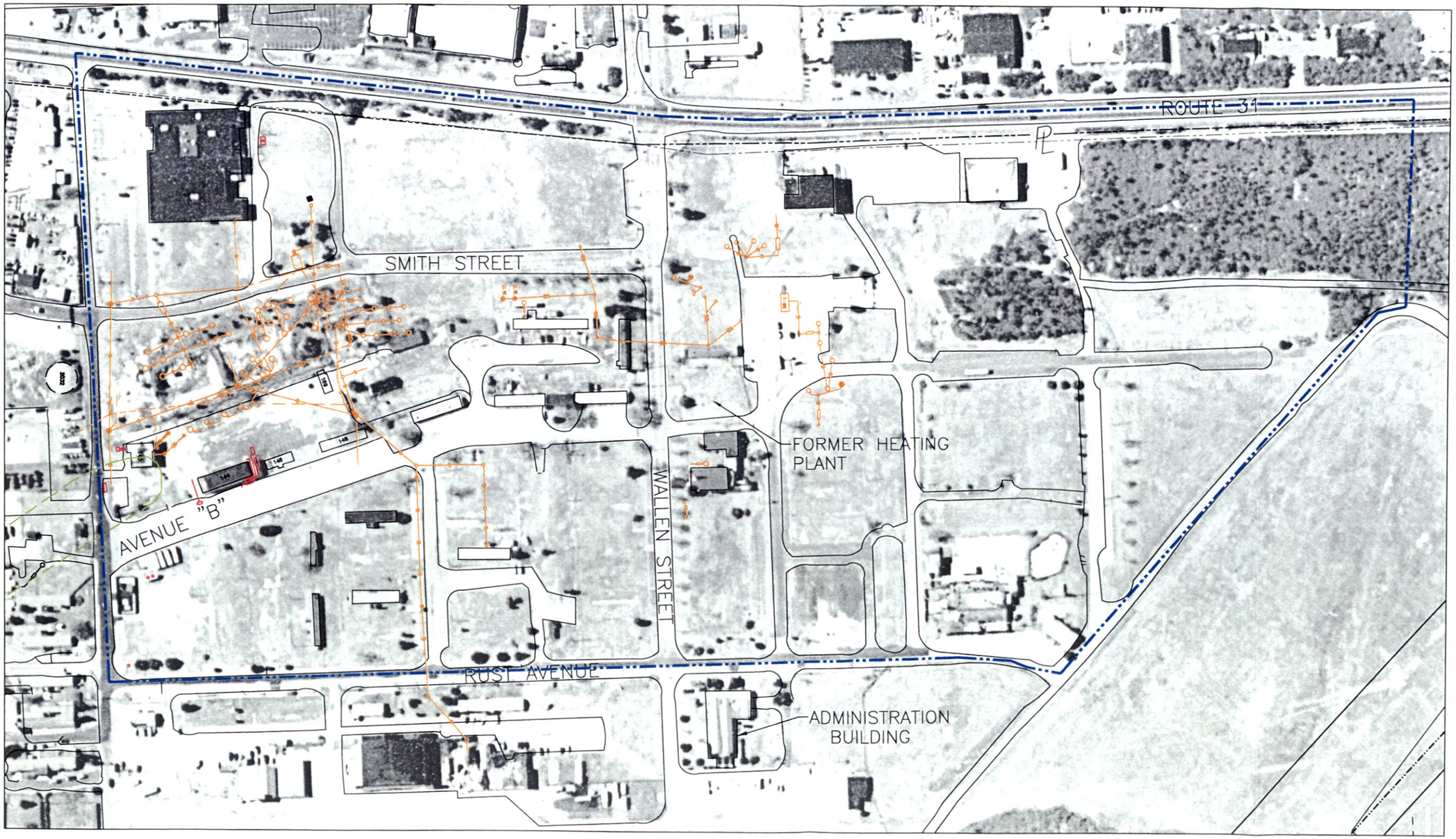
FILE NO. 10569.25466.022
MAY 2003

O'BRIEN & GERE ENGINEERS, INC.

PLOT DATE: 5/22/03

PATH: L:\DWG\PROJECTS\10569\25466\DWGS\023.DWG SF-100

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

1"=100' 100 0 100
APPROXIMATE SCALE

FILE NO. 10569.25466.023
MAY 2003

O'BRIEN & GERE ENGINEERS, INC.

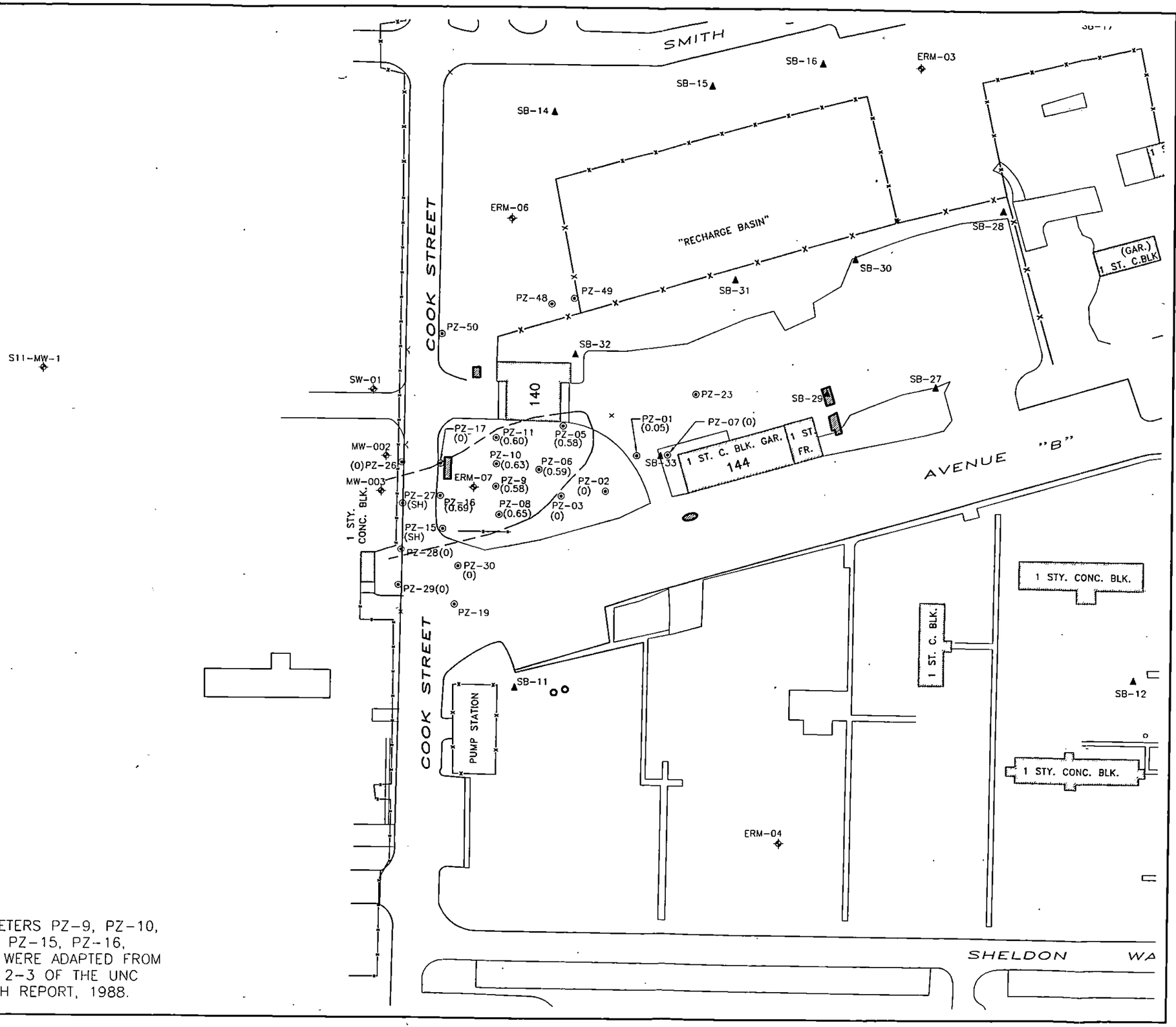
BUILDING HISTORIC USE

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

PLOT DATE: 5/22/03

DWG PATH: I:\DIV83\PROJECTS\10569\25466\8 DWG\019.DWG

FIGURE 4



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.

PLOT DATE: 5/21/03

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

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

1986 EXTENT OF FREE PRODUCT

1"=80' 80 0 80

FILE NO. 10569.25466.019
MAY 2003

O'BRIEN & GERE ENGINEERS INC.

DWG PATH: I:\DIV83\PROJECTS\10569\25466\7 _DWGS\021.DWG

FIGURE 6

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

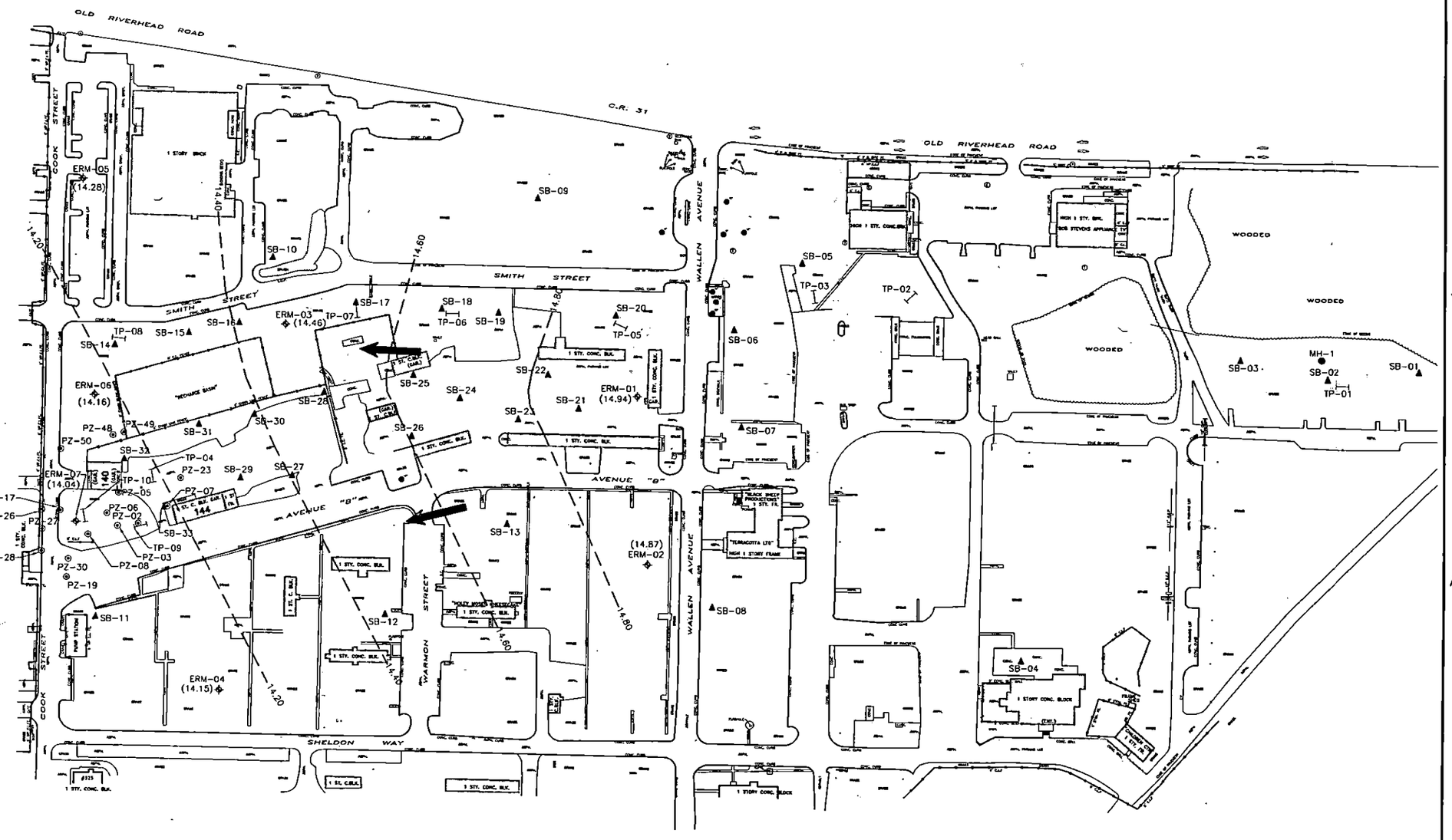
O'BRIEN & GERE ENGINEERS INC.

PLOT DATE: 5/22/03

DWG PATH: I:\DIV83\PROJECTS\10569\25466\8 DWG\013.DWG

PLOT DATE: 5/22/03

FIGURE 7



LEGEND

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

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

GROUND WATER FLOW MAP (7/11/02)

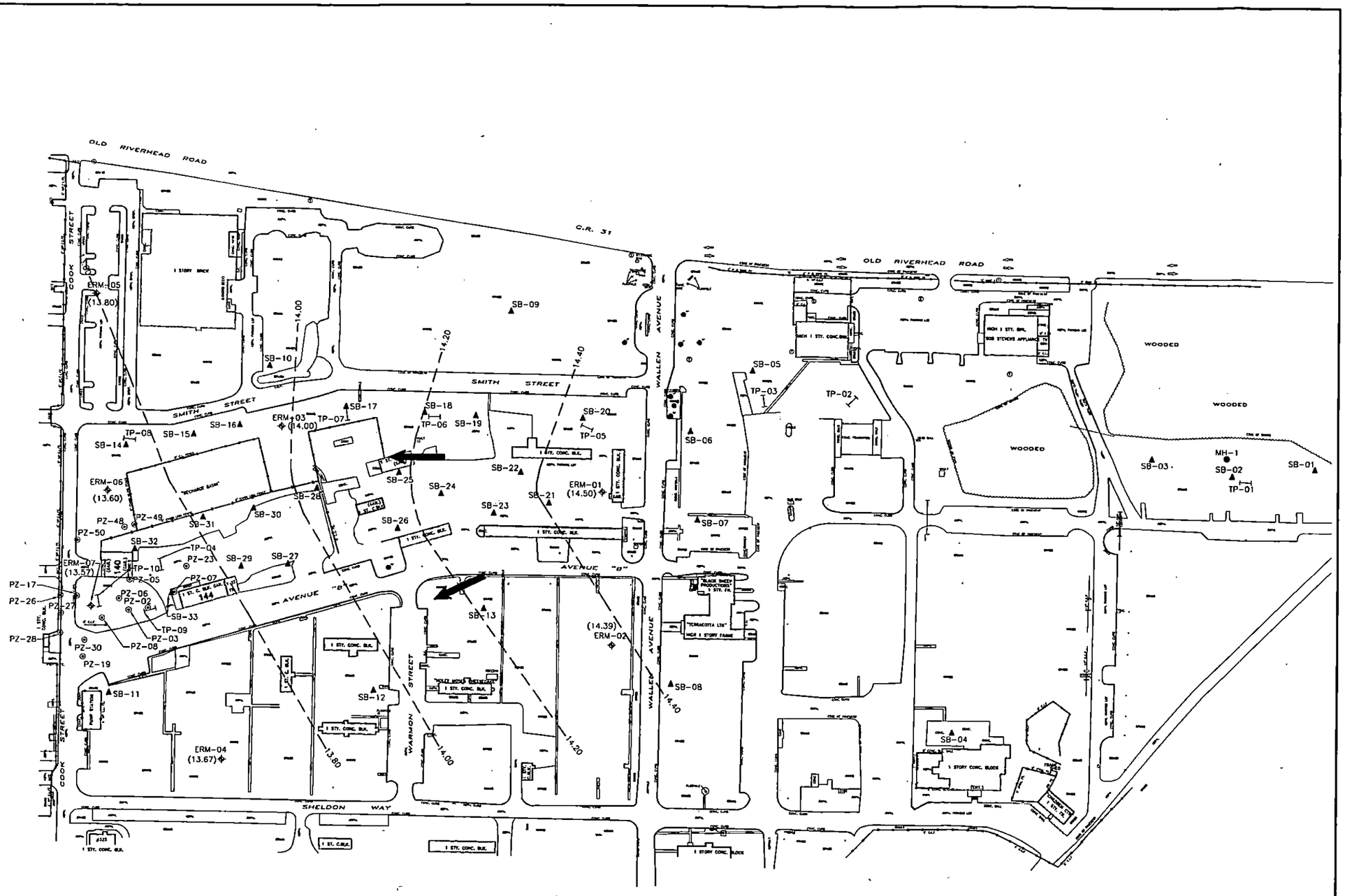
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NOTE:
MH-1 LOCATION ADAPTED FROM ERM FIELD NOTES.

FILE NO. 10569.25466.013
JANUARY 2003

O'BRIEN & GERE ENGINEERS INC.

FIGURE 8



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

FILE NO. 10569.25466.014
JANUARY 2003

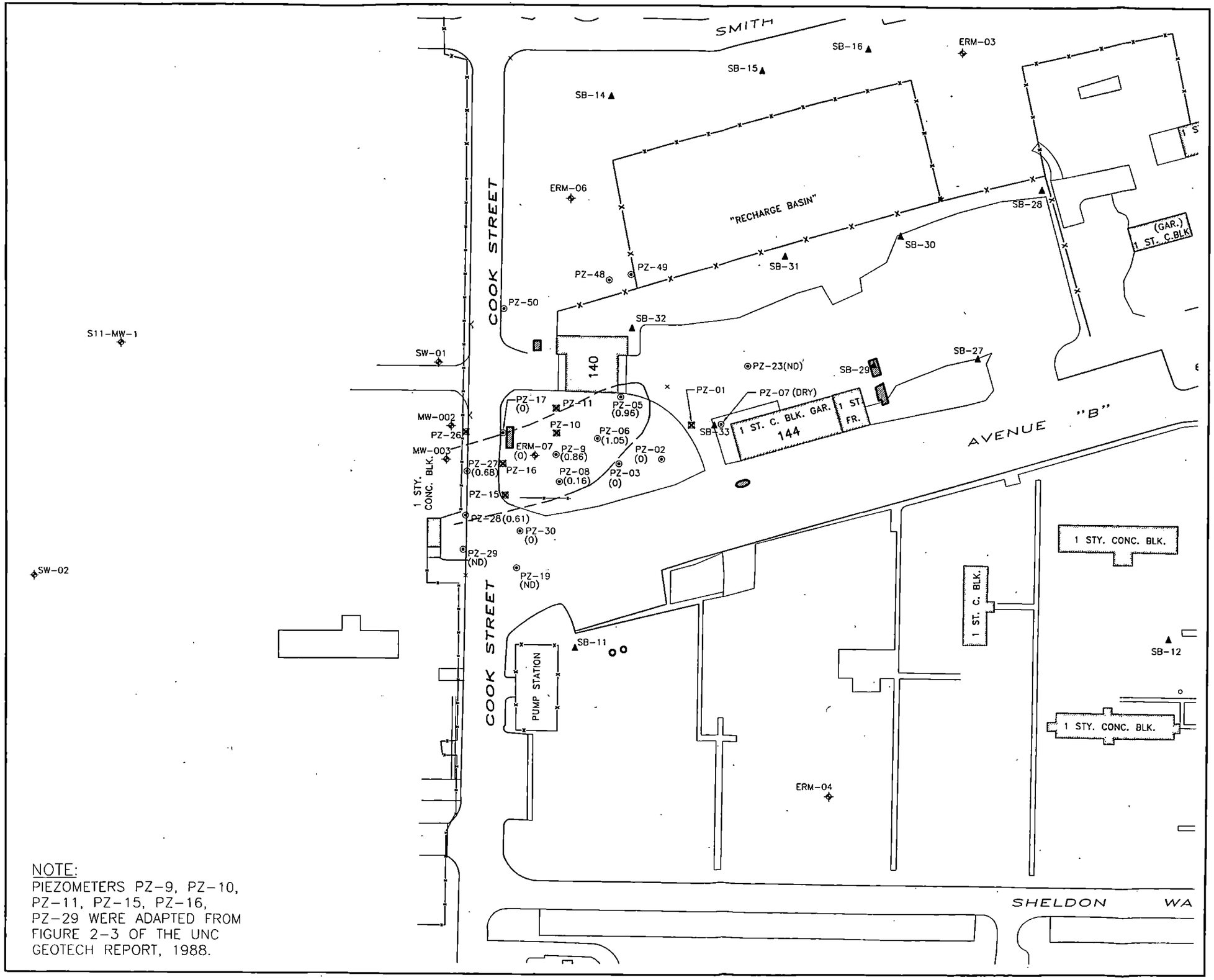
O'BRIEN & GERE ENGINEERS INC.

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

DWG PATH: I:\DIV83\PROJECTS\10569\25466\8 DWG\014.DWG

PLOT DATE: 3/6/03

FIGURE 9



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
⊠	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 FREE PRODUCT

1"=80' 80 0 80

FILE NO. 10569.25466.020
MAY 2003

O'BRIEN & GERE ENGINEERS INC.

