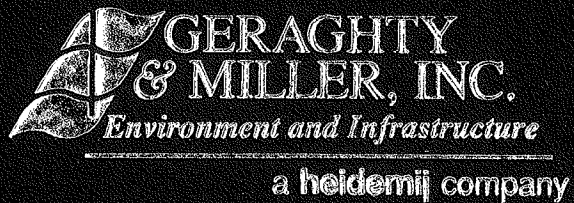


**PHASE II ENVIRONMENTAL
SITE ASSESSMENT
U3 PARCEL
NORTHROP GRUMMAN CORPORATION
BETHPAGE, NEW YORK**



GERAGHTY & MILLER, INC.



**PHASE II ENVIRONMENTAL
SITE ASSESSMENT
U3 PARCEL
NORTHROP GRUMMAN CORPORATION
BETHPAGE, NEW YORK**

July 1997

Prepared for

Northrop Grumman Corporation
South Oyster Bay Road
Bethpage, New York 11714

Prepared by

Geraghty & Miller, Inc.
88 Duryea Road
Melville, New York 11747
(516) 249-7600



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July 18, 1997

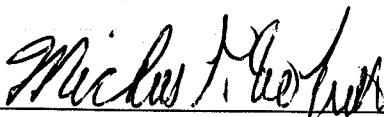
Prepared by GERAGHTY & MILLER, INC.



Robert Porsche
Staff Scientist



Carlo San Giovanni
Principal Scientist



Michael F. Wolfert
Project Director



**PHASE II ENVIRONMENTAL
SITE ASSESSMENT
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**PHASE II ENVIRONMENTAL
SITE ASSESSMENT
U3 PARCEL
NORTHROP GRUMMAN CORPORATION
BETHPAGE, NEW YORK**

1.0 INTRODUCTION

On February 14, 1997, Geraghty & Miller, Inc. was retained by the Northrop Grumman Corporation (Northrop Grumman) to conduct a Phase II Environmental Site Assessment (ESA) of the property known as the U3 Parcel, which is located on the southeastern portion of the Northrop Grumman airfield (now closed) in Bethpage, New York. A site location map is presented on Figure 1-1. The site consists of 10 acres (current Tax ID No.: Section 46, Block 323, and a portion of Lot 17 J) and is currently owned by Northrop Grumman. This site is located within an area zoned as H, which is defined as light industrial. To the south of the U3 Parcel are a series of storm water recharge basins, known as the south recharge basin group. Residential and commercial developments are located south of the recharge basins. To the west of the subject property is the T1 Parcel that contains landscaped (grassy) areas and sections of the former aircraft runway. To the east of the subject property is a parcel of land, formerly owned by Northrop Grumman, that is currently being redeveloped as a residential condominium complex. North of the U3 Parcel are buildings known as Plant 1 (which contains offices and the inactive Plant 1 Fuel Depot) and Hangar 7; site maps are provided on Figures 1-2 and 1-3.

The U3 Parcel was delisted from the New York State Registry of Inactive Hazardous Waste Disposal Sites (NYSDEC 1996) on April 7, 1995.

The U3 Parcel is generally level with topography gradually sloping away from the runway to facilitate drainage. Ground elevation is approximately 110 feet above mean sea level. Based on water-level measurements made during a Remedial Investigation (RI) of the Bethpage facility, the groundwater table beneath the U3 Parcel would be found at approximately 45 feet below land surface (Geraghty & Miller, Inc. 1994). The shallow groundwater in this area is not used as a source of potable drinking water.



A Phase I ESA of the U3 Parcel was completed by Geraghty & Miller in April 1997. The purpose of this Phase II ESA report is to document the investigative activities undertaken in accordance with recommendations of the Phase I ESA; present the results obtained from the laboratory analyses of environmental samples collected, and provide an interpretation of the analytical results with respect to the appropriate environmental criteria. Section 2 of this document presents an overview of the findings, conclusions, and recommendations of the Phase I ESA. The procedures followed throughout the course of the Phase II field program are described in Section 3. Section 4 describes the findings and conclusions of the Phase II field program. The recommendations of the Phase II ESA are presented in Section 5.



2.0 PHASE I SITE ASSESSMENT - OVERVIEW

This section presents an overview of the potential areas of environmental concern (AOC) identified in the Phase I ESA of the U3 Parcel and the investigative activities recommended for each. The areas of potential environmental concern, requiring additional investigation, include the following:

- Aircraft runway, taxiway, and runway landing lights.
- Storm water dry wells.
- Underground arresting cable winch vault.