DWG PATH: I:\DIV83\PROJECTS\10569\25466\8 DWG\020.DWG

PLOT DATE: 5/21/03

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: GABRESKI AIRPORT, NYSDEC	Project Number: 72708.01.01	Date & Time Started: 6/19/02 13:45 PM Date & Time Completed:	
Drilling Company: Delta Well & 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
Bit Size(s): 7 1/4"	Core Barrel(s): 4 3/4"	Geologist(s): 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
1	NS	*			Black top (Tar coated angular sand and gravel)	Removed with Post hole digger
2	NS NS	1.9	0.7 0.5		Light Brown, fine to medium loose sand, moist	No odor No staining
3	NS *		0.7 0.7		Light Brown grading to greenish gray, fine - medium loose sand, moist Dark gray, fine to med loose sand, mottling, moist, trace organic	No odor No staining
4	NS NS	1.3	0.5 0.2		Light Brown grading to greenish gray, fine - medium loose sand, moist Fine to medium loose sand - moist	No odor No staining
5	NS NS		0.6 0.5		Dark Gray grading to olive gray, fine to medium loose sand, very moist	No odor No staining
6	NS NS	1.2	0.4		Light brown, medium loose sand moist	No odor No staining
7	NS NS		0.5		Light brown, medium loose sand moist	No odor No staining
8	NS NS	1.2	0.2		Light brown, fine to medium loose sand, moist	No odor No staining
9	NS NS		0.3		Light brown, fine to medium loose sand, moist	No odor No staining
30	NS	NM	NM		**NS (Auger Only)**	NONE
31	NS	0.7	0.5		Light brown, medium to fine loose sand moist, trace rounded gravel	No staining No odor
32			0.6		Light brown, medium to fine loose sand moist, trace rounded gravel	No staining No odor
36	NS	NM	NM		**NS (Auger Only)**	NONE
37		1.3	0.1		Light brown, medium to fine loose sand with some rounded pebbles and gravel	No staining Saturated, No odor
38			0.2		Light brown, medium to fine loose sand with some rounded pebbles and gravel	No staining No odor 6/20/02
42	NS	NM	NM		**NS (Auger Only)**	NONE
					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 Walten 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: GABRESKI AIRPORT, NYSDEC	Project Number: 72708.01.01	Date & Time Started: 6/19/02 13:45 PM	
		Date & Time Completed: 6/25/02 11 30	
Drilling Company: Delta Well & 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
Bit Size(s): 7 1/4"	Core Barrel(s): 4 3/4"	Geologist(s): 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	
Drilling Company: Delta Well & Pump	Foreman: E. Gabay	Date & Time Completed:	
Drilling Equipment: Falking	Method:	Sampler(s): Steve / Conrad	Sampler Hammer: Drop:
Bit Size(s): Split Spoon	Core Barrel(s):	Elevation & Datum:	Completion Depth: Rock Depth:
		Geologist(s): J. Petersen	

DEPTH (ft below grade)	SAMPLES: Sample Identification	Recovery (feet)	FID/ PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS	
	LOCATION:				SURFACE DESCRIPTION:		PID
0	NS		0.0		6" Brown top soil fine to	10YR 3/3	0.0
	NS	1.5	0.0		medium sand dry, trace pebbles		
1	NS		0.0		Fine to medium sand	10YR 7/6	0.0
	NS		0.0		dry		
2	NS		0.0		No odors between 2-4 ft		
	NS	1.5	0.0		Fine to medium sand	10YR 6/6	0.0
3	NS		0.0		moist		
	NS		0.0				
4	NS		0.0		Fine to medium sand and	10YR 4/6	0.0
	NS	1.5	0.0		some gravel		
5	NS		0.0		Fine to medium sand and	10YR 6/8	0.0
	NS		0.0		some gravel - moist		
6	NS	0.5	0.0		Fine to medium sand and	10YR17/3	0.0
	NS		0.0		some gravel		
7	NS		0.0		Fine to medium sand and	10YR 7/3	0.0
	NS		0.0		some gravel		
8	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 GABRESKI AIRPORT, NYSDEC	**Project Number** 72708.01.01	**Date & Time Started:** 6/26/02 **Date & Time Completed:**	
Drilling Company Delta Well & Pump	**Foreman** Jake Elder	**Sampler(s)** Stephen Citrin	**Sampler Hammer** 140 lb / **Drop** 24"
Drilling Equipment Truck Mounted / **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: North side of E. Cook St. (between mw-.5', .7')				SURFACE DESCRIPTION: Grassy/ Sandy	
0						
	NS				Light brown, medium to fine	No odor
1	NS	1.2	0.0		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				Light brown, fine to coarse	No odor
3	NS	1.0	0.0		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				Reddish brown, medium to fine	No odor
5	NS	1.1	0.0		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				Brown, fine to coarse	No odor
7	NS	1.3	0.2		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				Brown medium sand and	No odor
36	NS	0.0	1.2		gravel. Loose some silt	No staining
	NS				Brown medium sand and	No odor
37	NS				gravel. Loose some silt	No staining
	NS				Brown medium sand. Some	No odor
38	NS		1.5		fine sand, trace gravel	No staining
	NS				Brown medium sand. Some	No odor
39	NS	0.0			fine sand, trace gravel	No staining
	NS				Brown fine to medium sand and	No odor
40	NS		1.5		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: GABRESKI AIRPORT, NYSDEC	Project Number: 72708.00.01	Date & Time Started: 6/27/02 11 45 Date & Time Completed: 6/28/02	
Drilling Company: Delta Drilling & Pump	Foreman: Jake Elder	Sampler(s): Stephen Citrin	Sampler Hammer: 140 lb / Drop: 24"
Drilling Equipment: Truck Mounted / Jacking: 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
0	LOCATION: Corner of Ave. B and Cook St. West Side				SURFACE DESCRIPTION: Grassy	
1	NS	0.7	0.0	5	Light brown medium to coarse loose	No odor
	NS			5	sand dry	No staining
2	NS		0.0	5		No odor
	NS			56		No staining
3	NS	1.0	0.0	10	Light brown medium to coarse	No odor
	NS			21	sand dry.	No staining
4	NS		0.0	24	Light brown, medium to coarse	No odor
	NS			23	sand. Some gravel, moist to dry.	No staining
5	NS	1.2	0.0	20	Dark medium to coarse sand	No odor
	NS			22	some coarse gravel	No staining
6	NS		0.0	8	Light brown to yellowish or medium to	No odor
	NS			11	coarse sand - moist	No staining
7	NS	1.0	0.0	16	Light brown medium to coarse	No odor
	NS			12	sand some gravel	No staining
8	NS		0.0	9	Yellowish orange medium to	No odor
	NS			13	coarse sand - moist	No staining
9	NS	1.0	0.0	5	Dark brown medium to coarse	No odor
	NS			5	sand - moist	No staining
10	NS		0.0	11	Light brown Medium to coarse	No odor
	NS			12	sand moist	No staining
11	NS	1.2	0.0		Brown medium to coarse	No odor
	NS				sand - moist	No staining
12	NS		0.0		Light brown with brown mottling	No odor
	NS				medium to coarse sand. Some rounded gravel.	No staining
13	NS	1.0	0.0	6	Light brown with brown mottling	No odor
	NS			15	medium to coarse sand, moist.	No staining
14	NS		0.0	10	Light brown medium to	No odor
	NS			19	coarse sand, some rounded gravel	No staining
15	NS	1.2	0.0	5	Light brown medium sand	No odor
	NS			6	some gravel - moist	No staining
16	NS		0.0	15	Light brown medium sand	No odor
	NS			17	brown mottling	No staining
17	NS	0.5	0.0	15	Light brown with brown mottling	No odor
	NS			10	medium to coarse sand	No staining
18	NS		0.0	13	NO RECOVERY	No odor
	NS			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 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)	Medium to coarse sand and gravel with trace mica chips, moist, no odors
	NA				SW	no staining present.
	NA				10YR(7/3)	Medium to coarse sand and gravel with trace mica chips, moist, no odors
20	NA				SW	no staining present. Gravel layer at 19.5
	NA	2.0	0.0		10YR(4/3)	Fine to medium sand and silt with gravel, no odors and no staining. Moist.
	NA				SP	
	NA				10YR(4/3)	Fine to medium sand and silt with gravel, no odors and no staining. Moist.
22	NA				SP	
	NA	2.0	0.0		10YR(6/3)	Medium to coarse sand and gravel with pebbles one inch in diameter.
	NA				SW	
	NA				10YR(6/3)	Medium to coarse sand and gravel with trace fines.
24	NA				SW	
	NA	2.0	0.0		10YR(5/4)	Fine, medium and coarse sand and gravel, very moist, no odors and no \
	NA				SP	staining.
	NA				10YR(5/4)	Fine, medium and coarse sand and gravel, very moist, no odors and no \
26	NA				SP	staining. Moist.
	NA	2.0	0.0		10YR(5/4)	Medium to coarse sand and gravel with trace fines. No odors and no stainging
	NA				SP	present, Moist.
	NA				10YR(5/4)	Medium to coarse sand and gravel with trace fines. No odors and no stainging
28	NA				SP	present, Moist.
	NA	2.0	0.0		10YR(6/3)	Medium to coarse sand and gravel with trace fines. Trace pebbles rounded
	NA				SW	up to one inch in diameter. Dry no odors and no staining.
	NA				10YR(6/3)	Medium to coarse sand and gravel with trace fines. Trace pebbles rounded
30	NA				SW	up to one inch in diameter. Dry no odors and no staining.
	NA	2.0	0.0		10YR(6/3)	Medium to coarse sand and gravel with trace fines. Trace pebbles rounded
	NA				SW	up to one inch in diameter. Dry no odors and no staining.
	NA				10YR(6/3)	Medium to coarse sand and gravel with trace fines. Trace pebbles rounded
32	NA				SW	up to one inch in diameter. Dry no odors and no staining.
	NA	2.0	0.0		10YR(6/3)	Medium to coarse sand and gravel, with trace fines. Dry no odors, no staining
	NA				SW	
	NA				10YR(6/3)	Medium to coarse sand and gravel, with trace fines. Dry no odors, no staining
36	NA				SW	
	NA	2.0	0.0		10YR(6/3)	Medium to coarse sand and gravel, with trace fines. Dry no odors, no staining
	NA				SW	
	NA				10YR(6/3)	Medium to coarse sand and gravel, with trace fines. Dry no odors, no staining
40	NA				SW	
						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: Gabreski Airport	Project Number: 72708.02.01	Date & Time Started: 6/18/02 07:30.	
Drilling Company: Delta Well & Pump	Foreman: Jim Pederson	Date & Time Completed: 6/1/02 09:30	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
	LOCATION: Adjacent to cesspools MH-1, 2 and 3.					SURFACE DESCRIPTION: Grass
0	NA	2.0	0.0		10YR(3/2)	Silty soil, top soil with vegetation.
	NA				SM	
	NA				10YR(6/2)	Silty sand and gravels, no odors and no staining.
2	NA				SP	
	NA	1.0	0.0		10YR(6/2)	fine to medium and coarse grained sand, trace silts, no odors, very moist.
	NA				SP	
	NA				10YR(6/2)	fine to medium and coarse grained sand, trace silts, no odors, very moist.
4	NA				SP	
	NA	2.0	0.0		10YR(5/3)	Medium to coarse sand and silts, no odor, no staining, moist from cess pools.
	NA				SP	
	NA				10YR(5/3)	Medium to coarse sand and silts, no odor, no staining, moist from cess pools.
6	NA				SP	
	NA	1.5	0.0		10YR(6/3)	Medium to coarse sand and silts, no odor, no staining, moist from cess pools.
	NA				SP	
	NA				10YR(6/3)	Medium to coarse sand and silts, no odor, no staining, moist from cess pools.
8	NA				SP	
	NA	2.0	0.0		10YR(6/6)	Medium to coarse sand and gravel, with trace to little fines, moist from pools.
	NA				SW	No odors, no staining.
	NA				10YR(6/6)	Medium to coarse sand and gravel, with trace to little fines, moist from pools.
10	NA				SW	No odors, no staining.
	NA	1.5	0.0		10YR(6/6)	Medium to coarse sand and gravel, with trace to little fines, moist from pools.
	NA				SW	No odors, no staining.
	NA				10YR(6/6)	Medium to coarse sand and gravel, with trace to little fines, moist from pools.
12	NA				SW	No odors, no staining.
	NA	2.0	0.0		10YR(6/4)	Medium to coarse sand and gravels with trace fines, moist from pools.
	NA				SW	
	NA				10YR(5/4)	Medium to coarse sand and rounded gravels, no odors and no staining.
14	NA				SW	
	NA	1.5	0.0		10YR(5/8)	Medium to coarse sand and gravels, with trace fines, no odors and no staining.
	NA				SW	
	NA				10YR(6/2)	Medium to coarse sand and gravels, with trace fines, no odors and no staining.
16	NA				SW	
	NA	2.0	0.0		10YR(6/4)	Medium to coarse sand, trace to some fines, and gravel. Moist, no odors.
	NA				SP	
	NA				10YR(6/3)	Medium to coarse sand and gravel, trace to no fines, no odors and no staining.
18	NA				SP	

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) SW	Medium to coarse sand, trace gravels, little to no silts, moist, no odors no staining present.
	NA					
	NA				10YR(6/2) SW	Medium to coarse sand with some to trace gravels, moist, no odors no staining present.
20	NA					
	NA	2.0	0.0		10YR(5/3) SW	Medium and coarse sand trace gravels, with rounded pebbles, no odors, no staining, moist.
	NA					
	NA				10YR(6/4) SW	Medium and coarse sand trace gravels, with rounded pebbles, no odors, no staining, moist.
22	NA					
	NA	2.0	0.0		10YR(5/3) SW	Medium and coarse sand trace gravels, with rounded pebbles, no odors, no staining, moist from pools.
	NA					
	NA				10YR(6/4) SW	Medium and coarse sand trace gravels, with rounded pebbles, no odors, no staining, moist from pools.
24	NA					
	NA	2.0	0.0		10YR(4/2) SP	Medium to coarse sand and some silts, trace gravels, no odors, no staining. Moist.
	NA					
	NA				10YR(5/6) SP	Medium to coarse sand and some silts, trace gravels, no odors, no staining, moist.
26	NA					
	NA	2.0	0.0		10YR(6/2) SW	Medium to coarse sand and gravel, little to no fines, no odors, no staining. Moist.
	NA					
	NA				10YR(6/2) SP	Medium to coarse sand and gravel, little to no fines, no odors, no staining. Moist.
28	NA					
	NA	2.0	0.0		10YR(6/2) SW	Medium to coarse sand, some to trace silts, no odors, no staining moist.
	NA					
	NA				10YR(6/2) SW	Medium to coarse sand, some to trace silts, no odors, no staining moist.
30	NA					
	NA	2.0	0.0		10YR(6/2) SW	Medium to coarse sand, some to trace silts, no odors, no staining moist.
	NA					
	X				10YR(6/2) SW	Medium to coarse sand, some to trace silts, no odors, no staining moist. Note soil boring dry to a depth of 36 ft, groundwater not encountered.
32						
						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: Gabreski Airport	Project Number: 72708.02.01	Date & Time Started: 6/18/02 09:45	
Drilling Company: Delta Well & Pump	Foreman: Jim Pederson	Date & Time Completed: 6/18/02 11:45	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
	LOCATION:					SURFACE DESCRIPTION: Grass
0	NA	1.5	0.0		10YR(3/3) SM	~ Approximately one foot of silty soil and vegetatioin, with some sand and some gravel, no ddors, and no staining. Moist.
	NA					
	NA				10YR(3/3) SM	Fine to medium and coarse grained sand, with some gravel. No odors, and no staining.
2	NA					
	NA	1.5	0.0		10YR(4/6) SP	Fine to medium and coarse grained sand, with some gravel. No odors, and no staining.
	NA					
	NA				10YR(4/6) SP	Fine to medium and coarse grained sand, with some gravel. No odors, and no staining.
4	NA					
	NA	1.5	0.0		10YR(5/8) SP	Medium to coarse sand and trace gravel, some silts and fine sand. No odors no staining.
	NA					
	NA				10YR(5/8) SP	Medium to coarse sand and trace gravel, some silts and fine sand. No odors no staining.
6	NA					
	NA	1.5	0.0		10YR(5/8) SP	Medium to coarse sand and trace gravel, some silts and fine sand. No odors no staining. Moist.
	NA					
	NA				10YR(5/8) SP	Medium to coarse sand and trace gravel, some silts and fine sand. No odors no staining. Moist.
8	NA					
	NA	1.5	0.0		10YR(5/8) SP	Medium to coarse sand and trace gravel, some silts and fine sand. No odors no staining. Moist.
	NA					
	NA				10YR(6/6) SP	Coarse sand and rounded gravels. Some pebbles up to 0.5 inch to 1 inch diameter.
10	NA					
	NA	1.5	0.0		10YR(6/6) SW	Coarse sand and rounded gravels. Some pebbles up to 0.5 inch to 1 inch diameter. Moist.
	NA					
	NA				10YR(6/6) SW	Coarse sand and rounded gravels. Some pebbles up to 0.5 inch to 1 inch diameter. Moist.
12	NA					
	NA	1.5	0.0		10YR(6/6) SW	Medium to coarse sand and gravel with trace fines. No odors, no staining. Moist.
	NA					
	NA				10YR(6/3) SW	Medium to coarse sand and gravel with trace fines. No odors, no staining. Moist.
14	NA					
	NA	1.5	0.0		10YR(6/3) SW	Medium to coarse sand and gravel with trace fines. No odors, no staining. Moist.
	NA					
	NA				10YR(6/3) SW	Medium to coarse sand and gravel with trace fines. No odors, no staining. Moist.
16	NA					
	NA	2.0	0.0		10YR(5/3) SP	Medium to coarse sand and gravel, with trace silts and fines. No odors , no staining.
	NA					
	NA				10YR(5/3) SP	Medium to coarse sand and gravel, with trace silts and fines. No odors , no staining.
18	NA					

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	1.0	0.0		10YR(4/6)	Dark yellowing brown silty fine to medium sand. No odors, no staining, moist
	NA				SM	
	NA				10YR(4/6)	Dark yellowing brown silty fine to medium sand. No odors, no staining, moist
4	NA				SM	
	NA	1.5	0.0		10YR(5/6)	Medium to coarse sand with some gravel trace silts and fines. No odors, no
	NA				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	1.5	0.0		10YR(6/3)	Medium to coarse sand with some gravel trace silts and fines. No odors, no
	NA				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	1.5	0.0		10YR(6/3)	Medium to coarse sand, some fine sand, trace silts and gravel. No odors, no
	NA				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	2.0	0.0		10YR(6/3)	Medium to coarse sand, some fine sand, trace silts and gravel. No odors, no
	NA				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	2.0	0.0		10YR(6/3)	Medium to coarse sand and gravel, with trace fines, mostly dry, no odors, no
	NA				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	2.0	0.0		10YR(5/4)	Darker unsorted sand with some more silts, present. No odors, no staining.
	NA				SM	
	NA				10YR(5/4)	Darker unsorted sand with some more silts, present. No odors, no staining.
16	NA				SM	
	NA	1.0	0.0		10YR(5/3)	Medium to coarse sand and gravel, appears moist- No odors and no staining
	NA				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) SP	Medium to coarse sand, and gravel, moist, No groundwater- no odors, no staining, larger size gravels.
	NA					
	NA				10YR(5/3) SP	Medium to coarse sand, and gravel, moist, No groundwater- no odors, no staining, larger size gravels.
20	NA					
	NA	2.0	0.0		10YR(4/2) SP	Medium to coarse sand with rounded gravels, no odors, no staining, moist.
	NA					
	NA				10YR(4/2) SP	Medium to coarse sand with rounded gravels, no odors, no staining, moist.
22	NA					
	NA	2.0	0.0		10YR(5/3) SW	Medium to coarse sand with rounded gravels, no odors, no staining, moist.
	NA					
	NA				10YR(5/3) SW	Medium to coarse sand with rounded gravels, no odors, no staining, moist.
24	NA					
	NA	2.0	0.0		10YR(6/3) SW	Medium to coarse sand, some gravel, little to no fines. No odors, no staining, very moist, however no water encountered.
	NA					
	NA				10YR(6/3) SW	Medium to coarse sand, some gravel, little to no fines. No odors, no staining, very moist, however no water encountered.
26	NA					
	NA	2.0	0.0		10YR(6/3) SW	Coarse to gravely sand very little fines, no odors, no staining, moist.
	NA					
	NA				10YR(6/3) SW	Coarse to gravely sand very little fines, no odors, no staining, moist.
28	NA					
						End Of Boring

Signature: _____ Date: _____

ERM NE

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

BORING LOG

Boring Number: SB-05

Project Name & Location: Gabreski Airport	Project Number: 72708.02.01	Date & Time Started: 6/19/02 07:30	
		Date & Time Completed: 6/19/02 11:40	
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-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		1.5	0.0		10YR(3/2) SM	6 inches of top soil cover- with grass and vegetation-silt and sand.
	NA					
	NA				10YR(4/6) SM	Rocky-sand and concrete, with dark gravelly sand. Moist
2	NA					
	NA	1.5	0.0		10YR(3/2) SM	Silty, fine to medium sand, with trace gravels. No odors and no staining.
	NA					
	NA				10YR(3/2) SM	Silty, fine to medium sand, with trace gravels. No odors and no staining.
4	NA					
	NA	2.0	0.0		10YR(3/2) SM	Silty brown fine to medium sand with trace gravels. No odors, no staining, some mottleing appearace.
	NA					
	NA				10YR(3/2) SM	Silty brown fine to medium sand with trace gravels. No odors, no staining, some mottleing appearace.
6	NA					
	NA	2.0	0.0		10YR(5/6) SM	lighter brown silts, with fine to medium sand trace gravels. No odors and no staining. Moist.
	NA					
	NA				10YR(5/6) SM	lighter brown silts, with fine to medium sand trace gravels. No odors and no staining. Moist.
8	NA					
	NA	2.0	0.0		10YR(4/6) SM	lighter brown silts, with fine to medium sand trace gravels. No odors and no staining. Moist. Some mottleing present.
	NA					
	NA				10YR(4/6) SM	lighter brown silts, with fine to medium sand trace gravels. No odors and no staining. Moist. Some mottleing present.
10	NA					
	NA	2.0	0.0		10YR(4/4) SP	Medium sand with some coarse and fines, trace silts. No odors, no staining.
	NA					
	NA				10YR(4/4) SP	Medium sand with some coarse and fines, trace silts. No odors, no staining.
12	NA					
	NA	2.0	0.0		10YR(6/3) SP	Medium to coarse sand with trace silts, no odors, no staining.
	NA					
	NA				10YR(6/3) SP	Medium to coarse sand with trace silts, no odors, no staining.
14	NA					
	NA	2.0	0.0		10YR(6/3) SP	Medium to coarse sand with trace silts, no odors, no staining.
	NA					
	NA				10YR(6/3) SP	Medium to coarse sand with trace silts, no odors, no staining.
16	NA					
	NA	2.0	0.0		10YR(6/3) SP	Medium to coarse sand, sporadic gravels and rounded pebbles, no odors, no staining, moist.
	NA					
	NA				10YR(6/3) SP	Medium to coarse sand, sporadic gravels and rounded pebbles, 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-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

BORING LOG

Boring Number: SB-07

Project Name & Location: Gabreski Airport	Project Number: 72708.02.01	Date & Time Started: 6/20/02 07:35	
		Date & Time Completed: 6/20/02 10:15	
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-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) SP	Medium to coarse sand and gravel with rounded pebbles. No odors, no staining, moist.
	NA					
20	NA				10YR(6/4) SP	Medium to coarse sand and gravel with rounded pebbles. No odors, no staining, moist.
	NA					
	NA	2.0	0.0		10YR(6/4) SP	Medium to coarse sand and gravel with trace pebbles, no odors no staining. Moist.
22	NA				10YR(6/4) SP	Medium to coarse sand and gravel with trace pebbles, no odors no staining. Moist.
	NA					
	NA	2.0	0.0		10YR(6/4) SP	Medium to coarse sand and gravel with trace pebbles, no odors no staining. Moist.
24	NA				10YR(6/4) SP	Medium to coarse sand and gravel with trace pebbles, no odors no staining. Moist.
	NA					
	NA	2.0	0.0		10YR(4/3) SW	Fine to medium sand, trace to no gravel, no odors, no pebbles, moist.
26	NA				10YR(4/3) SW	Fine to medium sand, trace to no gravel, no odors, no pebbles, moist.
	NA					
	NA	2.0	0.0		10YR(5/2) SW	Fine to medium sand, trace to no gravel, no odors, no pebbles, moist.
28	Sample				10YR(5/2) SW	Fine to medium sand, trace to no gravel, no odors, no pebbles, moist.
	NA	NS	NS		NA NA	No Sample Recovery
	NA					
32	NA				NA NA	No Sample Recovery
	NA					
	NA	0.5	0.0		10YR(6/4) SW	Medium to coarse sand and some gravel, trace rounded pebbles, no odors no staining, Ground water saturated at this depth.
34	NA				10YR(6/4) SW	Medium to coarse sand and some gravel, trace rounded pebbles, no odors no staining, Ground water saturated at this depth.
	NA					
	NA	0.5	0.0		10YR(6/4) SW	Medium to coarse sand and some gravel, trace rounded pebbles, no odors no staining, Ground water saturated at this depth.
36	NA				10YR(6/4) SW	Medium to coarse sand and some gravel, trace rounded pebbles, no odors no staining, Ground water saturated at this depth.
						END OF BORING

Signature: _____ Date: _____

ERM NE

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

BORING LOG

Boring Number: SB-08

Project Name & Location: Gabreski Airport	Project Number: 72708.02.01	Date & Time Started: 6/20/02 11:18 Date & Time Completed: 6/20/02 14:55	
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
	LOCATION:					SURFACE DESCRIPTION: Grass
0					10YR(3/3)	6 to 9 inches of top soil cover with some vegetation, silts fine sand and silt
	NA	1.5	0.0		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				10YR(5/6)	Fine to medium granined sand with some silts, gravels up to one inch in
	NA	1.5	0.0		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				10YR(6/3)	Well graded medium sand, trace gravel and rounded pebbles. No odors and
	NA	2.0	0.0		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				10YR(6/3)	Well graded medium sand, trace gravel and rounded pebbles. No odors and
	NA	2.0	0.0		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				10YR(6/3)	Fine to medium sand, trace gravels, trace rounded pebbles, no odors, no
	NA	2.0	0.0		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				10YR(6/3)	Fine to medium sand, trace gravels, trace rounded pebbles, no odors, no
	NA	2.0	0.0		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				10YR(6/3)	Medium sand-with rounded pebbles-and gravels. No odors, no staining, moist
	NA	2.0	0.0		SW	
	NA				10YR(6/3)	Medium sand-with rounded pebbles-and gravels. No odors, no staining, moist
14	NA				SW	
	NA				10YR(6/3)	Medium sand-with rounded pebbles-and gravels. No odors, no staining, moist
	NA	2.0	0.0		SW	
	NA				10YR(6/3)	Medium sand-with rounded pebbles-and gravels. No odors, no staining, moist
16	NA				SW	
	NA				10YR(6/4)	Fine to medium sand, little gravel, trace of silts, no odors no staining present.
	NA	2.0	0.0		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) SW	Fine to medium sand, little gravel, trace of silts, no odors no staining present. Moist.
	NA					
	NA				10YR(6/4) SW	Fine to medium sand, little gravel, trace of silts, no odors no staining present. Moist.
20	NA					
	NA	2.0	0.0		10YR(6/3) SW	Fine to medium sand with little to trace gravels, trace silts, no odors, no staining, moist.
	NA					
	NA				10YR(6/3) SW	Fine to medium sand with little to trace gravels, trace silts, no odors, no staining, moist.
22	NA					
	NA	2.0	0.0		10YR(6/3) SP	Coarse sand and gravel with trace fines, no odors and no staining moist.
	NA					
	NA				10YR(6/3) SW	Coarse sand and gravel with trace fines, no odors and no staining moist.
24	NA					
	NA	2.0	0.0		10YR(5/3) SW	Fine to medium sand, some very fine sand, trace coarse sand and medium to coarse sand, no odors and no staining.
	NA					
	NA				10YR(5/3) SW	Fine to medium sand, some very fine sand, trace coarse sand and medium to coarse sand, no odors and no staining.
26	NA					
	NA	1.5	0.0		10YR(5/3) SW	V. Fine to medium sand, some very fine sand, trace coarse sand and medium to coarse sand, no odors and no staining.
	NA					
	NA				10YR(5/3) SW	V. Fine to medium sand, some very fine sand, trace coarse sand and medium to coarse sand, no odors and no staining.
28	NA					
	NA	NS	NS		NA NA	No Sample Recovery
	NA					
	NA				NA NA	No Sample Recovery
32	NA					
	NA	2.0	0.0		10YR(6/3) SW	Fine to medium sand, some very fine sand, no odors, no staining, dry, trace gravels.
	NA					
	NA				10YR(6/3) SW	Fine to medium sand, some very fine sand, no odors, no staining, dry, trace gravels.
34	NA					
	NA	2.0	0.0		10YR(6/3) SW	Fine to medium sand, some very fine sand, no odors, no staining, dry, trace gravels.
	Sample					
36					10YR(6/3) SW	Fine to medium sand, some very fine sand, no odors, no staining, dry, trace gravels.
						END OF BORING

Signature: _____ Date: _____

ERM NE

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

BORING LOG

Boring Number: SB-09

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) SM/Fill	Dry top soil with vegetation, rounded gravels, silty fine to medium sand, no odors, no staining.
	NA					
	NA				10YR(5/3) SM/Fill	Dry silty fine, medium and coarse sand with gravels, no odors, no staining.
2	NA					
	NA	1.5	0.0		10YR(5/4) SM/Fill	Dry silty fine, medium and coarse sand with gravels, no odors, no staining.
	NA					
	NA				10YR(6/3) SM/Fill	Dry silty fine, medium and coarse sand with gravels, no odors, no staining.
4	NA					
	NA	1.5	0.2		10YR(7/3) SM/Fill	Fine to medium sand with some coarse sand and gravels, no odors, no staining
	NA					
	NA				10YR(7/3) SM/Fill	Fine to medium sand with trace silts, no odors, no staining, moist.
6	NA					
	NA	1.5	0.0		10YR(7/3) SM/Fill	Fine to medium sand with trace silts, no odors, no staining moist.
	NA					
	NA				10YR(7/3) SM/Fill	Fine to medium sand with trace silts, no odors, no staining moist.
8	NA					
	NA	1.5	0.3		10YR(4/3) SP/SM/Fill	Silty fine to medium sand- no staining, no odors, tiles seen in the soil.
	NA					
	NA				10YR(4/3) SP/SM/Fill	Silty fine to medium sand- no staining, no odors, tiles seen in the soil.
10	NA					
	NA	1.5	0.0		10YR(4/3) SP/SM/Fill	Silty fine to medium sand- no staining, no odors, tiles seen in the soil.
	NA					
	NA				10YR(4/3) SP/SM/Fill	Silty fine to medium sand- no staining, no odors, tiles seen in the soil.
12	NA					
	NA	1.5	0.6		10YR(7/3) SP/SW	Medium sand-with rounded pebbles-and gravels. No odors, no staining, moist
	NA					
	NA				10YR(7/3) SP/SW	Medium sand-with rounded pebbles-and gravels. No odors, no staining, moist
14	NA					
	NA	1.5	0.4		10YR(7/3) SP/SW	Medium sand-with rounded pebbles-and gravels. No odors, no staining, moist
	NA					
	NA				10YR(7/3) SW	Medium sand-with rounded pebbles-and gravels. No odors, no staining, moist
16	NA					
	NA	1.5	0.2		10YR(6/3) SP	Fine to medium sand with some coarse sand and gravels, trace silts, no odors no staining, some stratification present, with greater silt content.
	NA					
	NA				10YR(6/3) SP	Fine to medium sand with some coarse sand and gravels, trace silts, no odors no staining, some stratification present, with greater silt content.
18	NA					

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	2.0	0.1		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
20	NA				SP	no staining, some stratification present, with greater silt content.
	NA	1.5	0.2		10YR(6/4)	Fine to medium sand with trace rounded gravels and trace silts, moist with
	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
22	NA				SP	stratification, with greater silt content and iron staining. No odors no staining.
	NA	1.5	0.2		10YR(6/4)	Fine to medium sand with trace rounded gravels and trace silts, moist with
	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
24	NA				SP	stratification, with greater silt content and iron staining. No odors no staining.
	NA	1.0	0.4		10YR(6/3)	Fine to medium sand with some very fine sand and trace silts, moist with
	NA				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	1.0	0.3		10YR(6/3)	Fine to medium sand with some very fine sand and trace silts, trace of rounded
	NA				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	2.0	0.1		10YR(6/2)	Fine to medium sand with some coarse sand and rounded gravels, some iron
	NA				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	2.0	0.2		10YR(6/2)	Same as above with additional stratification present with silty and fine sand
	NA				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	1.5	0.3		10YR(6/2)	Fine to medium sand and trace coarse sand and gravels, no odors, no staining,
	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,
34	NA				SW	moist, light iron staining in areas.
	NA	1.5	0.3		10YR(6/2)	Fine to medium sand and trace coarse sand and gravels, no odors, no staining,
	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,
36	NA				SW	moist, light iron staining in areas.
39	Sample	2.0	0.3		10YR(6/3)	Fine to medium sand with trace rounded gravels and coarse sand, no odors
					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: Gabreski Airport	Project Number: 72708.02.01	Date & Time Started: 7/11/02 11:20	
		Date & Time Completed: 7/11/02 14:30	
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-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) SP	Fine to medium sand with some coarse sand and gravels, trace V. fine sand and silts, no odors and no staining.
	NA					
	NA				10YR(6/4) SP	Fine to medium sand with some coarse sand and gravels, trace V. fine sand and silts, no odors and no staining.
20	NA					
	NA	0.5	2.6		10YR(6/4) SP	Fine to medium sand with some coarse sand and gravels, trace V. fine sand and rounded pebbles. No odors, No staining moist.
	NA					
	NA				10YR(6/4) SP	Fine to medium sand with some coarse sand and gravels, trace V. fine sand and rounded pebbles. No odors, No staining moist.
22	NA					
	NA	0.5	2.8		10YR(6/4) SP	Fine to medium sand with some coarse sand and gravels, trace V. fine sand and rounded pebbles. No odors, No staining moist.
	NA					
	NA				10YR(6/4) SP	Fine to medium sand with some coarse sand and gravels, trace V. fine sand and rounded pebbles. No odors, No staining moist.
24	NA					
	NA	1.5	6.7		10YR(5/6) SP	Fine to medium sand, with trace very fine sand, trace mica and silts, some coarse sand with gravels, no odors no staining moist.
	NA					
	NA				10YR(5/6) SP	Fine to medium sand, with trace very fine sand, trace mica and silts, some coarse sand with gravels, no odors no staining moist.
26	NA					
	NA	1.5	8.9		10YR(5/6) SP	Fine to medium sand and gravel, with trace V. fine sand and silts, some coarse sand and gravel, no odors, no staining, moist.
	NA					
	NA				10YR(5/6) SP	Fine to medium sand and gravel, with trace V. fine sand and silts, some coarse sand and gravel, no odors, no staining, moist.
28	NA					
						End Of Boring

Signature: _____ Date: _____

ERM NE

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

BORING LOG

Boring Number: SB-11

Project Name & Location: Gabreski Airport	Project Number: 72708.02.01	Date & Time Started: 7/10/02 12:08	
		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~~				10YR(6/3)	Fine to medium sand-and silts, very dry, no odors, no staining.
	NA	1.5	1.0		SM	
	NA				10YR(6/3)	Fine to medium sand with some silts, no odors and no staining.
2	NA				SM	
	NA				10YR(4/4)	Fine to medium
	NA	1.5	1.2		SM	staining moist. Lightly iron stained.
	NA				10YR(4/4)	Silty fine to medium sand with some coarse sand and gravels, no odors, no
4	NA				SM	staining moist. Lightly iron stained.
	NA				10YR(5/4)	Fine to medium sand and some coarse sand with rounded and subrounded
	NA	1.0	2.5		SP	gravels, no odors evident, no staining.
	NA				10YR(5/4)	Fine to medium sand and some coarse sand with rounded and subrounded
6	NA				SP	gravels, no odors evident, no staining.
	NA				10YR(5/4)	Fine to medium sand and some coarse sand with rounded and subrounded
	NA	1.0	2.6		SP	gravels, no odors evident, no staining.
	NA				10YR(5/4)	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	1.5	0.0		SP	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				SP	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	0.0		SP	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(6/3)	Fine to medium sand with some very fine sand, trace coarse sand and gravels,
	NA	1.5	0.0		SP	moist, no odors, no staining.
	NA				10YR(6/3)	Fine to medium sand with some very fine sand, trace coarse sand and gravels,
14	NA				SP	moist, no odors, no staining.
	NA				10YR(6/3)	Fine to medium sand well sorted, trace coarse sand and gravels, moist no odors
	NA	1.5	0.0		SP	no staining, trace silts.
	NA				10YR(6/3)	Fine to medium sand well sorted, trace coarse sand and gravels, moist no odors
16	NA				SP	no staining, trace silts.
	NA				10YR(6/3)	Fine to medium sand with some coarse sand and gravels, trace V. fine sand and
	NA	1.5	0.0		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
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-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) SP	Fine to medium sand with some coarse sand and gravels, trace V. fine sand and silts, no odors and no staining.
	NA					
	NA				10YR(6/3) SP	Fine to medium sand with some coarse sand and gravels, trace V. fine sand and silts, no odors and no staining.
20	NA					
	NA	1.5	0.0		10YR(6/3) SP	Fine to medium sand with some coarse sand and gravels, trace silts no odors and no staining.
	NA					
	NA				10YR(6/3) SP	Fine to medium sand with some coarse sand and gravels, trace silts no odors and no staining. Some stratification with greater silts.
22	NA					
	NA	1.5	0.0		10YR(6/3) SP	Fine to medium sand with some coarse sand and gravels, trace silts no odors and no staining.
	NA					
	NA				10YR(6/3) SP	Fine to medium sand with some coarse sand and gravels, trace silts no odors and no staining.
24	NA					
	NA	1.5	0.0		10YR(6/3) SP	Fine to medium sand with some coarse sand and gravels no odors and no staining. Moist
	NA					
	NA				10YR(6/3) SP	Fine to medium sand with some coarse sand and gravels no odors and no staining. Moist
26	NA					
	NA	1.5	0.0		10YR(6/3) SP	Fine to medium sand with some coarse sand and gravels no odors and no staining. Moist
	NA					
	NA				10YR(6/3) SP	Fine to medium sand with some coarse sand and gravels no odors and no staining. Moist
28	NA					
						End Of Boring

Signature: _____ Date: _____

ERM NE

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

BORING LOG

Boring Number: SB-12

Project Name & Location: Gabreski Airport	Project Number: 72708.02.01	Date & Time Started: 7/10/02 12:08	
Drilling Company: Delta Well & Pump	Foreman: Jim Pederson	Date & Time Completed: 7/11/02 15:00	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) @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				10YR(6/3)	Intervals of fine sand, med sand and coarse sand with gravels with intermittent
	NA	1.1	0.0		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				10YR(6/3)	Fine to med sand matrix, Intervals at coarse sand and gravel encountered moist,
	NA	1.0	0.0		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				10YR(6/3)	Fine to med sand matrix, Intervals at coarse sand and gravel encountered moist,
	NA	1.0	0.0		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				10YR(6/3)	Med to coarse sand, with silts present. No odors, stratifreation, mottlery, moist
	NA	2.0	0.0		SP	
	NA				10YR(6/3)	Med to coarse sand, with silts present. No odors, stratifreation, mottlery, moist
26	NA				SP	
	NA				10YR(6/3)	Silts and fine sand high mica content. Trace coarse sand, No odors or staining
	NA	2.0	0.0		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				10YR(6/3)	Medium to coarse sand and gravel with little to trace silts, no odors, no staining
	NA	2.0	0.0		SP	
	NA				10YR(6/3)	Very fine to fine sand and silt, trace gravel, trace rounded pebbles.
30	NA				SP	
	NA				10YR(6/3)	Medium to coarse sand and gravel with little to trace silts, no odors, no staining
	NA	2.0	0.0		SP	
	NA				10YR(6/3)	Very fine to fine sand and silt, trace gravel, trace rounded pebbles.
32	NA				SP	
	NA				10YR(6/3)	Medium to coarse sand and gravel with little to trace silts, no odors, no staining
	NA	1.0	0.0		SP	
	NA				10YR(6/3)	Very fine to fine sand and silt, trace gravel, trace rounded pebbles.
34	NA					
	NA				10YR(6/3)	Medium to coarse sand and gravel with little to trace silts, no odors, no staining
	NA	1.0	0.0			
	NA				10YR(6/3)	Very fine to fine sand and silt, trace gravel, trace rounded pebbles.
36	NA					
	NA				10YR(6/3)	Medium to coarse sand and gravel with little to trace silts, no odors, no staining
	NA	2.0	0.0			
	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~~	2.0	0.0		10YR(7/3)	Fine to medium sand, trace of gravel, iron stained areas, trace of rounded pebbles
	NA				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	2.0	0.0		10YR(6/3)	Fine to medium sand, some gravel stones, stratification, mottling present
	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
22	NA				SP	No odors, no staining, moist, iron stained 1/4 " zones.
	NA	2.0	0.0		10YR(6/3)	Fine to medium sand, some gravel stones, stratification, mottling present
	NA				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	2.0	0.0		10YR(6/3)	Fine to medium sand, trace gravel stratification
	NA				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	2.0	0.0		10YR(6/3)	Fine to medium sand, trace gravel stratification
	NA				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	2.0	0.0		10YR(6/3)	Fine to medium sand, trace gravel, no odors, no staining, moist, no G.W.
	NA				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	2.0	0.0		10YR(6/3)	Fine to medium sand, trace gravel, no odors, no staining, moist, no G.W.
	NA				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	2.0	0.0		10YR(6/4)	Medium to coarse sand with trace gravel, no odors, no staining, moist.
	NA				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	2.0	0.0		10YR(6/4)	Medium to coarse sand with trace gravel, no odors, no staining, moist.
	NA				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

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) SW	Fan fine to medium sand well sother damp, no odors, no staining, trace of gravel
	NA					
	NA				10YR(6/4) SM	Fan fine to medium sand well sother damp, no odors, no staining, trace of gravel
20	NA					
	NA	1.5	0.0		10YR(5/4) SP	Fine to medium sand, with some gravel and rounded pebbles, little to no times
	NA					No odors, iron staining present with mottling
	NA				10YR(5/4) SP	Fine to medium sand, with some gravel and rounded pebbles, little to no times
22	NA					No odors, iron staining present with mottling
	NA	1.6	0.0		10YR(5/4) SP	Fine to medium sand with some gravel and rounded pebbles, little to no times.
	NA					Some gravels. No odors no staining
	NA				10YR(5/4) SP	Fine to medium sand with some gravel and rounded pebbles, little to no times.
24	NA					Some gravels. No odors no staining
	NA	1.5	0.0		10YR(6/4) SP	Fine to medium sand with silts tracegravels, rounded pebbles.
	NA					No odors, mottleing present
	NA				10YR(6/4) SP	Fine to medium sand with silts tracegravels, rounded pebbles.
26	NA					No odors, mottleing present
	NA	1.5	0.0		10YR(6/4) SP	Fine to medium sand with silts tracegravels, rounded pebbles.
	NA					No odors, mottleing present
	NA				10YR(7/4) SW	Fine to medium sand with silts tracegravels, rounded pebbles.
28	NA					No odors, mottleing present
	NA	1.5	0.0		10YR(6/4) SW	Fine to medium sand well sorted moist trace to no gravel.
	NA					No odors, no staining, some mottling
	NA				10YR(6/4) SW	Fine to medium sand well sorted moist trace to no gravel.
30	NA					No odors, no staining, some mottling
	NA	1.8	0.0		10YR(6/4) SW	Fine to medium sand well sorted moist trace to no gravel.
	NA					No odors, no staining, some mottling
	NA				10YR(6/4) SW	Fine to medium sand well sorted moist trace to no gravel.
32	NA					No odors, no staining, some mottling
	NA	1.5	0.0		10YR(6/3) SP	Medium to coarse sand little to no fines. Some gravel and rounded pebbles
	NA					
	NA				10YR(6/3) SP	Medium to coarse sand little to no fines. Some gravel and rounded pebbles
34	NA					
	NA	1.5	0.0		10YR(6/3) SW	Fine to medium sand, trace gravels and trace rounded pebbles
	NA					
	NA				10YR(6/3) SW	Fine to medium sand, trace gravels and trace rounded pebbles
36	NA					

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~~				10YR(4/3)	Fine to medium 2" topsoil sand with silt - trace coarse sand, some grael and
	NA	1.8	0.0		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				10YR(4/3)	Fine to medium 2" topsoil sand with silt - trace coarse sand, some grael and
	NA	1.5	0.0		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				10YR(4/4)	Medium sand with some times and coarse sand traces gravel, no odor, no staining
	NA	1.5	0.0		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				10YR(5/3)	Medium sand well sorted- traces fines trace gravels. Stratification present with
	NA	1.5	0.0		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				10YR(5/3)	Medium sand well sorted- traces fines trace gravels. Stratification present with
	NA	1.5	0.0		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				10YR(5/3)	Medium sand well sorted- traces fines trace gravels. Stratification present with
	NA	1.0	0.0		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				10YR(5/3)	Fine to medium sand and trace gravel and rounded pebbles.
	NA	1.5	0.0		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				10YR(5/3)	ot burn from - Retersion baising
	NA	1.5	0.0		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				10YR(5/3)	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.
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

Signature: _____ Date: 6/25/2002

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
	LOCATION:					SB-16(0.0-0.5)@0745 for TCL Pest and TAL Inorganic
0	~~NA~~	1.5	0.0		10YR(4/4)	Fine to medium sand with silts and some vegetation, loose, dry, no odors
	NA				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	1.5	2.4		10YR(5/4)	Fine to medium sand, some silts, some gravels and rounded pebbles
	NA				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	1.5	0.0		10YR(5/4)	Fine to medium sand, very soft and loose. Trace to little silts, some loose sand
	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
6	NA				SP	and gravels. Some rounded pebbles. No odors, no staining visible.
	NA	2.0	0.0		10YR(5/4)	Fine to medium sand, very soft and loose. Trace to little silts, some loose sand
	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
8	NA				SP	and gravels. Some rounded pebbles. No odors, no staining visible. Fill from mound
	NA	2.0	0.0		10YR(7/3)	Fine medium and coarse sand with gravels, poorly sorted sand, moist. No odors
	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
10	NA				SP	or staining visible. Fill from mound
	NA	2.0	0.0		10YR(5/4)	Fine medium and coarse sand with gravels, poorly sorted sand, moist. No odors
	NA				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	1.5	0.0		10YR(4/6)	Fine to medium sand and silts. Trace gravels - no odors and no staining present
	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
14	NA				SM	Iron staining heavy. Very soft fill fill from mounding.
	NA	1.5	0.0		10YR(4/6)	Fine to medium sand and silts. Trace gravels - no odors and no staining present
	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
16	NA				SM	Iron staining heavy. Very soft fill fill from mounding.
	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
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) SP	Fine to medium sand and gravels. Poorly sorted trace silts - native material. No odors, light iron staining preent.
	NA					
	NA				10YR(7/4) SP	Fine to medium sand and gravels.. Poorly sorted trace silts - native material. No odors, light iron staining preent.
20	NA					
	NA	1.5	0.0		10YR(7/4) SW	Medium San - well sorted, trace coarse sand with gravels, clean bed. No odors, no staining visible.
	NA					
	NA				10YR(7/4) SW	Medium San - well sorted, trace coarse sand with gravels, clean bed. No odors, no staining visible.
22	NA					
	NA	2.0	0.0		10YR(7/4) SW	Medium San - well sorted, trace coarse sand with gravels, clean bed. No odors, no staining visible.
	NA					
	NA				10YR(7/4) SW	Medium San - well sorted, trace coarse sand with gravels, clean bed. No odors, no staining visible.
24	NA					
	NA	2.0	0.0		10YR(6/4) SP	Fine medium sand with intervals of coarse mall gravels with small rounded pebbles at trace. No odors, lightly iron stained, trace silts.
	NA					
	NA				10YR(6/4) SP	Fine medium sand with intervals of coarse mall gravels with small rounded pebbles at trace. No odors, lightly iron stained, trace silts.
26	NA					
	NA	2.0	0.0		10YR(6/4) SP	Fine medium sand with intervals of coarse small gravels and rounded pebbles. no odors, no taining - trace silts
	NA					
	NA				10YR(6/4) SP	Fine medium sand with intervals of coarse small gravels and rounded pebbles. no odors, no taining - trace silts
28	NA					
	NA	2.0	0.0		10YR(4/4) SP	Fine to medium sand, trace gravels some very fine sand trace silts.
	NA					
	NA				10YR(6/4) SM	Very fine to fine sand and silts, no odors, no staining
30	NA					
	NA	2.0	0.0		10YR(6/4) SM	Fine to medium sand, trace gravels, some very fine sand trace silts. Some stratification with silts and micas (biotis musaute)
	NA					
	NA				10YR(6/4) SP	Fine to medium sand, trace gravels and silts, some very fine sands
32	NA					
	NA	2.0	0.0		10YR(6/4) SP	Fine to medium sand and gcoarse sand and gravel, trace silts.
	NA					
	NA				10YR(6/4) SP	Fine to medium sand and gcoarse sand and gravel, trace silts.
34	NA					
	NA	2.0	0.0		10YR(3/3) SP	1 cm thick lense of very moisty clumpy organics. No odors related with this lense of material.
	NA					
	NA				10YR(6/4) SP	1 cm thick lense of very moisty clumpy organics. No odors related with this lense of material.
36	NA					