2.1 Aircraft Runway, Taxiway, and Runway Landing Lights

The primary use of the U3 Parcel was as an aircraft runway and taxiway. Over the approximately 35 years that the runway and taxiway were used, petroleum hydrocarbons from the incomplete combustion of aircraft fuels, and herbicides applied to control plant growth may have accumulated on the runway and taxiway surfaces. Because storm water drains to the perimeter of the runway and taxiway, soils adjacent to these areas may have been impacted by petroleum hydrocarbons and herbicides.

The installation of two soil borings (U3-9 and U3-11) was recommended in the vicinity of the runway and taxiway to investigate soil potentially impacted by storm water runoff. Based on the land use associated with this potential AOC, a sample interval of 0 to 4 ft for the following analyses was recommended: total petroleum hydrocarbons (TPH), 8 Resource Conservation and Recovery Act (RCRA) Metals, and a volatile organic compound (VOC) grab sample based on headspace readings.

Although runway landing lights exist on the U3 Parcel, data collected during the Phase II Field Program of the neighboring S1 and T1 Parcels was utilized to evaluate the possible impact of PCBs from the runway landing lights. In addition, potential herbicide impacts were evaluated with the S1 and T1 Parcel Phase II Field Program investigation data. Specifically, samples collected at S1-13, S1-15, T1-14 and T1-16 were analyzed for TPH, VOCs, 8 RCRA metals, Herbicides and PCBs. Analytical data from these samples is summarized in Section 4.1.1.



2.2 Storm Water Dry Wells

Five storm water dry wells, discharging directly into the ground, were identified on the U3 Parcel. Because of the potential for petroleum hydrocarbons in storm water runoff, the storm water dry wells were considered potential AOCs. The catch basin identified on the U3 parcel was not considered an AOC because no recharge occurs within it; the catch basin is connected to storm water dry wells, where recharge occurs.

Based on the source of the runoff, which is collected in the catch basin and recharged to the aquifer through the storm water dry wells, the collection of 2 discrete sample intervals beneath the bottom of each dry well was recommended. Samples (U3-D1 through U3-D5) were recommended to be collected from 0 to 2 and 2 to 4 ft below the bottom of the storm water dry wells and analyzed for TPH, 8 RCRA Metals, VOCs and Semi-Volatile Organic Compounds (SVOCs) by EPA Method 8270 for the STARS Table 2 parameters.

2.3 Underground Arresting Cable Winch Vault

An underground arresting cable winch vault, approximately 6 feet by 6 feet by 6 feet, containing a hydraulic winch is located on the U3 Parcel. The arresting cable was formerly utilized in the testing of aircraft landing anchors. Lubricating oil or hydraulic fluid may have been used in the operation of the winch. Due to the potential for historic use of either lubricating oil or hydraulic fluid, the underground arresting cable winch vault was identified as a potential AOC. Following further investigation by Northrop Grumman, it was determined that the lubricating oil / hydraulic fluid reservoirs were empty.

Based on the potential for contaminants associated with this AOC, two discrete samples were recommended to be collected from the 0 to 2 and 2 to 4 ft intervals beneath the bottom of the winch vault. Samples from soil boring U3-19 were to be analyzed for TPH and Polychlorinated Biphenyls (PCBs).



3.0 PHASE II SITE ASSESSMENT - FIELD PROGRAM

This section of the report will provide a detailed summary of the field activities undertaken in support of the Phase II ESA and the rationale for the selection of analytical parameters. Field work was conducted in accordance with the recommendations of the April 1997 Phase I ESA report, as summarized in Section 2.0 of this report. The Phase II field program was conducted in two parts, on March 12 and 14, based on information gathered during the Phase I ESA, and on April 29, 30, and May 2, 1997, following the identification of additional potential AOCs during the March field effort, and a review of the preliminary soil sample data collected in March.

Based on previous investigations of the Northrop Grumman Bethpage facility conducted by Geraghty & Miller and other consultants, VOCs and the eight RCRA metals were identified as potential compounds of concern for the site, and for this reason, these analytes were included in the Phase II ESA list of analytical parameters.