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

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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 DUP062802 @ 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) SP	Fine to medium sand unsorted - with gravels, coarse sand and rounded pebbles, some stratification with iron staining.
	NA					
	NA				10YR(6/4) SP	Fine to medium sand unsorted - with gravels, coarse sand and rounded pebbles, some stratification with iron staining.
20	NA					
	NA	2.0	0.7		10YR(6/4) SP	Fine to medium sand, trae gravels, no odors, small rounded pebbles some stratification - iron staining
	NA					
	NA				10YR(6/4) SP	Fine to medium sand, trae gravels, no odors, small rounded pebbles some stratification - iron staining
22	NA					
	NA	2.0	1.2		10YR(6/4) SP	Fine medium and coarse sands, some gravels, rounded pebbles No odors, no staining
	NA					
	NA				10YR(6/3) SP	Fine medium and coarse sands, some gravels, rounded pebbles No odors, no staining
24	NA					
	NA	2.0	0.2		10YR(6/3) SP	Fine to medium to coarse sand with gravel poorly sorted. Low silts No odors, no staining some stratification
	NA					
	NA				10YR(6/3) SP	Fine to medium to coarse sand with gravel poorly sorted. Low silts No odors, no staining some stratification
26	NA					
	NA	1.0	0.4		10YR(6/3) SP	Fine to medium to coarse sand with gravel poorly sorted. Low silts No odors, no staining, some stratification, moist
	NA					
	NA				10YR(6/3) SP	Fine to medium to coarse sand with gravel poorly sorted. Low silts No odors, no staining, some stratification, moist
28	NA					
	NA	1.5	0.0		10YR(6/3) SP	Medium to coarse sand and gravel, rounded pebbles, trace silts some iron staining
	NA					
	NA				10YR(6/3) SP	Medium to coarse sand and gravel, rounded pebbles, trace silts some iron staining
30	NA					
	NA	1.5	0.0		10YR(6/3) SP	Medium to coarse sand and gravel, rounded pebbles. No odor, no staining, moist
	NA					
	NA				10YR(6/3) SP	Medium to coarse sand and grave., rounded pebbles No odor, no staining, moist
32	NA					
	NA	1.0	0.0		10YR(6/3) SP	Medium to coarse sand and gravel. Small rounded pebbles - trace silts no odors
	NA					
	NA				10YR(6/3) SP	Medium to coarse sand and gravel. Small rounded pebbles - trace silts no odors
34	NA					
	NA	1.0	0.0		10YR(6/3) SP	Medium to coarse sand and gravel, small rounded pebbles. No odors or staining. GW encountered @ 35 feet
	NA					
	NA				10YR(6/3) SP	
36	NA					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~~	1.5	0.0		10YR(6/4)	Dry loose silty fine to medium sand with some rounded pebbles and gravels.
	NA				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	1.5	0.0		10YR(4/4)	Moist brown, hard packed silty, fine to medium sand, some gravels and
	NA				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	2.0	0.0		10YR(5/4)	Fine to medium sand with some gravels and rounded pebbles, trace silts.
	NA				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	2.0	0.0		10YR(5/4)	Fine to medium sand with some gravels and rounded pebbles, trace silts.
	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.
8	NA				SP	No odors and no staining present - moist.
	NA	2.0	0.0		10YR(6/4)	Fine to medium sand, lightly iron stained coarse sand and rounded gravels
	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
10	NA				SP	present. Trace silt. No odor no staining present
	NA	2.0	0.0		10YR(6/4)	Fine to medium sand, lightly iron stained coarse sand and rounded gravels
	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
12	NA				SP	present. Trace silt. No odor no staining present
	NA	2.0	0.0		10YR(6/3)	Fine to medium sand and gravels, rounded pebbles. No odors, no staining.
	NA				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	2.0	0.0		10YR(6/3)	Fine to medium sand with intervals at very fine sand with trace silts.
	NA				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	2.0	0.0		10YR(6/3)	Fine to medium sand with some rounded gravels, Some coarse sand present.
	NA				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~~	2.0	0.0		10YR(6/3)	Fine to medium sand with some rounded gravels, Some coarse sand present.
	NA				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	2.0	0.0		10YR(6/3)	Fine to medium sand with coarse sand and gravels, trace silts.
	NA				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	2.0	0.0		10YR(6/3)	Fine to medium sand with coarse sand and gravels, trace silts.
	NA				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	2.0	0.0		10YR(6/4)	Fine to medium sand and silt, no odors, no staining, trace pebbles and coarse sand
	NA				SP	
	NA				10YR(6/4)	Fine to medium sand and silt, no odors, no staining, trace pebbles and coarse sand
26	NA				SP	
	NA	2.0	0.0		10YR(6/4)	Fine to medium sand, some very fine sand and silty with high mica content.
	NA				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	2.0	0.0		10YR(6/3)	Fine to medium sand, with some gravel and runded pebbles, moist.
	NA				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	2.0	0.0		10YR(6/4)	Very fine to fine sand and silts. Trace at coarse sand and gravel.
	NA				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	1.0	0.0		10YR(6/3)	Medium to coarse sand with trace fines, some rounded pebbles.
	NA				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	1.0	0.0		10YR(6/3)	Saturated medium to coarse sand and gravel with rounded pebbles.
	NA				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~~				10YR(4/3)	Top 6" with green vegetation. Very dry loose silts soil with fine to medium sand
	NA	1.5	0.0		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				10YR(5/8)	Damp heavily iron stained silty fine to medium sand.
	NA	2.0	0.0		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				10YR(5/4)	Fine to medium sand with some coarse sands and gravels, no odors, no staining
	NA	2.0	0.0		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				10YR(7/4)	Fine to medium sand with some coarse sands and gravels, no odors, no staining
	NA	2.0	0.0		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				10YR(6/4)	Mix of fine to very fine, medium and coarse sand intervals - some intervals with
	NA	2.0	1.4		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				10YR(6/4)	Mix of fine to very fine, medium and coarse sand intervals - some intervals with
	NA	2.0	1.2		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				10YR(6/4)	Mix of fine to very fine, medium and coarse sand intervals - some intervals with
	NA	2.0	1.2		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				10YR(6/4)	Medium to coarse sand and gravel interval high gravel and small pebbles.
	NA	2.0	4.8		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				10YR(6/4)	Medium to coarse sand and gravel interval high gravel and small pebbles.
	NA	2.0	0.5		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~~				10YR(2/1)	6" Blacktop (asphalt) and subbase.
	NA	1.0	0.0			
	NA				10YR(4/1)	Darker medium sand and gravel with silts. No odors or staining visible
2	NA				SP	
	NA				10YR(5/6)	Fine to medium sand and silts with trace coarse sand and gravels.
	NA	1.5	0.0		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				10YR(6/8)	Poorly sorted coarse sand and gravel with trace of fine sand and silts.
	NA	1.5	0.0		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				10YR(6/6)	Medium to coarse sand and gravel with fine sand little to no silts. Iron staining
	NA	1.5	0.0		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				10YR(6/4)	Medium to coarse sand with trace gravels some very fine and fine sand
	NA	1.5	0.0		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				10YR(6/4)	Medium to coarse sand with trace gravels some very fine and fine sand
	NA	1.5	0.0		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				10YR(6/4)	Fine to medium sand, trace gravels and coarse sand. No odors no staining
	NA	1.5	0.0		SW	
	NA				10YR(6/4)	Medium to coarse sand with some gravels trace fines. No odors, no staining.
14	NA				SP	
	NA				10YR(6/4)	Fine to medium sand, trace gravels and coarse sand. No odors no staining
	NA	1.5	0.0		SP	
	NA				10YR(6/4)	Fine to medium sand with trace coarse sand fines No odors, no staining
16	NA				SP	
	NA				10YR(6/4)	Fine to medium sand with trace coarse sand and gravels. Little to no silts. Fine
	NA	2.0	0.0		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~~				10YR(6/4)	Fine to medium sand and very fine sand. Trace gravels and silts
	NA	2.0	0.0		SW	No odors, no staining
	NA				10YR(6/4)	Medium sand with gravels and rounded pebbles. No odors, no staining
20	NA				SP	
	NA				10YR(6/4)	Fine to medium sand wth some gravels and rounded pebbles
	NA	1.0	0.0		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				10YR(6/4)	Fine to medium sand and gravel with rounded pebbles
	NA	1.0	0.0		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				10YR(6/4)	Fine to medium sand and gravels and arounded pebbles.
	NA	2.0	1.0		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				10YR(6/4)	Fine to medium sand and gravels and arounded pebbles.
	NA	2.0	0.7		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				10YR(6/4)	Fine to medium sand and gravels.
	NA	2.0	0.8		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				10YR(6/4)	Fine to medium sand and gravels.
	NA	2.0	1.0		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~~				10YR(5/1)	6" of Black top and subbase
	NA	1.2	0.0		SM	
	NA				10YR(5/4)	Fine to medium moist sand and silts with gravels. No odors, no staining
2	NA				SM	
	NA				10YR(5/8)	Fine to medium sand and silts, very moist and iron stained.
	NA	1.2	1.2		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				10YR(5/8)	Fine, medium to coarse sand and gravels, with some s. HS. Iron stained
	NA	1.5	1.6		SM	
	NA				10YR(6/4)	Medium to coarse sand with rounded pebbles and gravels
6	NA				SP	No odors, no staining
	NA				10YR(6/4)	Fine, medium to coarse sand and gravels, with some s. HS. Iron stained
	NA	1.5	1.8		SP	
	NA				10YR(6/4)	Medium to coarse sand with rounded pebbles and gravels
8	NA				SP	No odors, no staining
	NA				10YR(6/4)	Medium to coarse sand with gravels trace silts, moist
	NA	1.5	3.1		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				10YR(6/3)	Medium to coarse sand with gravels trace silts, moist
	NA	1.5	1.2		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				10YR(6/3)	Fine, medium and coarse sand mixes slightly iron stained no odors, traces of
	NA	1.5	0.0		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				10YR(6/3)	Fine, medium and coarse sand mixes slightly iron stained no odors, traces of
	NA	1.5	0.0		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				10YR(6/3)	Fine to medium sand and rounded gravels, stratification with iron stained and
	NA	1.5	0.0		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

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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~~				10YR(6/2)	Fine to medium sand and rounded gravels, stratification with iron stained and
	NA	1.5	0.0		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
20	NA				SP	higher content intervals. No odors or staining visible
	NA				10YR(6/4)	Fine, medium and coarse sand intervals. Moist, iron stained in areas, some
	NA	1.5	0.0		SP	mottling appearances. No odors, no staining.
	NA				10YR(6/4)	Fine, medium and coarse sand intervals. Moist, iron stained in areas, some
22	NA				SP	mottling appearances. No odors, no staining.
	NA				10YR(6/4)	Fine, medium and coarse sand intervals. Moist, iron stained in areas, some
	NA	1.5	0.0		SP	mottling appearances. No odors, no staining.
	NA				10YR(6/4)	Fine, medium and coarse sand intervals. Moist, iron stained in areas, some
24	NA				SP	mottling appearances. No odors, no staining.
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravel. Trace silts, light
	NA	1.5	0.0		SP	iron stained intervals with higher silt content. No odors
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravel. Trace silts, light
26	NA				SP	iron stained intervals with higher silt content. No odors
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravel. Trace silts, light
	NA	1.5	0.0		SP	iron stained intervals with higher silt content. No odors
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravel. Trace silts, light
28	NA				SP	iron stained intervals with higher silt content. No odors
	NA				10YR(6/4)	Fine to medium sand and gravels - trace silts, some stratification present with
	NA	1.5	0.0		SP	iron stained intervals with higher silt content.
	NA				10YR(6/4)	Fine to medium sand and gravels - trace silts, some stratification present with
30	NA				SP	iron stained intervals with higher silt content.
	NA				10YR(6/4)	Fine to medium sand and gravels - trace silts, some stratification present with
	NA	1.5	0.0		SP	iron stained intervals with higher silt content. GW encountered @ 30 ft
	NA				10YR(6/4)	Fine to medium sand and gravels - trace silts, some stratification present with
32	NA				SP	iron stained intervals with higher silt content. GW encountered @ 30 ft
						End of Boring

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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.

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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

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

ERM

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~~				Asphalt	6"-8' of asphalt and subbase.
	NA	1.5	2.3			odors from asphalt.
	NA				10YR(6/4)	Fine to medium sand and silt.
2	NA				SM	No odors, no staining
	NA				10YR(6/4)	Fine to medium sand and silt with rounded pebbles - no odors no staining
	NA	1.5	0.9		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				10YR(5/8)	Fine to medium sand with silts and rounded gravels, no odors, no staining - damp
	NA	1.5	0.0		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				10YR(6/4)	Fine to medium sand with silts and rounded gravels. No odors, no staining
	NA	1.5	0.0		SP	
	NA				10YR(6/4)	Fine to medium sand with silts and rounded gravels. No odors, no staining
8	NA				SP	
	NA				10YR(6/4)	Fine to medium sand with some coarse sand and gravel intervals, some very fine
	NA	1.5	0.0		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				10YR(6/4)	Fine to medium sand with some coarse sand and gravels, trace silts
	NA	1.5	0.0		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				10YR(6/4)	Fine to medium sand with coarse sand and gravels. No odors and no staining
	NA	1.5	0.0		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				10YR(6/4)	Fine to medium sand with coarse sand and gravels. No odors and no staining
	NA	1.5	0.0		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				10YR(6/4)	Fine to medium sand with trace pebbles and coarse sand, and silts.
	NA	1.5	0.0		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

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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

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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~~				10YR(4/4)	Fine to medium sand and silts. Trace of gravels and rounded pebbles.
	NA	1.5	0.0		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				10YR(4/4)	Fine to medium sand and silts, trace of gravels and rounded pebbles
	NA	1.5	0.0		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				10YR(4/4)	Fine to medium sand, with some silt. Trace gravels and rounded pebbles
	NA	1.5	0.0		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				10YR(6/8)	Fine to medium sand, with some silt. Trace gravels and rounded pebbles
	NA	1.5	0.0		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				10YR(6/6)	Fine sand, grading into coarser sands with gravel, less iron staining than above
	NA	1.0	0.0		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				10YR(6/6)	Fine sand, grading into coarser sands with gravel, less iron staining than above
	NA	1.0	0.0		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				10YR(6/4)	Fine to medium sand with rounded gravels, trace silts, no odors, no staining - moist
	NA	1.5	0.0		SP	
	NA				10YR(6/4)	Fine to medium sand with rounded gravels, trace silts, no odors, no staining - moist
14	NA				SP	
	NA				10YR(6/4)	Fine to medium sand with rounded gravels, trace silts, no odors, no staining - moist
	NA	1.5	0.0		SP	
	NA				10YR(6/4)	Fine to medium sand with rounded gravels, trace silts, no odors, no staining - moist
16	NA				SP	
	NA				10YR(6/4)	Fine to medium sand with some coarse sand, gravel present with rounded pebbles
	NA	1.0	0.0		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~~				10YR(6/4)	Medium to coarse sand with gravel layers moist, some locally iron stained
	NA	1.0	0.0		SP	intervals. No odors
	NA				10YR(6/4)	Medium to coarse sand with gravel layers moist, some locally iron stained
20	NA				SP	intervals. No odors
	NA				10YR(6/4)	Fine to medium sand - traces of gravel with rounded pebbles. Some coarse sand
	NA	1.5	0.0		SP	No odors. Some mottling present with darker silts
	NA				10YR(6/4)	Fine to medium sand - traces of gravel with rounded pebbles. Some coarse sand
22	NA				SP	No odors. Some mottling present with darker silts
	NA				10YR(6/4)	Fine to medium sand - traces of gravel with rounded pebbles. Some coarse sand
	NA	1.0	0.0		SP	Moist, no odors, no staining
	NA				10YR(6/4)	Fine to medium sand - traces of gravel with rounded pebbles. Some coarse sand
24	NA				SP	Moist, no odors, no staining
	NA				10YR(6/4)	Fine to medium sand with trace coarse sand and gravel. Some stratification
	NA	2.0	0.0		SP	present with higher silt content and mica. No odors, no staining present.
	NA				10YR(6/4)	Fine to medium sand with trace coarse sand and gravel. Some stratification
26	NA				SP	present with higher silt content and mica. No odors, no staining present.
	NA				10YR(6/4)	Fine to medium sand with trace coarse sand and gravel. Some stratification
	NA	1.5	0.0		SP	present with higher silt content and mica. No odors, no staining present.
	NA				10YR(6/4)	Fine to medium sand with trace coarse sand and gravel. Some stratification
28	NA				SP	present with higher silt content and mica. No odors, no staining present.
	NA				10YR(6/4)	Coarse sand with some medium sand and silts. No odors, no staining
	NA	1.0	0.0		SP	GW encountered @ 29 ft
	NA				10YR(6/4)	Coarse sand with some medium sand and silts. No odors, no staining
30	NA				SP	GW encountered @ 29 ft
	NA				10YR(6/4)	Coarse sand and gravel with some medium sand. Trace silts
	NA	1.0	0.0		SP	No odors, no staining.
	NA				10YR(6/4)	Coarse sand and gravel with some medium sand. Trace silts
32	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-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~~	1.5	0.0		10YR(6/4)	Fine to medium sand with some coarse sand and gravels, moist, trace silts
	NA				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	1.5	0.0		10YR(6/4)	Fine to medium sand and gravels with some coarse sand, trace very fine and silts.
	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.
22	NA				SP	No odors, no staining
	NA	1.5	0.0		10YR(6/4)	Fine to medium sand and gravels with some coarse sand, trace very fine and silts.
	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.
24	NA				SP	No odors, no staining
	NA	1.5	0.0		10YR(6/3)	Fine to medium sand, with some coarse sand and gravel, trace of silts and fine sand.
	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.
26	NA				SP	No odors, no staining
	NA	1.5	0.0		10YR(6/3)	Fine to medium sand, with some coarse sand and gravel, trace of silts and fine sand.
	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.
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~~				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
20	NA				SP	No odors, iron staining localized by small iron rien stones.
	NA				10YR(6/3)	Fine to medium sand matrix with high silt content, stratification present
	NA	1.5	0.0		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				10YR(6/3)	Fine to medium sand matrix with high silt content, stratification present
	NA	1.5	0.0		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				10YR(6/6)	Fine to medium sand, with some silts, trace gravels and rounded pebbles.
	NA	1.5	0.0		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				10YR(6/4)	Fine to medium sand, with some silts, trace gravels and rounded pebbles.
	NA	1.5	0.0		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				10YR(6/3)	Pale brown - fine to medium sand, trace coarse sand and gravel - small rounded
	NA	1.5	0.0		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				10YR(6/3)	Pale brown - fine to medium sand, trace coarse sand and gravel.
	NA	1.5	0.0		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~~	1.5	0.0		10YR(5/6)	Dark grey gravel and wet silty top soil.
	NA				SP	
	NA				10YR(5/6)	Fine to medium sand with trace gravels and silts. No odors, no staining
2	NA				SP	
	NA	1.5	0.0		10YR(5/6)	Fine to medium sand with trace gravels and silts. No odors, no staining
	NA				SP	
	NA				10YR(5/6)	Fine to medium sand with trace gravels and silts. No odors, no staining
4	NA				SP	
	NA	1.5	0.0		10YR(7/6)	Fine to medium sand and gravels, trace rounded pebbles, No odors or staining
	NA				SP	
	NA				10YR(7/6)	Fine to medium sand and gravels, trace rounded pebbles, No odors or staining
6	NA				SP	
	NA	1.5	0.0		10YR(7/6)	Fine to medium sand and gravels, trace rounded pebbles, No odors or staining
	NA				SP	
	NA				10YR(7/6)	Fine to medium sand and gravels, trace rounded pebbles, No odors or staining
8	NA				SP	
	NA	1.5	0.0		10YR(7/4)	Coarse sand, some medium sand and gravel, some rounded pebbles.
	NA				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	1.5	0.0		10YR(7/4)	Unsorted coarse sand, some medium sand and gravel, some rounded pebbles.
	NA				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	1.5	0.0		10YR(7/4)	Medium sand and coarse sand, some gravels, trace silts, no odors, no staining
	NA				SP	
	NA				10YR(7/4)	Medium sand and coarse sand, some gravels, trace silts, no odors, no staining
14	NA				SP	
	NA	1.5	0.0		10YR(7/4)	Medium sand and coarse sand, some gravels, trace silts, no odors, no staining
	NA				SP	
	NA				10YR(7/4)	Medium sand and coarse sand, some gravels, trace silts, no odors, no staining
16	NA				SP	
	NA	Fall Back	Fall Back		NR	No Depth Recovery
	NA				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~~	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.
20	NA				SP	Silty layers of stratification. No odors, no staining.
	NA	2.0	0.0		10YR(7/3)	Fine sand with trace silts, no odors, no staining - well sorted moist
	NA				SW	
	NA				10YR(7/3)	Fine sand with trace silts, no odors, no staining - well sorted moist
22	NA				SW	
	NA	2.0	0.0		10YR(7/3)	Fine sand with trace silts, no odors, no staining - well sorted moist
	NA				SW	
	NA				10YR(7/3)	Fine sand with trace silts, no odors, no staining - well sorted moist
24	NA				SW	
	NA	2.0	0.0		10YR(7/2)	Fine to medium sand - no silts, well sorted, no odors, no staining, trace rounded
	NA				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	1.5	0.0		10YR(7/2)	Fine to medium sand - no silts, well sorted, no odors, no staining, trace rounded
	NA				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	NR		NR	No Recovery - GW @ 31 bgs.
	NA				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

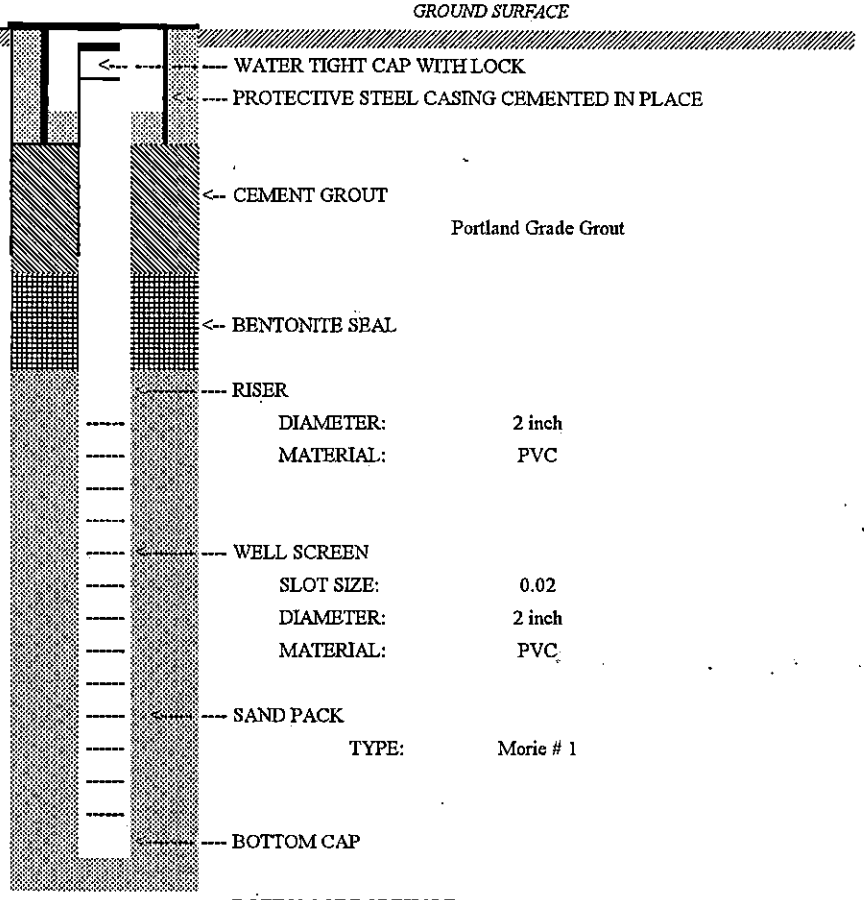
520 Broad Hollow Road, Suite 210, Melville, NY, 11747

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*			Leve *Ground Elevation (feet)*
Delta Well & Pump	Conrad Strebel	Date	Time	(feet)
Surveyor				*Top of Protective Steel Cap Elevation (feet)*
		7/1/02	15:44	32.3
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



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

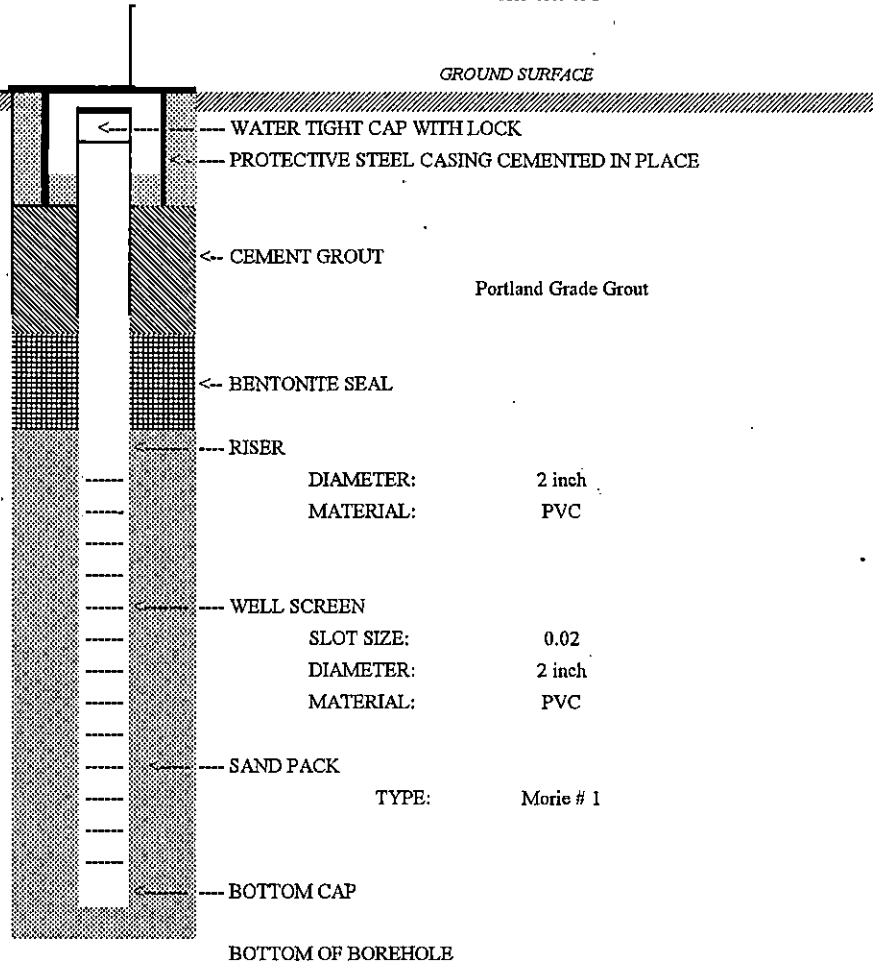
520 Broad Hollow Road, Suite 210, Melville, NY, 11747

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*			Level	*Ground Elevation (feet)*
Delta Well & Pump	Conrad Strebel	Date	Time	(feet)	
Surveyor					*Top of Protective Steel Cap Elevation (feet)*
		7/1/02	15:52	38.64	
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

WELL : ERM-03

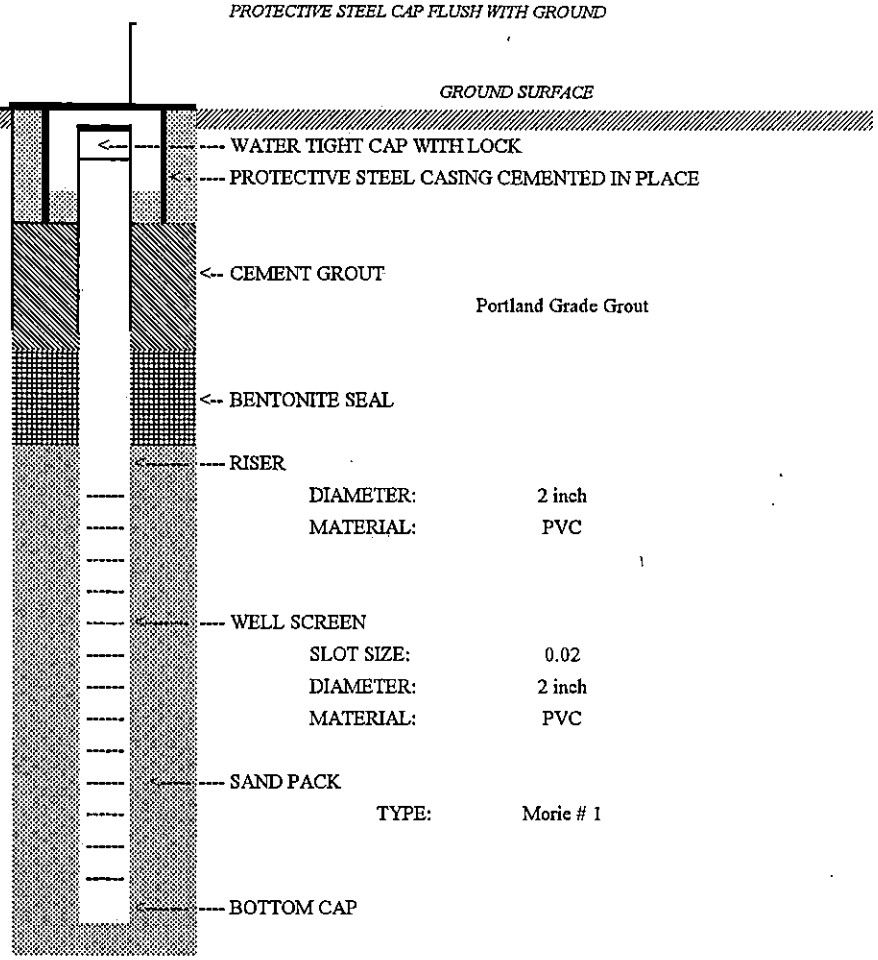
520 Broad Hollow Road, Suite 210, Melville, NY, 11747

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					*Top of Protective Steel Cap Elevation (feet)*
		7/1/02	16:06	38.75	
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



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

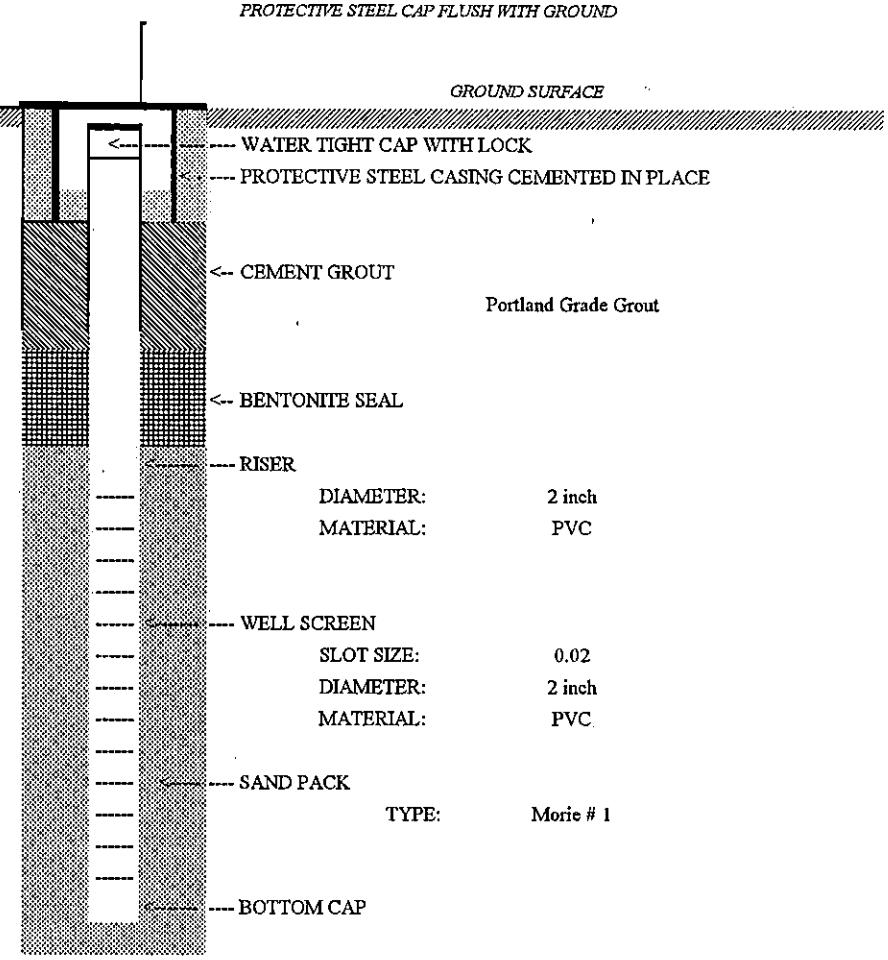
MONITORING WELL CONSTRUCTION LOG

Project Name & Location	*Project No.*	*Water Level(s)* (ft below top of PVC casing)			*Site Elevation Datum (feet)*
Gabreski Airport, NYSDEC					
Drilling Company	*Foreman*			Level	*Ground Elevation (feet)*
Delta Well & Pump	Conrad Strebel	Date	Time	(feet)	
Surveyor					*Top of Protective Steel Cap Elevation (feet)*
		7/1/02	15:58	36.6	
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

PROTECTIVE STEEL CAP FLUSH WITH GROUND



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

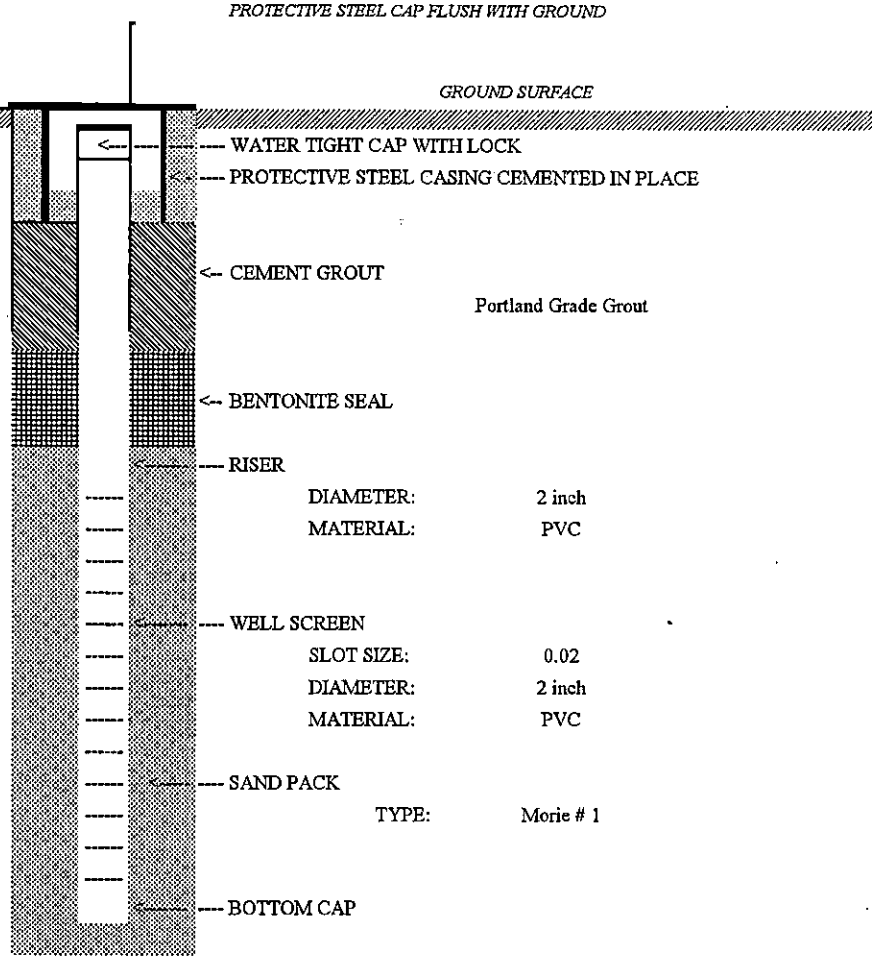
520 Broad Hollow Road, Suite 210, Melville, NY, 11747

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					*Top of Protective Steel Cap Elevation (feet)*
		7/1/02	16:12	43.87	
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

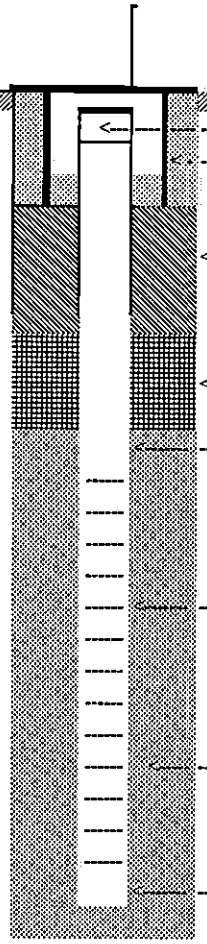
MONITORING WELL CONSTRUCTION LOG

Project Name & Location	*Project No.*	*Water Level(s)* (ft below top of PVC casing)		*Site Elevation Datum (feet)*
Gabreski Airport, NYSDEC				
Drilling Company	*Foreman*		Level	*Ground Elevation (feet)*
Delta Well & Pump	Conrad Strebel	Date	Time (feet)	
Surveyor				*Top of Protective Steel Cap Elevation (feet)*
		7/1/02	16:19 39.65	
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

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 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

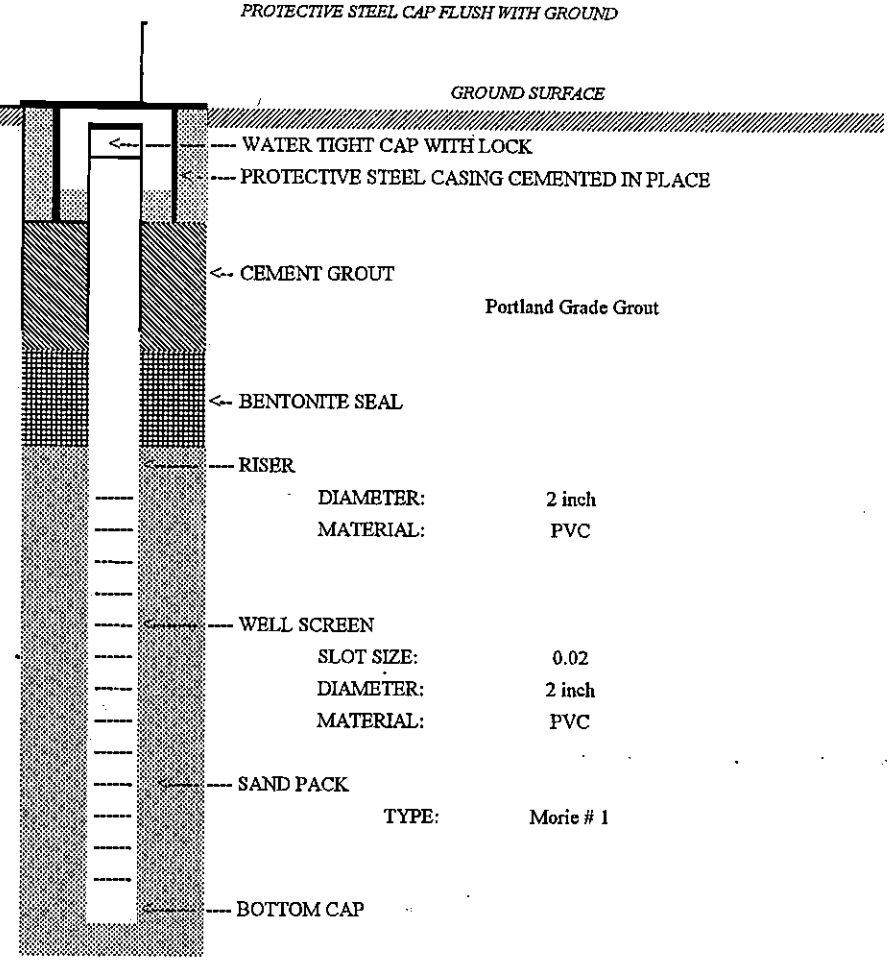
MONITORING WELL CONSTRUCTION LOG

Project Name & Location	*Project No.*	*Water Level(s)* (ft below top of PVC casing)		*Site Elevation Datum (feet)*
Gabreski Airport, NYSDEC		Date	Time	Level (feet)
Drilling Company	*Foreman*			*Ground Elevation (feet)*
Delta Well & Pump	Conrad Strebel			
Surveyor		7/1/02	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

PROTECTIVE STEEL CAP FLUSH WITH GROUND



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. x 5 = 8.75 gal.

(1 volume / 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
- ___ Bailer
- X Submersible
- ___ Centrifugal
- ___ Pos. Displ.
- ___ 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 7/8/02

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

Depth of Pump: 40'

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.	

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 oc	ORP	D.T.W.
units		mS/cm	NTU	mg/l		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

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

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 7/9/02

SAMPLE ID : ERM-02
WELL ID : ERM-02 Time Onsite: Time Offsite:
SAMPLERS : Gene Gabay 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 (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 - 602 503 Other
- X SVOCs TCL VOCs
- X Metals TCL SVOCs
- X PCB/Pest TAL Inorganics and CN
- Physical Pesticides/PCBs
- Other

Analytical Method:

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 7/9/02

SAMPLE ID : ERM-03

WELL ID : ERM-03 Time Onsite: Time Offsite:

SAMPLERS : Gene Gabay 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: Well Volume Calculation: 1 volume 3 volumes

____ Peristaltic	____ Centrifugal	2 in. well:	10.70	ft. of water x 0.16 =	1.71 gal.	x 3 =	5.13	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: 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:		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: 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 7/9/02

SAMPLE ID : ERM-04

WELL ID : ERM-04 Time Onsite: Time Offsite:

SAMPLERS : Gene Gabay 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

Depth of Pump: 43'

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.

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 Chain of Custody sample time: 12:11

Sample End Time: 12:17 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 - 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, 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 7/10/02

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

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.

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:

- 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

Analytical Method:

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= .2 Mg/l

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 7/10/02

SAMPLE ID : ERM-06

WELL ID : ERM-06 Time Onsite: Time Offsite:

SAMPLERS : Gene Gabay 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

Depth of Pump: 45'

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.

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 - 602 503 Other

X SVOCs TCL VOCs

X Metals TCL SVOCs

PCB/Pest TAL Inorganics and CN

Physical

Other

Analytical Method:

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 7/10/02

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: Well Volume Calculation: 1 volume 3 volumes

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

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 9/25/02

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

Depth of 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.

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 - 602 503 Other

SVOCs

Metals

PCB/Pest

Physical

Other

Analytical Method:

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 9/25/02

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
Sample End Time: 8:20
Chain of Custody sample time: 8:17
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 9/25/02

SAMPLE ID : ERM-07

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

SAMPLERS : M.Mendes 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: Well Volume Calculation: 1 volume 3 volumes

____ Peristaltic	____ Centrifugal	2 in. well:	10.78	ft. of water x 0.17 =	1.8326	gal.	x 3 =	5.4978	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: 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:		Analyses:		Analytical Method:		
Stainless steel bailer	X	VOCs -	602	503	Other	
Teflon bailer	X	SVOCs				
Pos. Disp. Pump	X	Metals	+ Fe			
Disposable bailer		PCB/Pest				
Dedicated pump		Physical				
X Other: Submersible		Other	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 9/25/02

SAMPLE ID : PZ-08

WELL ID : PZ-08

SAMPLERS : M.Mendes

		Time Onsite:		Time Offsite:
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:		Analyses:		Analytical Method:		
Stainless steel bailer		X	VOCs -	602	503	Other
Teflon bailer		X	SVOCs			
Pos. Disp. Pump		X	Metals	+ Fe		
Disposable bailer			PCB/Pest			
Dedicated pump			Physical			
X	Other: Submersible		Other	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 9/25/02

SAMPLE ID : PZ-17

WELL ID : PZ-17 Time Onsite: Time Offsite:

SAMPLERS : M.Mendes 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: Well Volume Calculation: 1 volume 3 volumes

____ Peristaltic	____ Centrifugal	2 in. well:	1.63	ft. of water x 0.17 =	0.2771	gal.	x 3 =	0.8313	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: 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:		Analyses:		Analytical Method:		
Stainless steel bailer		X	VOCs -	602	503	Other
Teflon bailer		X	SVOCs			
Pos. Disp. Pump		X	Metals	+ Fe		
Disposable bailer			PCB/Pest			
Dedicated pump			Physical			
X	Other: Submersible		Other	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

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 7/10/02

SAMPLE ID : ERM-06

WELL ID : ERM-06 Time Onsite: Time Offsite:

SAMPLERS : Gene Gabay 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: Well Volume Calculation: 1 volume 3 volumes

____ Peristaltic	____ Centrifugal	2 in. well:	10.67	ft. of water x 0.16 =	1.7 gal:	x 3 =	5.1 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: 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 7/10/02

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

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

GROUND WATER SAMPLING RECORD

SITE GABRESKI AIRPORT DATE 7/10/02

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: Well Volume Calculation: 1 volume 3 volumes

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

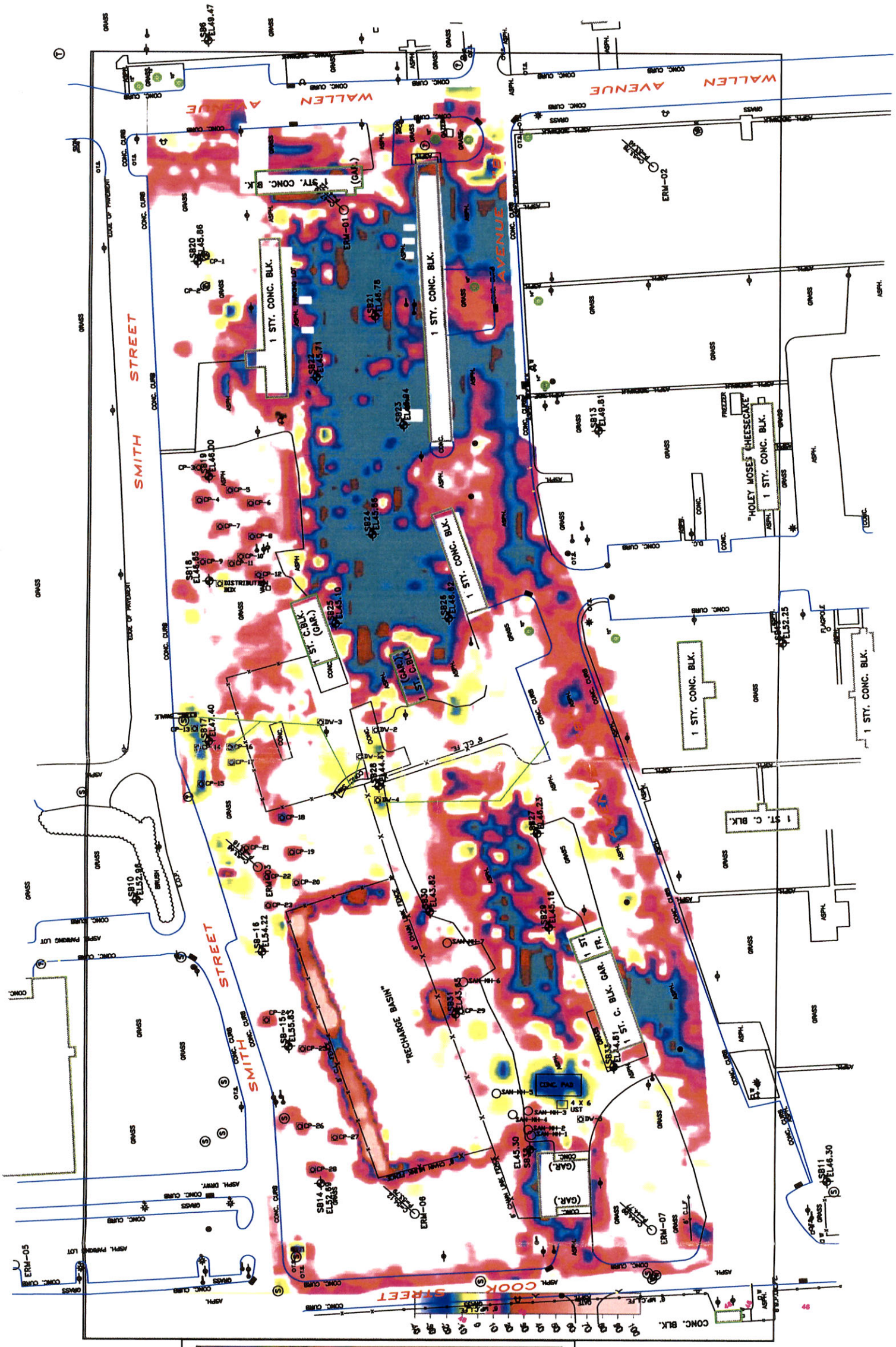
Comments:

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

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.