To support the development of conclusions and recommendations regarding the level and degree of additional site investigation and/or remediation required, Geraghty & Miller has relied on the guidance/methodologies described in the NYSDEC January 24, 1994 and proposed revision (undated) TAGM No. 4046. As discussed in the TAGM, this document is designed to provide a technical basis for NYSDEC project managers at "...individual Federal Superfund, State Superfund, 1986 EQBA Title 3, and Responsible Party (RP) sites..." to determine soil cleanup levels. The analytical results of soil samples analyzed for VOCs were compared to the Appendix A Criteria in TAGM No. 4046, and the analytical results of soil samples analyzed for metals were compared to Eastern USA background ranges and the proposed soil cleanup objectives for cadmium and chromium provided in the revised, undated TAGM No. 4046. Although not directly applicable, because the U3 Parcel is not one of the referenced site types, Appendix A Criteria and Eastern USA background levels were used because state and federal soil standards have not been promulgated, and use of the Appendix A Criteria and Eastern USA background levels is consistent with the guidance provided in TAGM No. 4046, which states that attainment



of the Appendix A Criteria will, at a minimum, eliminate significant threats to human health and/or the environment.

In addition, based on historical information provided by Northrop Grumman, Geraghty & Miller determined that the majority of the U3 Parcel was previously utilized as an aircraft runway and taxiway. Therefore, TPHs were added to the list of analytical parameters for soil samples collected. If TPHs were detected in a sample, a petroleum product identification analysis (TPH ID) was performed to determine what petroleum products existed in the sample.

If a petroleum product identification was made, total analyses for the SVOCs in STARS Table 2 were performed. The SVOC analysis was limited to the polyaromatic hydrocarbons of the STARS Table 2 list because the petroleum products identified were diesel range organics (DRO) fuel type products. Analysis of additional SVOC compounds was not warranted based on the results of the TPH ID. The results of total SVOC analyses were compared to the Human Health Guidance Values, and TCLP Alternative Guidance Values in STARS Table 2. If the reported concentrations of SVOCs exceeded the TCLP Alternative Guidance Values, the samples were submitted for analysis of the TCLP extract. The TCLP results were compared to the TCLP Extraction Guidance Values provided in STARS Table 2. Comparison to guidance values under STARS Table 2 is done to assess potential impacts to groundwater and soil disposal options.

At each of the sample locations described below, extra sample containers were filled and submitted to the lab for possible TPH identification analysis, Total Spill Technology And Remediation Series (STARS) parameters analysis, and analysis by the Toxicity Characteristics Leaching Procedure (TCLP) for STARS parameters. Analysis of these samples was dependent upon the results of the TPH analysis.

Herbicides and PCBs were included in the Phase II list of analytical parameters based on the potential impacts associated with particular portions of the U3 Parcel (arresting cable winch vault and aircraft runway, taxiway and runway landing lights).



Based on the potential AOCs identified during the Phase I ESA, and part one of the Phase II field program, a total of 8 soil boring locations were selected for the collection of soil samples. The sample designations, analytical parameters, and rationale for sample location selection and analysis are summarized on Table 3-1 and described below. Soil sample locations are shown on Figure 1-3. All samples were submitted to EcoTest Labs, of Babylon, New York for analysis.

3.1 Air Monitoring Activities

During the installation of soil borings, air monitoring for volatile organic vapors in the workers' breathing zone, and at the boreholes was conducted utilizing a photoionization detector (PID). Prior to use, the PID was calibrated using a 100 parts per million (ppm) concentration of isobutylene gas. The PID was also utilized to screen the soil samples for the collection of VOC samples. When multiple soil samples were to be collected from a location (i.e., on either side of the taxiway), the PID was used to select the VOC grab samples from the soil sample with the highest (if any) PID reading. If PID readings were similar, the shallowest sample or sample from the location with the lowest land surface elevation was submitted for lab analysis.

3.2 Soil Sampling Program

As part of the Phase II investigation of the U3 Parcel, soil borings were installed at each of the following potential areas of concern:

- Aircraft runway and taxiway.
- Storm water dry wells.
- Underground arresting cable winch vault.

In addition, the analytical results of samples collected as part of the S1 and T1 Parcels Phase II Field Programs will be presented to summarize the environmental impact of the runway landing lights, and potential herbicide contamination.

The locations of the soil borings and the soil sample identification associated with each of the areas of environmental concern are shown on Figure 1-3. Soil borings were installed utilizing



a Geoprobe rig equipped with either Macro Core (2 inch x 46 inch) or Large Bore (1 inch x 22 inch) sampling tubes. Depending on the conditions encountered and the type of sample to be collected, the appropriate sampling tube was selected. Sampling tools were decontaminated with Alconox and water prior to sample collection and all acetate liners were discarded after use.