Appendix E

Geophysical Survey Report



Terrain Conductivity
(mS/m)

NORTH

0 50 100 200
SCALE IN FEET

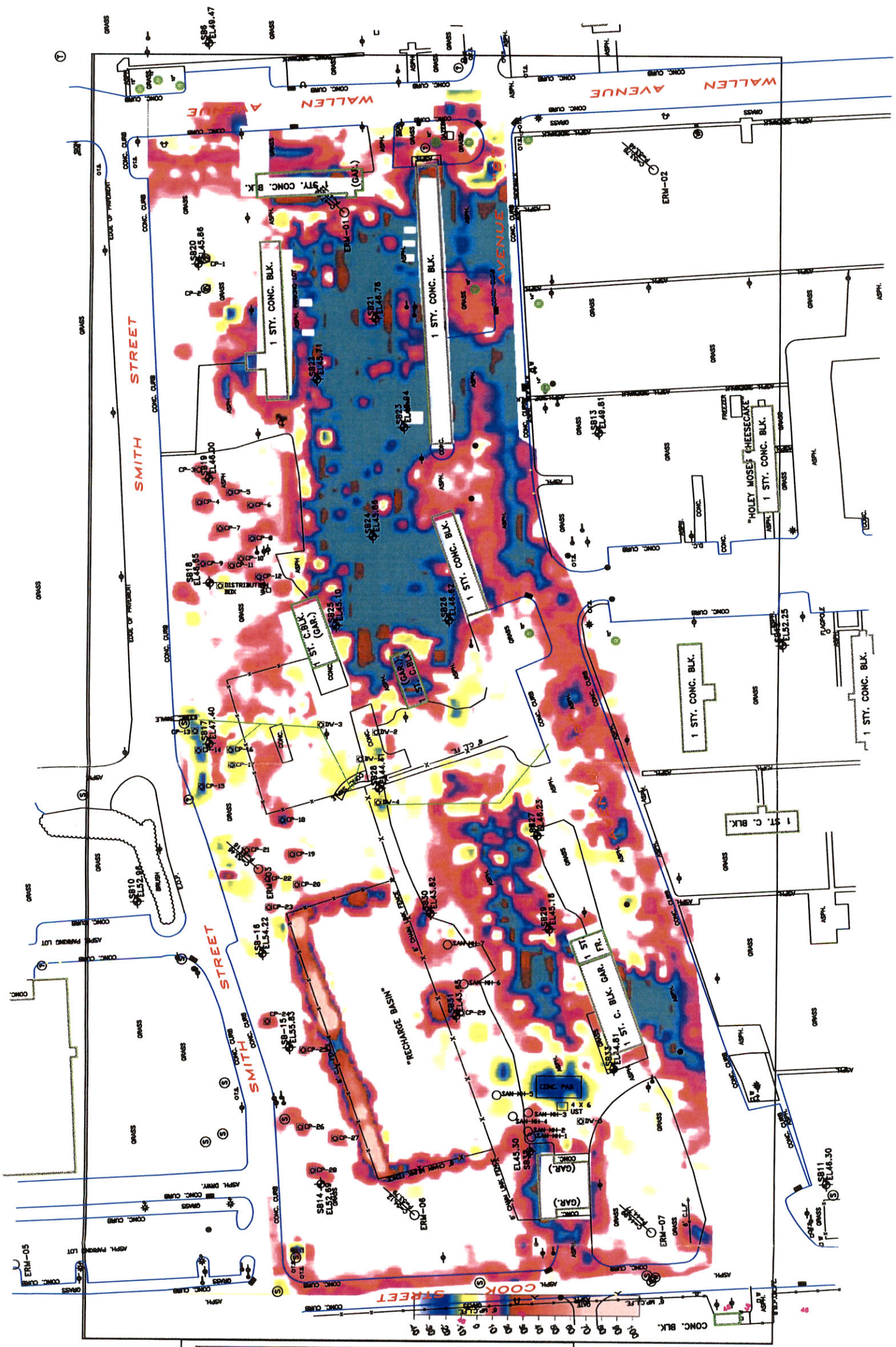
Legend

CP-8	Potential Cesspool or Drywell
SAN-MH-1	Sanitary Manhole (Possibly Cesspool)
	Interpreted Storm Sewer Pipe

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



Notes:

1) Base map prepared by:
American Engineering Services, P.C.
1600 Old County Road - Suite 209
Plainview, NY 11803
516-454-7500

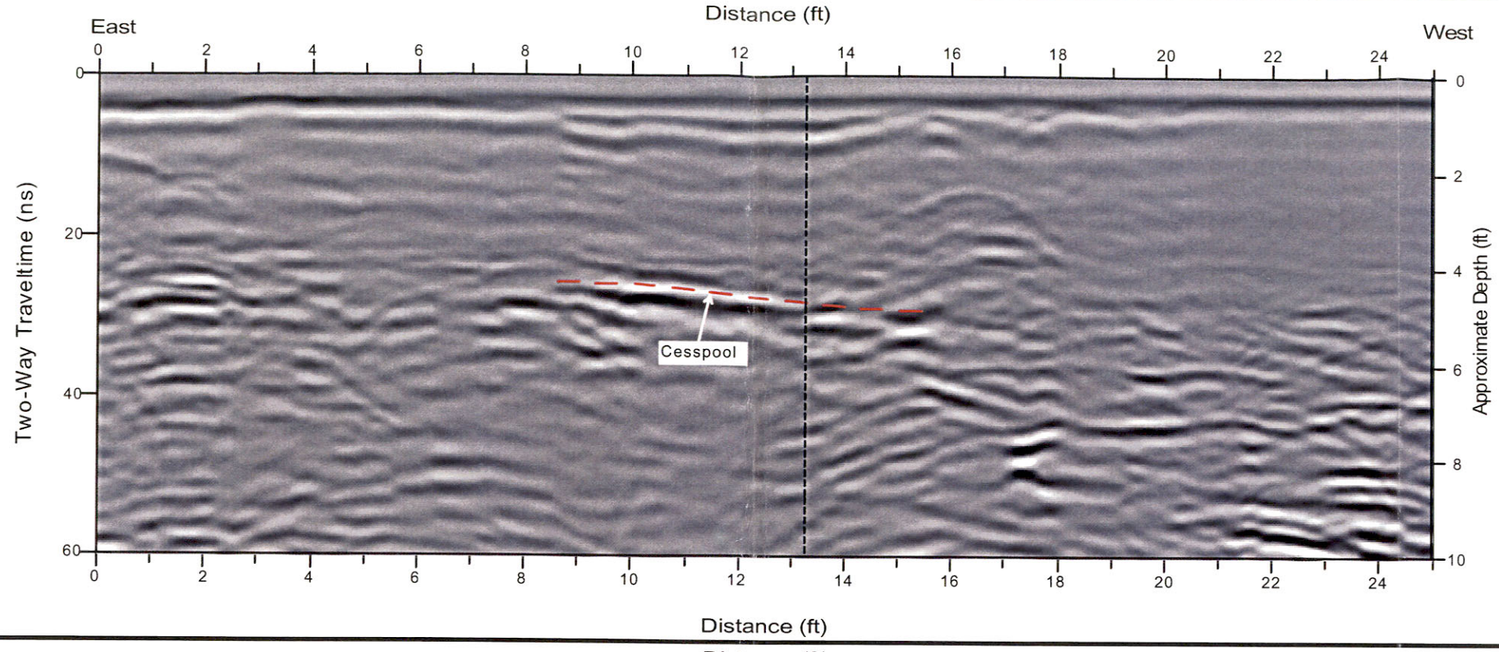
2) Base map registered to NY State Plane Coordinates (NAD83) by AGS based on GPS data.

Legend

- CP-8 — 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 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



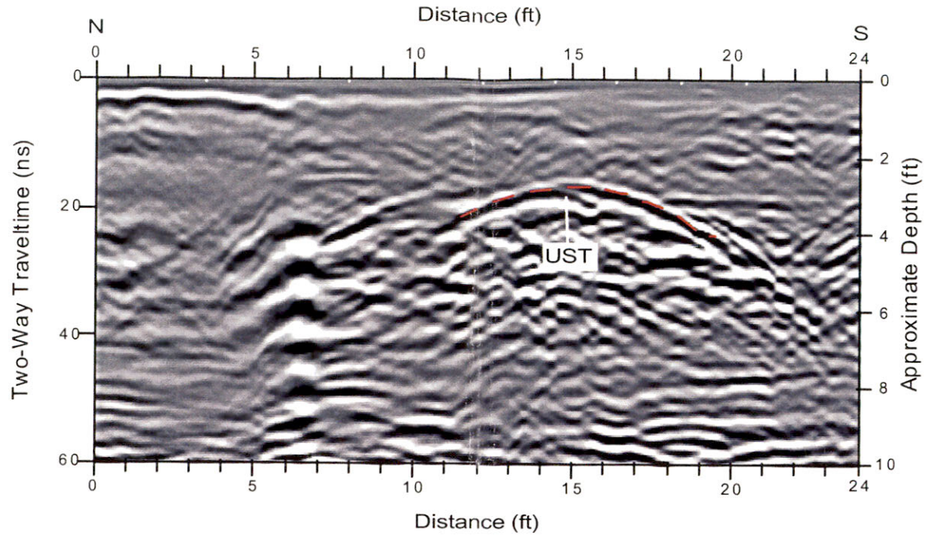
Note: 1) GPR image was collected using a GSSI SIR-2 system and a 400 MHz antenna.
2) Dashed black lines represent the intersection points of the GPR images.

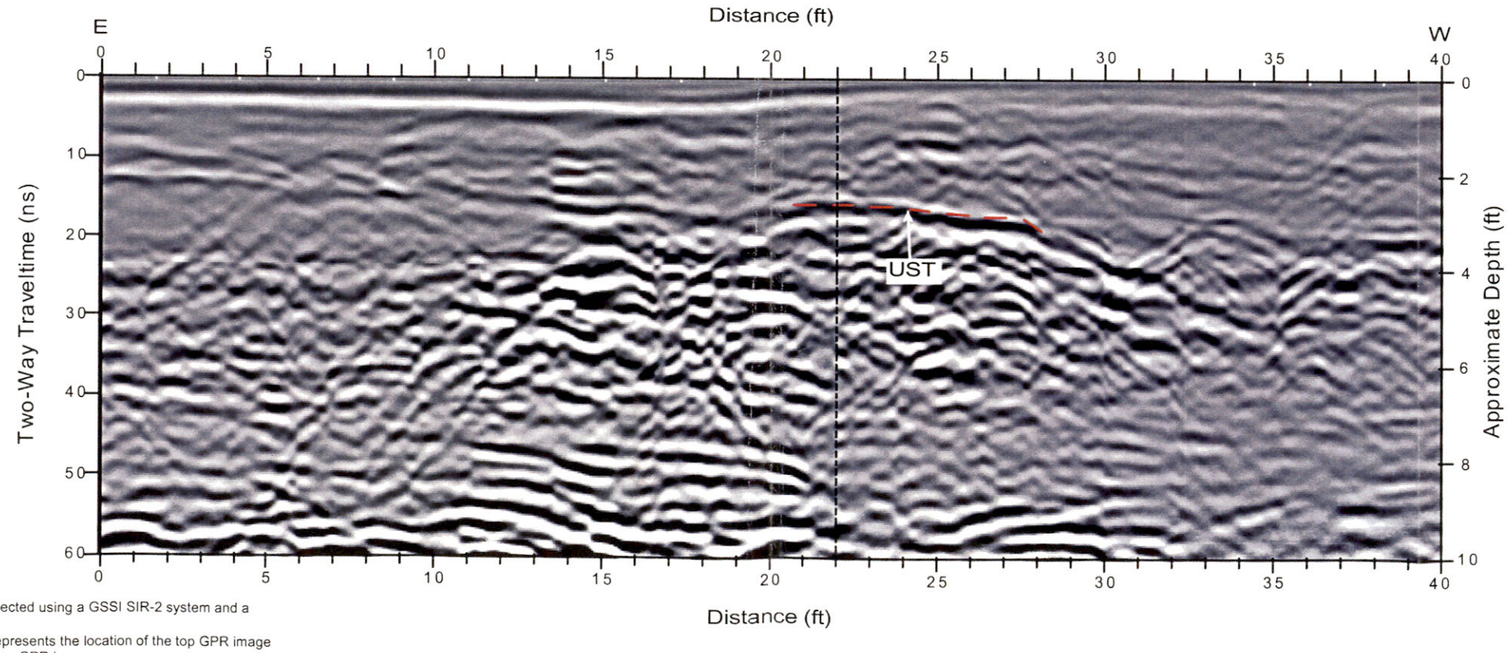
02-134-1 sb/7/31/02

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

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Appendix F

Test Pit Logs/Field Notes

CONTENTS

PAGE NO.	REFERENCE	DATE

MFM

DATE: 6/10/02 (Monday)
Site: GABRESKI 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. Mandes on site checked in @ the Building Admin. Building w/ Johne, 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

6/10/02

Continued arrive in the am tomorrow.

15:30 Continued laying out grid in the South Central area of the site.

1630 - ERM and AGS offsite will meet tomorrow on site @ 0700.

DATE: 6/11/02 (Tuesday)

site: GINSBERG Airport, West Hampton, NY.

Client: NYSDEC

Purpose: Continue - Setting up grid collecting EM data and Begin clearing Soil boring locations w/ GPR unit.

Weather: am: Hazy, hot humid 72°
pm: Same as above - 95°

0730: ERM and AGS on site. Began Clearing SB locations and monitoring wells within the South Central Area with SEMA.

0800 - Don Jagel using the Trimble GPS unit to set up a base map.

0800 - 1700 - Clearing SB locations in the South Central Area & MW-5 Don Jagel ~~Cleare~~ CLEARED using Trimble to create base map.

1700 ERM and AGS on site

MGN (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 Santino regarding what we were doing.

1100-1700 Continued Making locations Using GPR on all SB and MW locations.
Don Jagiel Continuing to collect EM data from around the site.
1700 Completed Clearing all SB and MW locations
1715 offsite

MGN (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 Jagiel collecting EM data. SETH and I are marking out Cesspools in the area of SB-17.
13:30-1530 Locating cesspools from buildg 1440 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

MFW

6

DATE: 6/14/02 (Friday)
Site: Gabreski Airport, W.H., N.Y.
Client: NYSDEC.
Purpose. finish up EM survey. and last locations w/ GPR.
Weather: 60-65°, overcast w/l. Rain.
pm: Same.

0800 Concentrating on locating Cesspools Near SB-14.
Between SB-14 and Building 40, the appearance of an underground UST (550 gallons) was located. possibly 6x4 or 6x8 ft tank.

1035. Locating all Mkt. on site.

12:30-1330 AGS finishing up have completed EM survey and GPR clearing.

1400 ERM and AGS offsite

MFW

7

DATE: 6/17/02 (Monday)
Purpose: SB and MW Installations
location: GABRESKI - Airport.
Weather am: Sunny - 75°.
pm: Sunny - 80-85°, SW wind.
0800 ERM and NYSDEC on site preparing for site work.
0830 Jake Elder of ERM and Jimmy of Delta on site.
Geoprobe on site.

0900 Reviewed Hasp w/ Jimmy and Signed him in for the day.

1050 Set up on SB-11 - 10:55
1055 - Logging core from 0-4 ft.
10:55 to Continued logging SB-01.
12:00 - Break for lunch - 12:30
12:30 - Continued coring From 16 ft.
Note: Delta drilling Co. obtaining Supplies from shop and moving onsite.

1350 - Coring from 32-36 feet below ground surface. (See boring log for description details.)

6/17/02 (MFM) (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 northern 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

(MFM) (9)

DATE: 06/18/02 (Tuesday)
Purpose: Continue SB and start MW installation
location: GREENSVI - 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. Proding 6 location in radial directions. Slab encountered @

6/18/02 (MFM) (10)

6" below grade - move point down the hill west of original location. ~30 to 40 ft.

1028 Setting up on the new location.

Note: JAKE Elder/ERM beginning continuous spooning to MW-02.

1037 Received core at SB-03 (0-4ft)

1145 Completed Boring SB-03 down 24' No Samples collected -

1145-1230 Lunch Break.

1237 Setting up on SB-04 on the Concrete pad.

1250 Received first Core 0-4 ft.

1428 Completed Boring @ 28 feet GW not encountered @ this location Boring completed w/ advisement from NYSDEC.

Note One Sample collected today will hold Sample for Shipment tomorrow Plenty of fresh ice temp. OK

(MFM) (11)

DATE: 6/19/02 / Wednesday

Purpose: SB And MW installation.

Location: Gabreski Airport.

Weather: am: Sunny / Partly cloudy / light rain
pm Sunny 80°, breezy S-10mph SW.

0700 Erm / Osuna / Dec on site. checked temperature of Sample collected yesterday @ SB-02 Temp ok

0715 Set up on SB-05 - Preparing Equipment.

0720 Calibrating - Microtip to 100 ppm isobutylene cal gas - and Zeroed instrument to ambient air.

0730 Begin Geoprobe on SB-05 from Surface SB-05(0.25'-0.5') TAL-Inorganics/TCL Pest. See boring log for Soil description details

0900-0915 Lunch Break. down @ 28 ft. -
Note: locations of SB-05 west of cess pool leaching field covers. NYSDEC Rep J. Malcolm suggested test pit in this area.

@ 1045 the 32'-36' core very difficult.

Next page

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.

1140 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) @ ~~0845~~ 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 wind

0700 EGM/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) Blanks TB w/ Samples.

0801 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

6/20/02 (MFM) (14)

1015 Completed SB-07 - will move to SB-08.

1053 Setting up on SB-08

1118 SB-08 first Core received @ 1118

1154 Received core from 12-16 ft.

12:00 - 12:30 Lunch break

1255 Received Core from 16-20 ft.

1403 - Received core from 24-28 ft.

1435 - Driving core 28-32 ft.
No Recovery. @ 28-32.

1455 Received core for 32-36. No GW encountered w/in the Core.

1545 - End of Boring @ 36 feet - attempted to obtain Sample to 36-40. However no core obtained from 36-40, Drilling to Hard. - No GW encountered Sample obtained @ SB-08(35'-36') @ 1455 for VOC's, SVOC, & ~~Inorganics~~

Note: All Samples collected today were immediately placed on

6/20/02. (MAW) (15

Cont. ice. Plenty of fresh ice, sample will be held for shipment on Friday for Saturday delivery.

Note: MW-02 was installed on Wednesday 6/19/02, Depth of Well was 48 ft w/ 15 ft of Screen. A depth to Water of 38 was encounter during splitspoon.

On 6/20/02 ERM measured the depth to Water in MW-02 - well was dry it appears that grout has entered through the screen and set up in the well. The well is damaged and unusable DELTA will need to redrill this Well To 48 ft and set the Well.

JAKE Eldor off site today will return on Monday. Gene Gabay will be onsite tomorrow.

1600 Spoke to A Coenen regarding Samples collected today and Analysis.

1700 Checke Depth to water in MW-ERM

Smoked Meat

MFW (16)

DATE: 06/21/02 (Friday)
Purpose: MW and soil boring Installation
site: Gabreski Airport.
Weather: am: Sunny 65° West wind
pm: Sunny 83°, SW wind 5-10 mph

0700 ERM (Mendes, Gabay, DEC J. Makelim) 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 follo
Sample collection. Prepared Samp
for fedex delivery to Mitkem @
Labs in RI, Saturday deliver
Relinquished Samples @ 1730 to
Fedex.

1700-1730 ERM & site drive to Fedex

(18)

6/24/02 (Monday)
Site: Gardiner Airport.
Purpose: MW and SB installations
Weather am: Sunny hot & heavy 80°
pm: Sunny hot, humid 88°, NW wind.

0700 QEC & Delta on site, set TB062402
0730 ERM on site, preparing to
Sample for the day
Calibrated Microtip to Ambient
air and 100 ppm isobutylene
0800 Set up on SB-33
0810 Driving core from 0-4 ft.
0813 SB-33 (0.0-0.5) ms/msd @ 0813
Collected for TCL Pest's, TAL Inorg
0845-0900 - Coffee Break
0900 Received Core from 16-20 ft.
0920 Awaiting to obtain core. 20-24.
Logged Core 20-24 ft.
0955 MW-01 (ERM-01) DTW = 36.04'
toC to gs = 3.34' DTB = 45.21'
Measurements taken from toc before
installation of flush mount manhole

6/24/02

(19)

6/24/02
1005 MW-02 (ERM-02) DTW = 41.05'
toc to gs = 1.92' DTB = 50.16'
Measurements as with MW-01

1028 - Received Core from 24-28 ft.
1055 - Received Core from 28-32 ft.
Sample collected from 27-28 ft.
Core from 28-32 had min. amt
Recovery and was Saturated.

SB-33 (27'-28') @ 1028 for VOC, SVOA
and TCL Pesticides.

1130 Moved to SB-32.
1142 Received first Core from 0-4 ft.
12:00-12:30 - Lunch break.
12:30 Driving core to 4-8 ft.
12:45 Driving core to 8-12 ft.
13:53 Receiving core from 20-24 ft.

SB-32 (30'-31') @ 1523 for VOC and
TAL Inorganics, collected here (2 jars)
Note: Groundwater encountered @
31 ft below ground surface.
DUP062402 collected @ this location

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 Perkins

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. COC 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 CONED OFF MW-05 or ERM-05 in PARKING LOT.

1730 ERM and DEC offsite

(MFW)

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 Photovac 20/20, cal w to ambient air, and 100ppm - Isobutylene cal gas.

0745 - J.E conducted DTW in ERM-04

DTW - 39.48 ft TOC to gs = 2.4

DTB - 49.65 ft

0800 - DELTA DRILL CREW on site (Coop of 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.

6/25/02 (MFM) (2)

0935 - obtained Core 24-28 ft.

1015 Driving core 32-36 ft BLS.

1028 Received and logged Core 32-36 ft.

1121 Received and logged Core 36-40.
GW encountered @ 40 ft.

1122 SB-14 (39'-40') @ 1122 collected for analysis VOC, SVOC & TAL Inorganics.

SB-14 GW encountered @ 40 ft.
Completed SB-14 @ 40ft. 1135.

1156 Setting up on SB-15.

SB-15

1247 Preparing to drive Core to 0-4 ft.

Note: SB-14 and SB-15 are very soft or loosly packed the top 20-24 feet because of mounds of up areas from the retension basin.

1335 Move core 24-28 ft

1353 - Preparing to drive core 28-32 ft.

(MFM)

6/25/02 (MFM) (3)

Note: Jake started split spooning on ERM-05.