Soil samples were screened with a PID, and were physically and visually characterized and inspected for staining or discoloration. Field memos and chains of custody have been included in Appendix A. Where specified and based upon PID measurements, VOC grab samples were collected. The remaining soils from the sample location were composited and submitted to EcoTest Labs for one or more of the following analyses: TPH, TPH ID, SVOCs (STARS 8270), the eight RCRA metals, herbicides, and PCBs. In locations where no VOC sample was collected, soils were composited and submitted for analysis of TPH, TPH ID, SVOCs (STARS 8270), the eight RCRA metals, herbicides, and PCBs as described in Sections 3.2.1 through 3.2.3 of this report and summarized on Table 3-1. A field blank was collected during part one of the field program and is described in Section 3.3 of this report.

3.2.1 Aircraft Runway, Taxiway, and Runway Landing Lights

As indicated on Table 3-1, Soil Borings U3-9 and U3-11 were selected to sample soils which had the potential to have been exposed to storm water runoff from the runway, or taxiway.

At Soil Boring U3-9, two soil samples were collected from 0 to 4 ft bg; one sample was collected from each side (west and east) of the taxiway. The soils were screened with a PID for selection of a VOC grab sample; the remaining soils from the 0 to 4 ft intervals were composited and samples were collected for analysis of TPH and the eight RCRA metals.

At Soil Boring U3-11, one soil sample was collected from 0 to 4 ft bg. The soil was screened with a PID for selection of a VOC grab sample; the remaining soils from the 0 to 4 ft interval were then composited and samples were collected for analysis of TPH and the eight RCRA metals.



At Soil Borings S1-13, T1-14, S1-15 and T1-16, one soil sample was collected from 0 to 4 ft bg at each location. The soil was screened with a PID for selection of a VOC grab sample; the remaining soils from the 0 to 4 ft interval at each location were then composited and samples were collected for analysis of TPH, the eight RCRA metals, herbicides and PCBs. The analytical results are presented in Section 4.1.1 of this report.

3.2.2 Storm Water Dry Wells

Soil Borings U3-D1, U3-D3, U3-D4 and U3-D5 were collected during the Phase II Investigation Field Program and were installed through the storm water dry wells shown on Figure 1-3. Due to the recent re-grading of the area surrounding the location of U3-D2, the dry well could not be located, and Soil Boring U3-D2 was not advanced. In accordance with the assessment protocols, two discrete samples were collected beneath each dry well. The soils from 0 to 2 and 2 to 4 ft beneath the bottoms of the storm water dry wells from each discrete zone were composited and samples submitted for analysis of TPH, the eight RCRA metals, VOCs, and SVOCs (STARS 8270). The analytical results are presented in Section 4.1.2 of this report.

3.2.3 Underground Arresting Cable Winch Vault

At Soil Boring U3-19, two discrete soil samples were collected from 0 to 2 and 2 to 4 ft below the bottom of the winch vault. Since the vault had no concrete floor, the borings were drilled through the vault. Samples were analyzed for TPH and PCBs. The analytical results are presented in Section 4.1.3 of this report.

Following the Phase II investigation, two arresting cable pulley vaults were identified; the first was located approximately 60 ft northeast of the winch vault, the second is located 275 ft further northeast, on the opposite side of the runway. Although no samples were collected at these locations, they were visually inspected. The results and conclusions of this inspection are presented in Section 4.1.3 of this report.



3.3 Field Blank Sample

At the completion of the days efforts on March 12, 1997, a field blank was collected and submitted to the laboratory for analysis of TPH, VOCs, Herbicides, PCBs and the eight RCRA metals. Procedures used to collect the field blank are as follows: following decontamination of the sampling equipment, laboratory supplied distilled water was poured over the sampling shoe and trowel and collected in the stainless steel bowl used to composite the soil samples. The water was then bottled and submitted to the lab for the analyses indicated above. The field blank was collected to ensure that the soil samples had not been subjected to cross contamination from the sampling equipment. The analytical results are presented in Section 4.2 of this report.