1436 - Received core from 32-36 ft.

1510 - Received core from 36-40 ft.

1513 SB-15 (39-40') @ 1512 for VOCs, SVOC, and TAL Inorganics.

Note Have completed SB-15 @ 40ft GW @ ~40 ft. All samples collected today were placed on ice w/ the samples collected yesterday.

COC completed. All samples packaged according to Work Plan procedures and shipped to [redacted] via Federal Express for priority overnight 1600 ERM and DELTA onsite.

[redacted]

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
0811 Received core from 0-4 ft, SB-31(0.0'-0.5') @ 0811 for TCL tests and TAL Inorganics
0939 - 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.

Notes: Drove core from 28-32 again however No sample recovered Sample collected from 27'-28'. G-W 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-05 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 @ ERM-03 is silted up.
1338 obtained core 20'-24'
1357 JAKE E. offsite.
1431 Obtained core from 24'-28'.
1445 Received (3) screens from MW installation crew - 35'-37', 37'-39', 39'- See ERM-06 Geologic log for details
1458 - 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

6/26/02 (MFN) (26)

1510 - DELTA - Drilling down to 50 ft in ERM-06, Jimmy wrapping things up for the day.

Note: Once Geoprobe holes (SB) completed locations are backfilled w/ cuttings less the samples and steaked for survey.

Note Photos collected from around the site.

1730 ERM and DEC offsite. Samples held for shipment to the lab on friday.

(MFN) (27)

DATE: 6/27/02 (Thursday)
Site: GABRESKI Airport.
Purpose: MW and SB installation
Weather: am: Sunny, 78°, SW wind 5-10 mph
pm:

0700 ERM and DELTA onsite/ DEC onsite. Calibrated PID 20/20 to ambient air and 100 ppm isobutylene calibration gas.

0730 DELTA setting up on SB-30.

0755 Received first core from 0-4 ft.

Continued coring @ SB-30 continued

1011 Drove core from SB-30.

See Geologic log for details.

1023 SB-30/30-3) @ 1023 for VOC and Pesticides, MS/MSD collected @ this location for Pesticides only.

1040 Moved to SB-27.

Begin coring from the surface to 16 ft.

1130 Lunch break.

1230 Driving core from 16'-20' ft

6/27/00 (MFN) (28)

1315 DEVELOPMENT OF ERM-03 started @ 1315.

1316 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.

6/27/00 (MFN) (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 µS/	PH	Temperature	ORP
1550	550	330	10.1	+ 23.0	159
1555	3.48	—	—	+ 20.6	—
1600	2.37	—	—	—	—
1605	1.43	—	—	—	—

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 shipment tomorrow.

8/28/02: Friday
Site: Grabreski Airport.
Purpose: ERM-07 and SB installations
Weather: am: 77°, humid overcast.

pm

0700 ERM, DELTA and DEC on site.
0730 Calibrating Photovac 20/20 to 0 gas Ambient air and 100 ppm Isobutylene calibration gas.
0750 Received core from 0-4 ft @ SB-17.
0750 SB-17 (0.0'-0.5') @ 0750 for TCL Pesticides and TAL Inorganics.
DUP062802 @ 0800 for TCL Pesticides and TAL Inorganics
0810 Received core 8-12 ft
0817 Received core 12-16 ft
0822 Received core 16-20 ft.
0900 Received core from 20-24 ft.
0915 took pictures in the cesspool area of SB-17 - and 18 & 19.
0955 Driving core from 24'-28'.
1004 Received core 24'-28'.
1032 Driving core 28-32'.

8/28/02 (MPW) (31)

Note: In the area of SB-17 -
Cesspools - 4.7 ft top of pool
21.7 ft to bottom
12 ft Diameter
(4) pools in this area.

1127 Core from 32-36 ft received.
SB-17 (35'-36') @ 1127 for VOCs & SVOCs
GW encountered @ 36 ft BGS.
1130 - End of Boring @ 36 ft.
Moved to SB-18
Started Coring @ SB-18 (1244)
See log for details.
1246 - Received core from (0-4 ft)
1251 Received core from (4-8) ft
1300 Received core from (8-12)

Note: DELTA HAS COMPLETED ERM-07 w/ 42 ft. 15 ft screen and the rest solid.
1315 Received core from 12-16
1330 Received core from 16-20
Note: ERM-06 has been developed Purged on well 1 hour and Conductal

6/28/01 (MFM) 32

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 @ 34 ft.

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.

(MFM) 33

DATE: 7/01/01 (Monday)

SITE: GARRISON Airport

PURPOSE: Soil boring Installation Manhole Installations -

Weather: am: Partly cloudy 76°, S winds 5-10 pm:

0700 ERM and Delta (Geo jimmy onsite) Setting up on SB-16 this morning

0710 Calibrating PID 99/20 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, Post, Inorganics.

07/01/02 (MAW) (34)

Soil Samples from SB-16. Post, Inorganic

1230 FB070102 collected for [redacted] (MAW)

Setting up to Develop MW-007 or ERM-007

ERM-007

DTW = 30.75 Pump on 1330

DTB = 41.97 Pump off. 1430

WC = 11.22 purge rate: 2gpm

1x Volume purged - 160 gal

3x

5x

Purged 40 gallons @ high rate w/ Continuous Surge.

Time	pH	Temp	Conduct.	ORP	Turb.
1330	6.9	18.1	0851	-080	71000
1340	6.0	16.4	0889	-171	3.94

surged well repetively w/ pump. water turbid for 1 min to clear conditions

1350	5.9	16.4	0878	-148	13.2
1400	5.9	17.2	0868	-117	27.8
1410	5.7	16.7	0898	-111	3.28
1420	5.7	16.7	904	-111	1.28
1430	5.8	16.7	901	-058	0.91

END OF Development

07/01/02 (MAW) (35)

Note: After development of ERM-07 Final DTW = 30.75 ft. from TOC - marked casing for measurements. DELTA DRILLING CREW DEMOBING TODAY Have set all the manholes for ERM-01 through ERM-07.

Please Note: FB070102 was collected (MAW) [redacted] for TCL Pesticides and TAL Inorganics, filling (2) 1000ml Amber jars and (2) 500ml Plastics time for this field Blank is 12:30.

Time	Well ID	DTW	DTB
1544	ERM-01	32.32	41.69
1552	ERM-02	38.64	47.86
1558	ERM-04	36.60	47.09
1606	ERM-03	38.75	52.40
1612	ERM-05	43.87	53.03
1619	ERM-06	39.65	50.35
1625	ERM-07	30.75	41.98

Marked all Casing for Survey & measure ft.

1645 ERM offsite - Completed 1 boring today and development of ERM-07

MAW 36

DATE: 07/02/02 (Tuesday)
Site: Gabreski Airport
Purpose: SB installations
Weather: am: 76° - 68% 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 checked temperature of the Samples collected 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 MAW 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 @ 32 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 @ Fedex.

(MFN) (38)

Date: 07/03/02 (Wednesday)
site: Gabreski Airport.
Purpose: Soil boring Installations
Weather: hazy, 69% humidity, 80° - light S wind.
pm:

0600 ERM and Dawn onsite @ 0600 - Set up on SB25

0615 Calibrating the Photovance 2b/20 to 0ppm Ambient air and 100ppm isobutylene cal gas.

0620 SB-25 received core @ 25'-32'. See geologist log for details.

0758 Preparing to drive core from 25'-32'.

0839 Received core from 28-32' GW encountered @ 32 ft

Note SB-25(11'-12') @ 0656 for VOC only.

Cleaned up area @ SB-25
Moved to SB-26.
Sample placed on ice following Sample collection.

SB-26

0902 Driving core from 0-4 ft.

7/03/02 (MFN) (39)

0905 - SB-25 Core from 0-4 ft received.

1115 Received core from 28-32' - No GW @ this Interval will Drive an additional Core.

- Prepared for GW Sampling scheduled for Monday, July 8 - SB-26(31-32')@ 1115 for VOC & SVOC.

- End of the day. All samples collected today will be held in the ERM Warehouse Refridgerator for Shipment to Mitkem laboratory on July 5 2002. Samples will arrive on Sat. July 6, 2002.

07/08/02 (Monday)
Site: GASKESKI 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 Calbration 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

0759 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.

12:30 - 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 attennation parameters.

1503 Received Core from 28'-32'. GW. encountered @ 32.

SB-29 (31-32) @ 1503 Collected for VOCs. All Samples collected today will be held overnight on plenty of fresh ice @ proper temperature

07/08/02 (MKW) (42)

GW - Sampling was conducted today on ERM-01, The MS/MSD was collected from this location as well as natural attenation parameters See G.W. Sampling sheets for details.

Samples were placed on ice immediately following Sample Collection. Samples were packaged following C.O.C procedures w/ a temperature blank and shipped VIA Federal Express to Mitkem Laboratory.

1600 ERM offsite.

(mkw) (43)

DATE: 07/09/02 (Tuesday)
SITE: GLOUCESTER Airport.
PURPOSE: Soil Borings and GW Sampling.
Weather: am: overcast 70°, 10-15 mph WNW
pm:

0700 ERM and DELTA onsite. -
Note: DELTA does not have GEOPROBE Liners to conduct Soil Sapling this morning - Waiting for shipment from Geoprobe VIA UPS @ the DELTA SHOP.

ERM-01

0745 GENE set up on ERM-01 to conduct GW Sampling VIA LOW FLOW technology

0900 ERM-01 was sampled for SVOC TAL Metals and Cyanide through the Grundfos pump. VOC Samples were collected w/ Bailer.
See Sample Log for details.
FE, field test conducted result = 0.3 mg/L

0950 ERM set up on ERM-03,

1040 ERM-03 was sampled for SVOCs TAL Inorganics and Cyanide VOCs were collected w/ Bailer.

07/09/02 (MKM) (AE)

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 FB070902 Conducted for VOC through Bailer w/ DI water Provided by the Laboratory (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.

(MKM) (45)

DATE: 07/10/02 (Wednesday)
SITE: GRAYLING AIRPORT
Purpose: SB installation 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 0 ppm ambient air and 100 ppm isobutylene gas.
0620 Began drilling @ SB-21.
0628 Received Core from 0-4 ft. continued receiving cores from SB-21.
0730 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 TB071002 Placed w/ Sample Mobed to SB-22.
0845 Driving core 0-4 ft.
0845-0900 Coffee break.
0942 - Recored core 16'-20' ft.

07/10/02 (MFW) (46)

0911 SB-22 (6'-8') @ 0911 for VOCs, Note MS/MSD collected from this location. Samples were bottled immediately, however were held for greater PID hit.

0915 FB071002 collected @ SB-22 for VOCs only for Soils.

1026 Driving core from 24'-28'.

1105 Received core from 28'-32', End of Boring - GW @ 32'.

1130 Set up SB-11.

1208 Received Core from 0-4 ft.

1208 SB-11 (0.0'-0.5') @ 1208 for TCL Pests and TAL Inorganics collected @ the Surface interval.

Continued Geoprobing -

1315 Driving core from 24'-28'. -- Very tough going down not able to penetrate 28' will retry

Note: Sample collected from 27'-28' @ 1330.

1330 SB-11 (27'-28') VOC, SVOC, TAL Inorganics

07/10/02 (MFW) (47)

Note: Refusal encountered @ 28 ft. The Sample interval @ 27'-28' was jarred and placed on ice prior to refusal encountered @ 28'. ∴ 28' was the end of this boring.

1438 - Refusal Depth of 28 foot was encountered END OF THE DAY for Geoprobe.

Surveyors are marking out borings and MW's today. - I will check their status and walk w/ them for a while.

1500 Working with Surveyors to mark and survey Borings and Wells.

Note: GW Sampling complete (2) coolers were shipped Via Fed Ex to Mitkem Laboratories following C.O.C. procedures.

Delivered to FED Ex and Dropped off.

(MAW) (48)

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 Dawn on site.
0635 Calibrating the photovac 20/20 to 0ppm ambient air and 100 ppm isobutylene gas.
0830 Set up on SB-09. on the South Western block.
0850 Received core from - 0-4 ft. Driving cores to depth.
0730 Jim Pederson spoke to Tom K. The Drill Rig (F-7) and traprate will be De-moded @ the end of today's WORK DAY.

0830 Surveyors on site to continue the Soil boring and MW survey locations.

0856 Received core from 24'-28' moist, No oW.
0926 Received core from 28'-32'

07/11/02. (MFW) (49)

Note: Difficult to obtain the 32'-36' Sample:
1009 Received core from 32'-36'. Will go down SB-09 and 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 Pes 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.

07/11/02 (MFM) (50)

All Samples collected today were placed on ice with Samples collected during yesterday's (07/10/02) Sampling of SB-22, 21 and 11 as well as the TB071002 and FB071002.

Note: Surveyors completed their task to located and Survey in all the Soil borings and Monitoring Well locations. They also hit some additional elevation points within the Norther wooded area.

Prepared Samples for shipment Via Fedex to Mitkem laboratories located in RI. WARWICK. Samples packaged on plenty of ice.

1530 Spoke to Airport Management Representative. About project Completion. Drill Rig will be Demobed tomorrow.

1600 Received 4 plugs for the well will place and collect

07/11/02 (MFM) (51)

around of water levels.

Well ID	Time	DTW
FEM-01	1615	32.28
FRM-02	1619	38.59
ERM-04	1625	36.58
EEM-07	1630	30.73
ERM-06	1639	34.63
ERM 05	1644	43.85
ERM-03	1648	38.70

1700 Dropped of Sample cooler w/ the last of the Soil Samp for the Soil borings. Soil borings Complete.

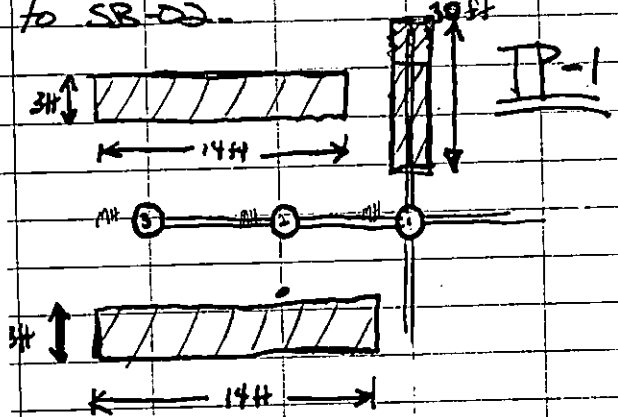
EEM offsite

MAW (52)

DATE: 09/23/02 / Monday)
Site: GABRESKI Airport, West hampton
Purpose: Test pitting activities
Weather: ago: overcast humid 75°, light SW wind

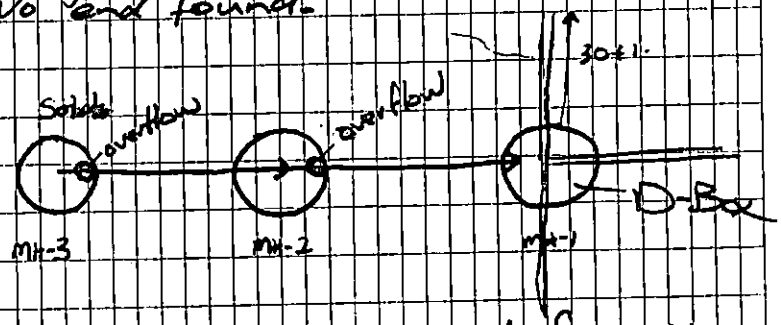
0700 pm
EEM (M. Menzies) NYSDEC (J. Malcolm)
American Environmental (Gene Mastandrea)

0730 NYSDEC & EEM discussing work activities
0845 American Environmental on site.
0900 Calibrate PID & LEL to standards (all ok)
0915 Begin test pitting @ the 3 man holes @ the Norther 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 end found.

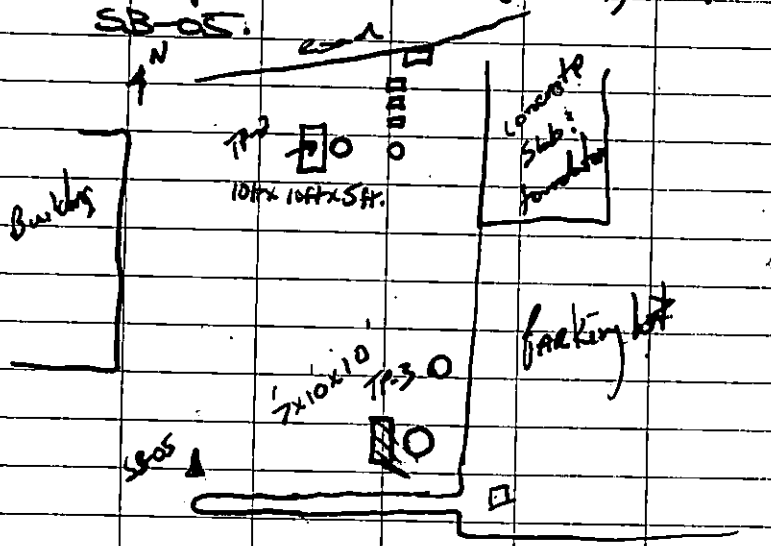


1020 MH-1 Sample collected from the Bottom of MH-1. 3 to 4 inches of Sediment on the Bottom of MH-1 w/ a hard Concrete bottom. Sample collected at a depth of 5 ft. for TCL VOC, SVOC and Metals.

Mobing over to TP-2 in the area of SB-05.

9/23/02 (MFW) (54)

TP-2 area at the appliance store Investigating test pits around and cesspools in the vicinity of SB-05.

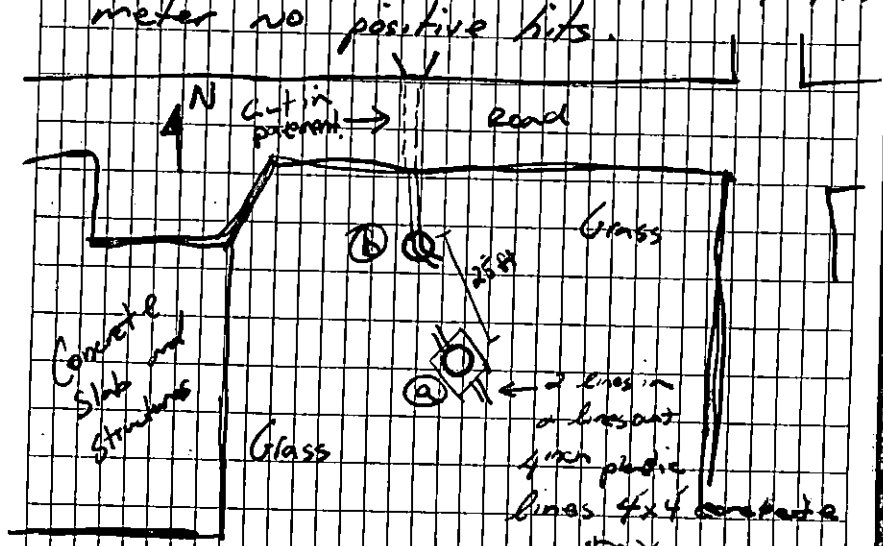


TP-2 - No sample collected from TP-2 Dug East of Building - South of Bob Stevens East of Abandonned Building

TP-3 Located ~~East~~ East of SB-05 and South TP-2. Dimensions 10x10x x7. No odor and no Staining ~~encountered~~. Note: Location of Cesspools is actually further

9/23/02 (MFW) (55)

east than is identified on the map. Soil Screened w/ PID, and LEL/O2/H2S meter no positive hits.



(a) = 4' by 4' box 2 lines in 2 lines out 4" lines 3 ft off bottom Eastern side blocked w/ Sediment. (Dry)

(b) Manhole - Sanintary - (open Channel) 4" line going N to SE. 3 ft diameter Dry Sediments, Inorganic material Stones and sediment.

Closing up manhole covers.

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, wet No odors and No staining

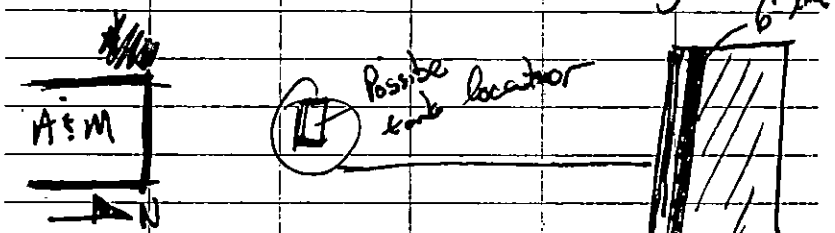


Photo #3 shows the location of Metal pipe that was encountered Not a tank. (Metal pipe in foreground)

Backfilling Excavation @ 1445.

1500 - Gene from American Environmental offsite.

9/23/02 (MFM) (57)

1528 - SB-06/07 collected by Composting soil from between SB-06/07 from (4) four locations. Collected soil to be analyzed for Pesticides.

1540 - SB-16 collected by Composting 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

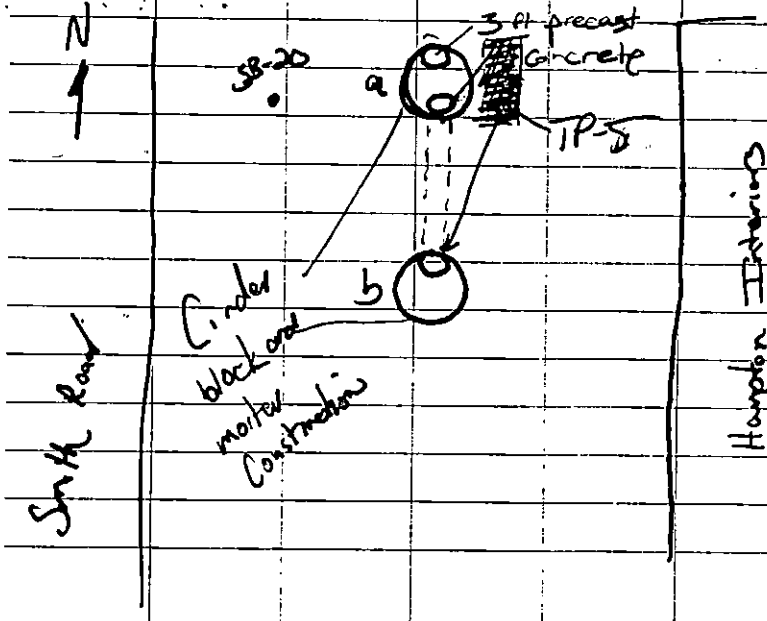
SB-31 @ 1610 collected by compositing soil from the Vicinity of SB-31 and analyzing for Pesticides.

All Samples placed on ice immediately following sample collection and will be shipped out on Wednesday 9/25/02

MFM 58

DATE: 9/24/02 (Tuesday)
Site: Grabreak Airport
Purpose: Test pitting on site
Weather am: overcast 76°, cool.
pm:

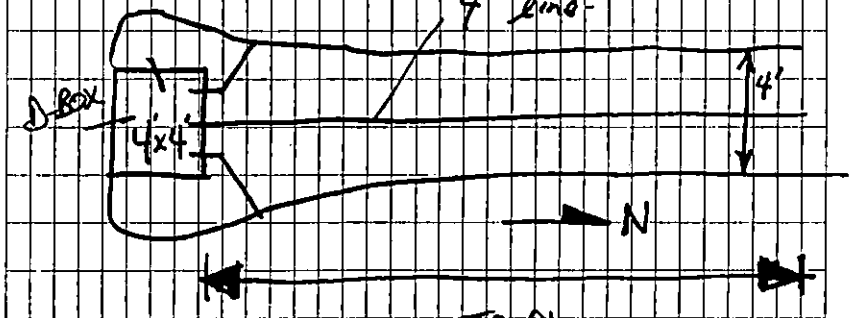
0700 ERM - (M. Mendes), NYSDEC (J. Malcolm)
American Environmental (G. Mashadrau)
-0705 Calibrated field instruments PID and the ORAE-LEL
0715 uncovered Manholes @ TP-5 located behind the Hampton Interiors building in the area of SB-20.