4.0 FINDINGS AND CONCLUSIONS

The findings and conclusions presented in this section summarize the investigative results as they relate to each potential AOC. Analytical results of laboratory analyses performed are summarized and compared to the appropriate standards/guidance values as indicated below. For the purposes of simplifying the compilation of laboratory data collected during the Phase II Investigation Field Program, laboratory data tables have been compiled based on the compounds analyzed. The discussions presented in Sections 4.1.1 through 4.1.3 will describe the compounds detected at each of the potential AOCs. Section 4.2 describes the analytical results of the field blank analysis. Analytical results are summarized on the following tables:

- Table 4-1 Total Petroleum Hydrocarbons.
- Table 4-2 Petroleum Product Identification.
- Table 4-3 Volatile Organic Compounds.
- Table 4-4 Eight RCRA Metals.
- Table 4-5 PCBs.
- Table 4-6 Total STARS Semi-Volatile Organic Compounds.
- Table 4-7 TCLP STARS Semi-Volatile Organic Compounds.

4.1 Soil Sampling Program

The following sections summarize the soil sampling program for the Phase II Investigation of the U3 Parcel. Soil samples were collected from each of the potential AOCs:

- Aircraft runway and taxiway.
- Storm water dry wells.
- Underground arresting cable winch vault.



In addition, the results of sampling conducted to assess the environmental impact of the Runway Landing Lights during the S1 and T1 Phase II Investigations will be presented.

4.1.1 Aircraft Runway, Taxiway, and Runway Landing Lights

Soil Borings U3-9 and U3-11 were installed in the vicinity of the runway and taxiway, respectively. Soil Borings S1-13, T1-14, S1-15 and T1-16 were installed in the vicinity of the runway landing lights during the Phase II investigations of the S1 and T1 Parcels, and are presented here to quantify the impact of the U3 Parcel's runway landing lights on the surrounding soils, and to quantify potential herbicide contamination of the U3 Parcel. Analytical results of soil samples collected from these borings are summarized below.

TPH was detected in Soil Samples U3-9 and U3-11 at 12 mg/kg. Analytical results are presented on Table 4-1. In accordance with our standard operating procedure, Geraghty & Miller authorized the analysis of TPH ID for both samples, following approval by Northrop Grumman. No petroleum related products were identified in either of the samples (see Table 4-2). Based on the TPH ID results, the concentrations reported in the TPH analysis were likely the result of asphalt mixing with the soil sample during collection.

No VOCs were detected in Soil Samples U3-9 and U3-11 above method detection limits. Analytical results are shown on Table 4-3.

Although arsenic, barium, chromium, lead, and mercury were detected above method detection limits in Soil Samples U3-9 and U3-11, concentrations of these metals were below Eastern USA Background ranges or Appendix A Criteria for both sample locations. Cadmium, selenium and silver were not detected at concentrations above method detection limits (see Table 4-4).

Soil Borings S1-13, T1-14, S1-15 and T1-16 were analyzed for PCBs and Herbicides. No PCBs or Herbicides were detected above method detection limits in any of the soil samples collected in the vicinity of the runway landing lights. Analytical results are shown on Table 4-5.



Based on the analytical results of soil samples collected, the soils surrounding the runway, taxiway and runway landing lights on the U3 Parcel are not areas of environmental concern.

4.1.2 Storm Water Dry Wells

Soil Borings U3-D1, U3-D3, U3-D4 and U3-D5 were installed through each of the storm water dry wells identified on the U3 Parcel. Dry well U3-D2 could not be located and was not sampled. Analytical results of samples collected are summarized below.

TPH was detected in Soil Samples U3-D1 through U3-D5 (0 to 2 and 2 to 4 ft intervals) at concentrations ranging from 14 to 820 mg/kg. Analytical results are presented on Table 4-1. With Northrop Grumman's authorization, Geraghty & Miller requested the analysis of TPH ID for each of the soil samples listed above. TPH ID analyses indicated the presence of unknown products, tentatively identified by the lab as #6 Fuel Oil in Soil Samples U3-D1 (0 to 2 and 2 to 4 ft), U3-D4 (2 to 4 ft) and U3-D5 (0 to 2 ft). Review of the chromatographs by Geraghty & Miller for these analyses confirms the presence of a degraded petroleum product. Although the product did not exactly match the standards to which it is typically compared, the lab's interpretation of the chromatograph is that the product detected in these samples most closely resembles #6 Fuel Oil. In addition, Lubricating Oil was detected at 100,000 ug/kg in Soil Sample U3-D4 (0 to 2 ft). No petroleum products were identified in Soil Samples U3-D3 (0 to 2 and 2 to 4 ft), and U3-D5 (2 to 4 ft). Analytical results are summarized on Table 4-2.