9/24/02 MFM 59

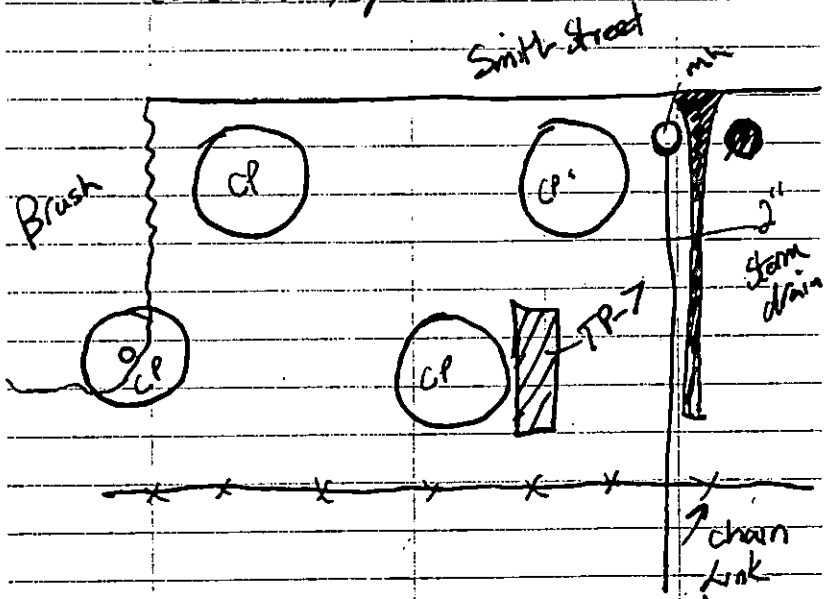
TP-5 - Dug along the east side of cess pool a. 7'x4'x5'. Cess pool is a cinder block and mortar construction for storm water use. Test pit, No odor and No staining

TP-6 - Dug @ the junction box found in the field West of Building 103. Geophysical data suggested that a leaching field was encountered from the junction box in a northward direction.
Photo #4: Structure D-Box.
Photo #5: trench in North direction from DBox



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.

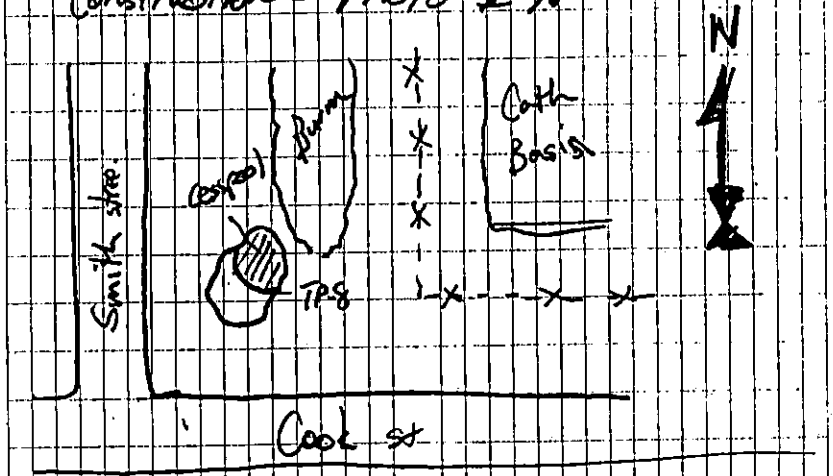


Test Pit 7 - dug to 7 ft below grad. 10 feet long by 4 ft wide. No odors No staining

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.



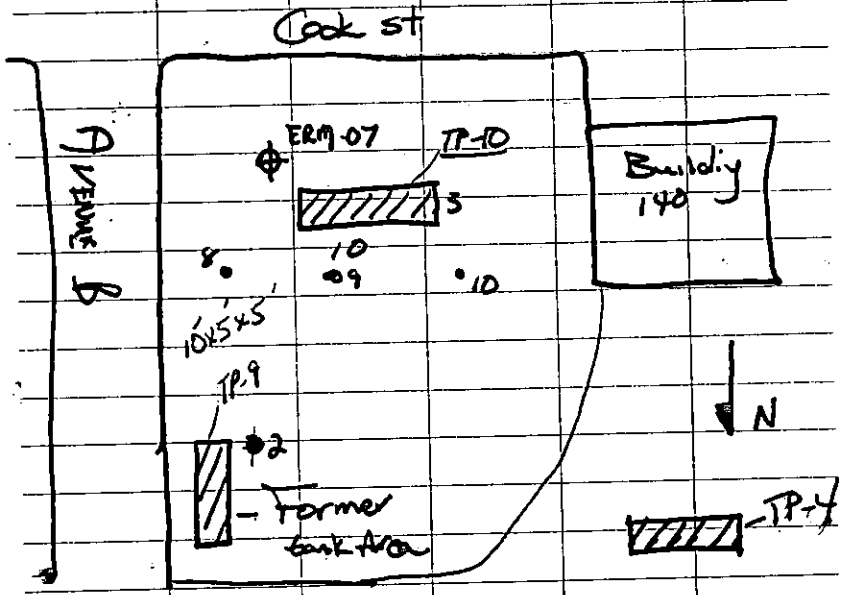
Possible staining encountered - Darker Soil P.I.D ~ 30 ppm. - Possible moisture int within the P.I.D. No odors detected by olfactory.

12:00 Break for Lunch.

Moved over to the area East of Building 140.

9/24/02 MFM (62)

TP-9 - Area East of Building # 140 North of ERM-07, 10-15ft long by 5ft wide by 5 ft depth



Note: That Excavation performed in the area of the removed tank. No odors and No staining encountered

9/24/02 MFM (63)

TP-10 - Dug North and West of ERM-07 to a depth of 10ft.

Note: Location shown on previous page,

No odors, no staing - Brown to Black Surface top soil - Dark black to brown sand/soil horizon to ~ 4 ft below grade - No odors (organic)

1530 - Gene M. offsite.

1408 - Conducting a round of water levels

Well ID	Time	DTW
ERM-05	1410	44.33
ERM-03	1419	39.16
ERM-01	1428	32.72
ERM-02	1436	39.07
ERM-04	1453	37.06
ERM-06	1501	40.18
ERM-07	1512	31.20

→ Over Temp. Recorder

9/25/02 (MFM) (64)

Well ID	DSP	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	-	31.85	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 all 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 - 0745
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.

9/25/02 MAW 66

0839 - Set up on ERM-07.

ERM-07

DTW - 31.21
DTB - 41.99
DOP - 38'
WC - 10.78
1x - 1.83
3x 5.5'

Pump on: 0912
Pump off: 0955
Sample time: 0958
Purge Vol: 10 gal

Sampled ERM-07 @ 0958 for VOC, SVOC, Total Metals, Fe, Nitrate, TKN/T. Phosphate, Amonia and Fe field test kit.

1030 Setting up on PZ-08 located North and East of ERM-07. PZ-08 is upgradient well to ERM-07.

PZ-08

DTW: 34.28
DTB: 37.10
DOP: 36'
WC: 2.82'
1x: 0.5
3x: 1.5

Pump on: 10:55
Pump off: 1157
Sample time: 1145
Purge Vol: 12

9/25/02 MAW 67

PZ-08 - sampled PZ-08 @ 1145 for VOCs, SVOCs, Total Metals, Fe, Nitrate, TKN/T Phosphate, Amonia & Fe field test kit.

12:00 - 12:30 - Lunch.

12:30 Setting up on PZ-17, PZ-17 located SW of ERM-07, and down gradient.

PZ-17

DTW - 34.17
DTB - 55.80
DOP - 35.25 ~~approx~~
WC - 1.63
1x - 0.277
3x - 0.83

Pump on: 1318
Pump off: ~~1405~~
Sample time: 1355
Purge Vol: 15 gal

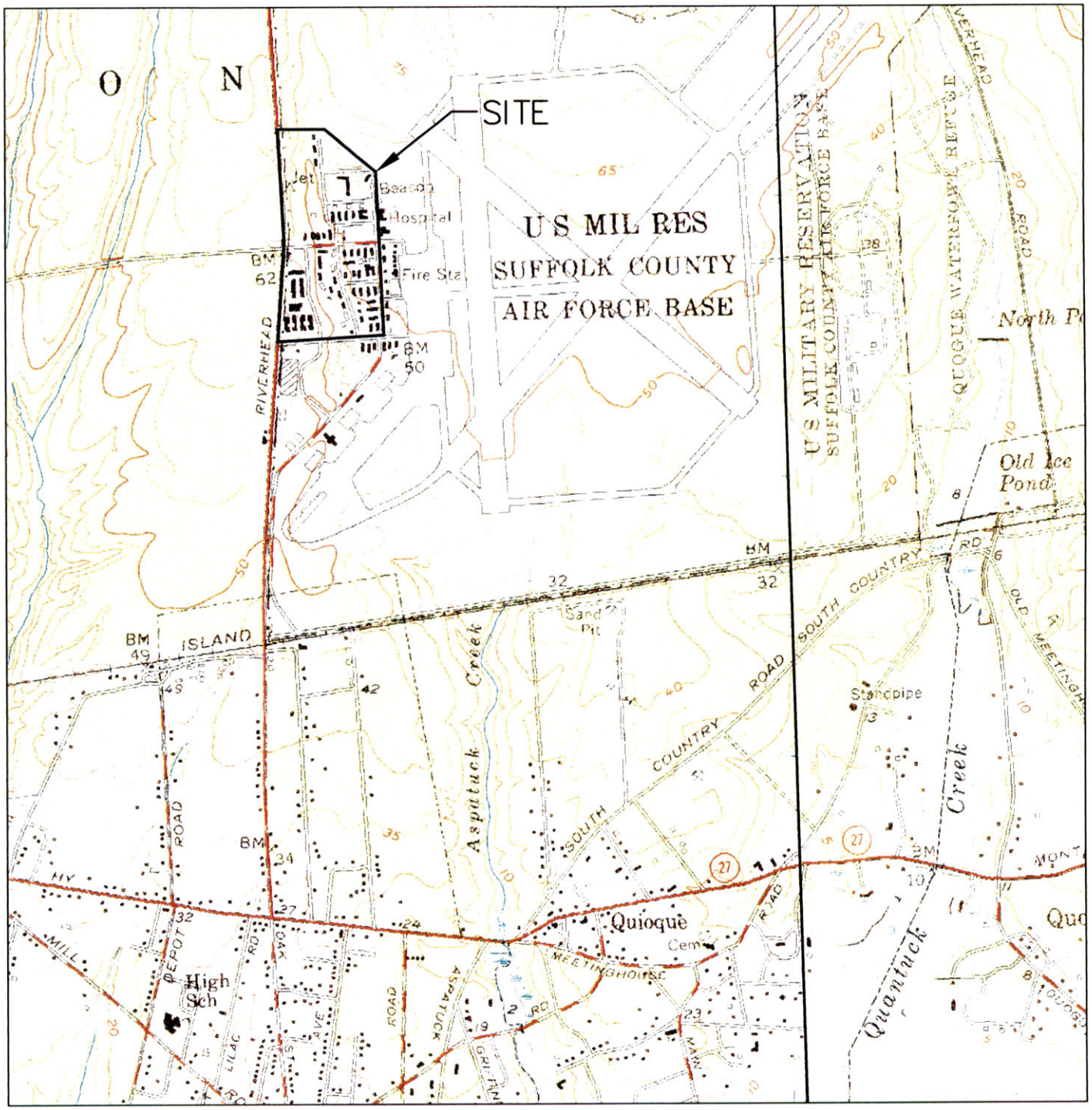
PZ-17 Sampled @ 1355 for VOC, SVOC Total Metal, Fe, Nitrate, TKN/T. Phosphate Amonia, and Fe field test kit.

Exhibit 1

Historic NAPL Information

NMJ I:\DIV71\PROJECTS\10569\25466\DWG\004.DWG SF:1

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"=80'

80 0 80

O'BRIEN & GERE
ENGINEERS INC.

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.

Does not limit % of responsibility of

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.

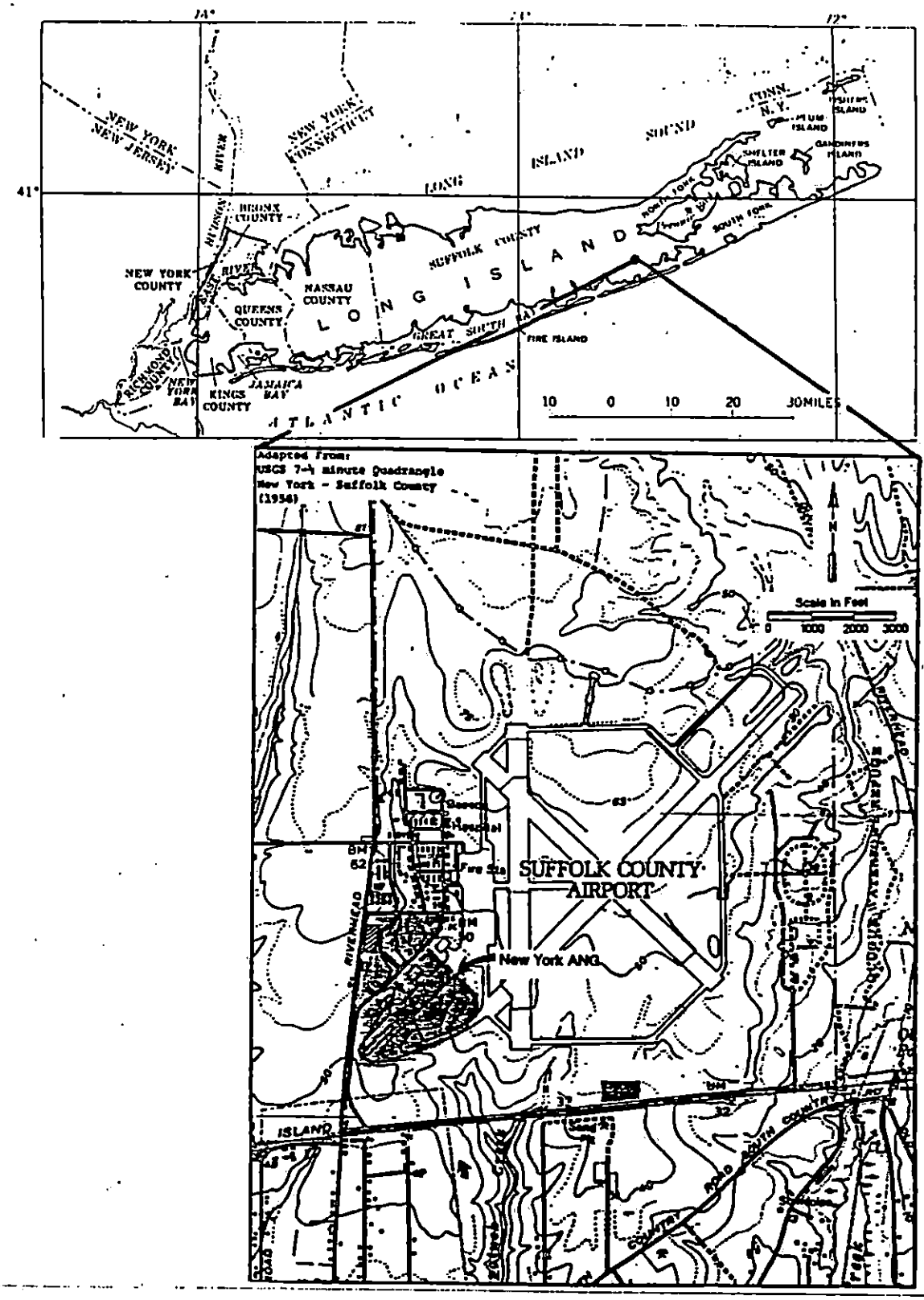


Figure 2.1 Location Map of the Suffolk County Airport

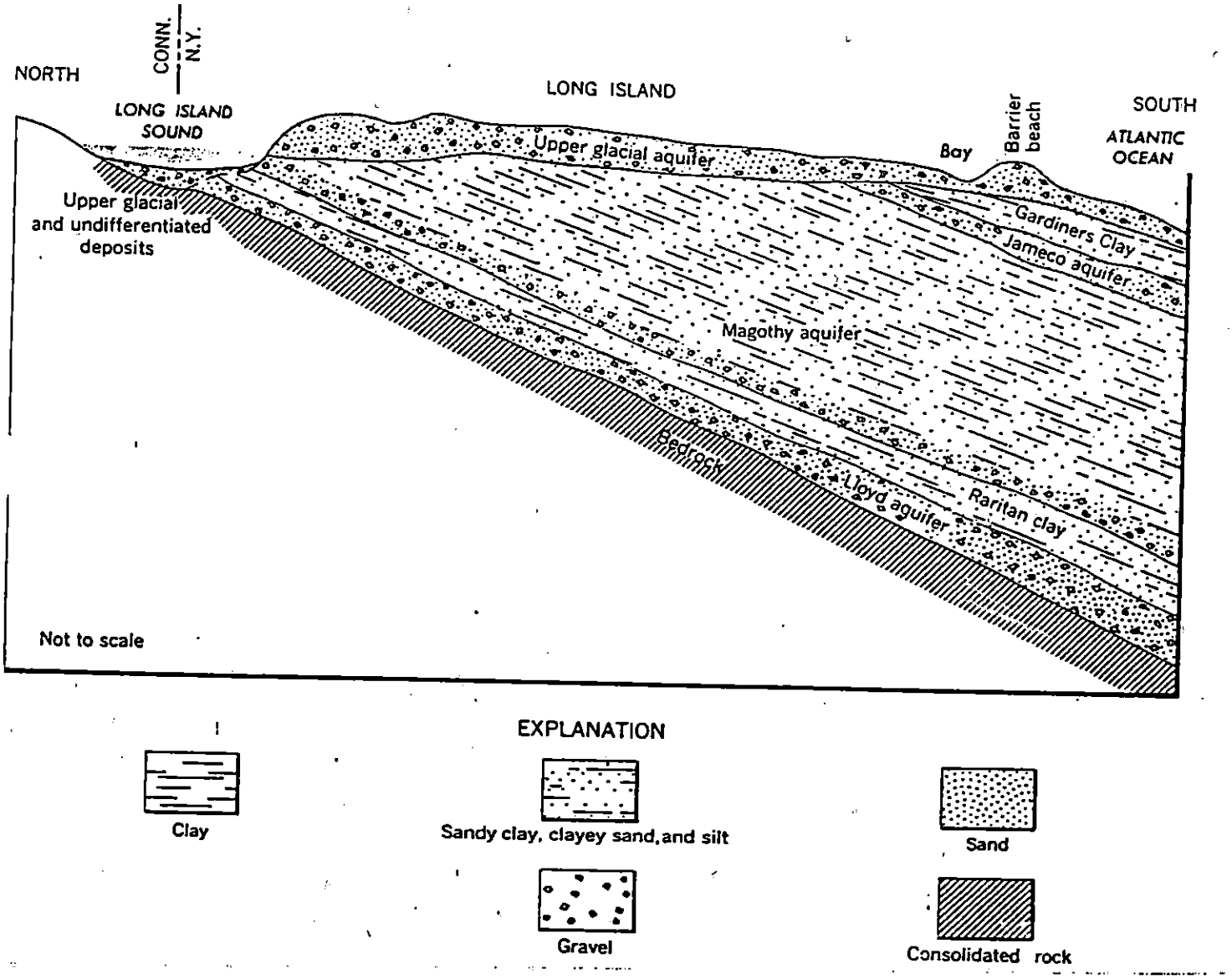


Figure 2.2 Geologic Features of the Ground-Water Reservoir
(Franke and McClymonds, 1972)

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.

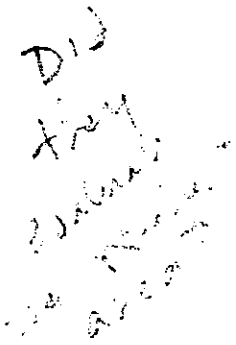
Representative samples of the various known petroleum products present at the Suffolk County Airport will be obtained for comparison purposes with the floating product within the existing plume. Following separate analysis of each petroleum product, the laboratory may be requested to combine samples

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.

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Please return
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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 2JAN02

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 ✓		PLUGGED	
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: 18JA102

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			34.8
3 ✓			33.86
5 ✓			33.66
6 ✓			33.69
7 ✓			DRY
8 ✓			33.31
9 ✓			32.83
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
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

4T
FYI
Please return

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

CLARE B. BRADLEY, M.D., M.P.H.
COMMISSIONER

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

220 FABRO 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

#85-2503 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 ✓		PLUGGED	
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 ✓		BROKED	
16 ✓		BROKED	
17 ✓			33.69
18			
26 ✓		PUCCED	
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

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
TEL: (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	34.90
6 ✓	.38	34.30	34.68
7 ✓			DRY
8 ✓			33.96
9 ✓			33.49
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKEN	
16 ✓		BROKEN	
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 ✓		BROKED	
16 ✓		BROKED	
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

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 ✓		BROKED	
16 ✓		BROKED	
17 ✓			34.18
18			
26 ✓		PLUGGED	
27 ✓	0.34	34.65	35.04
28 ✓	0.01	35.22	35.23
29			
30 ✓			37.88
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			36.41
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

4 0 12

All numbers reported as: feet-inches-1/8inches

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

TUES
Sec. #85-2503 County Airport, [Bmn.Bs] Westhampton Date: 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 ✓		PLUGGED	
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) 853-2251
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

#85-2503 County Airport, [Bmn.Bs] Westhampton Date: 7 May 02

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	

12 - 5

All numbers reported as: feet-inches-1/8inches

JM

12-4

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

65-2503 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 ✓	.91	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 ✓		BROKED		
16 ✓		BROKED		
17 ✓			34.06	
18		[redacted]	[redacted]	
26 ✓		PULLED		
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
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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: 7/11/02

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

Site: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: WED 19 JUNE 01

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
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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) 853-2251
FAX (631) 853-2307

(JM) 12
0 bailed

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
MONITORING WELL REPORT

#85-2503 County Airport, [Bmn.Bs] Westhampton Date ~~8/5/02~~ 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 ✓			33.91
18			
26 ✓		PULLED	
27 ✓			34.23
28 ✓			34.14
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

Re: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: THURS 18 JUL 96

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 ✓		PLUGGED	
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 — 0

All numbers reported as: feet-inches-1/8inches

Martin
FYI. Please
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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. 11788
TEL. (631) 853-2251
FAX (631) 853-2301

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-Q Bailed

te: #85-2503 County Airport, [Bmn.Bs] Westhampton Date: Friday 2A46 0

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓		[illegible]	34.58
3 ✓			33.46
X 5 ✓	.03	34.22	34.25
6 ✓			34.31
7 ✓			(DRY)
8 ✓			33.88
9 ✓			33.42
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKED	
16 ✓		BROKED	
17 ✓			33.79
18			
26 ✓		PULLED	
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 6/12/90

WELL#	prod. in ft.	depth to product	depth to grdwater
1 ✓		DESTROYED	
2 ✓			34.74
3 ✓			34.61
5 ✓	.44	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 ✓			34.96
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: FRI 30 AUG 85

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 ✓	.44	34.41	34.90
7 ✓			DRY
8 ✓			34.09
9 ✓	(.40)	33.55	33.95
10 ✓		DESTROYED	
11 ✓		DESTROYED	
15 ✓		BROKEN	
16 ✓		BROKEN	
17 ✓			33.78
18			
26 ✓		PLUGGED	
27 ✓			34.49
28 ✓			35.02
29			
30 ✓			31.68
40			
41			
42 ✓		BURIED	
43 ✓		BURIED	
44 ✓			36.20
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55 ✓		GONE	

12 - 3

All numbers reported as: feet-inches-1/8inches