No VOCs were detected above method detection limits in any of the soil samples collected from the storm water dry wells. Analytical results are shown on Table 4-3.

Arsenic, barium, chromium, and lead were detected in all Soil Samples (U3-D1 through U3-D5). In addition, cadmium was detected in Soil Samples U3-D3 (0 to 2 and 2 to 4 ft) and U3-D4 (0 to 2 ft), and silver was detected in Soil Samples U3-D1 (2 to 4 ft), U3-D3 (0 to 2 and 2 to 4 ft) and U3-D4 (0 to 2 ft). Except for silver, which does not have a background concentration range, all of the



metals listed above were detected at concentrations below Eastern USA Background ranges or soil cleanup objectives. Although silver was detected at concentrations ranging from 0.2 to 2.4 mg/kg, it is not a primary constituent of concern for the site and its detection is not associated with the past or current use of the site. Furthermore, selenium was not detected in any of the soil samples. Analytical results are shown on Table 4-4.

Because petroleum products were identified in selected soil samples collected (see above) these samples were analyzed for total SVOCs in STARS Table 2. No SVOCs were detected above the method detection limit in Soil Samples U3-D1 (0 to 2 ft), U3-D3 (0 to 2 and 2 to 4 ft), U3-D4 (2 to 4 ft), and U3-D5 (2 to 4 ft). SVOCs were detected in Soil Samples U3-D1 (2 to 4 ft), U3-D4 (0 to 2 ft) and U3-D5 (0 to 2 ft). Because the laboratory was unable to separate the Benzo(b)fluoranthene and Benzo(k)fluoranthene isomers during their analysis, Geraghty & Miller has compared the total detected concentration (the sum of the reported Benzo(b)fluoranthene and Benzo(k)fluoranthene concentrations) to the sum of the STARS Human Health values for the two compounds and the sum of the TCLP Alternative Guidance Values for the two compounds. Analytical results of SVOC analyses are summarized on Table 4-6 along with the guidance values for each compound.

Benzo(a)pyrene was detected in Soil Sample U3-D1 (2 to 4 ft) at 68 ug/kg. Based on the 20% error associated with the analysis of SVOCs, there is no statistically significant difference between the concentration detected and the STARS Human Health Guidance Value of 61 ug/kg. In addition, benzo(a)anthracene, chrysene, benzo(b)fluoranthene/ benzo(k)fluoranthene and benzo(a)pyrene were detected at concentrations of 83, 97, 140, and 68 ug/kg, respectively, above the STARS TCLP Alternative Guidance Values. In Soil Sample U3-D4 (0 to 2 ft), STARS Human Health Guidance Values were exceeded with concentrations of Benzo(a)anthracene at 280 ug/kg, a total concentration of benzo(b)fluoranthene/benzo(k)fluoranthene of 800 ug/kg and benzo(a)pyrene at 300 ug/kg. These concentrations also exceeded the STARS TCLP Alternative Guidance Values. In addition, the following SVOCs were detected in Soil Sample U3-D4(0 to 2 ft) above the TCLP Alternative Guidance Values: phenanthrene (1400 ug/kg), fluoranthene (1500 ug/kg), pyrene(1700 ug/kg), and chrysene (590 ug/kg). In Soil Sample U3-D5(0 to 2 ft) phenanthrene, fluoranthene, pyrene, and chrysene were detected above method detection limits, but below STARS Human Health Guidance



Values. However, chrysene was detected at 38 ug/kg, which is above the TCLP Alternative Guidance Value of 0.04 ug/kg. Therefore in accordance with STARS, for the purpose of determining the potential for groundwater impact, an analysis of the TCLP extract from U3-D1(2 to 4 ft), U3-D4(0 to 2 ft) and U3-D5(0 to 2 ft) was performed. Table 4-7 summarizes the results of the SVOC analysis of the TCLP extract for Soil Samples U3-D1, U3-D4, and U3-D5. No SVOCs were detected in the TCLP extract from any of the soil samples above method detection limits. In accordance with guidance provided in the STARS Memo (NYSDEC, 1992), the soils from U3-D4(0 to 2 ft) are petroleum impacted, but not hazardous and should be removed and disposed of at an approved asphalt batch plant.

4.1.3 Underground Arresting Cable Winch Vault

Two discrete samples were collected from Soil Boring U3-19 from 0 to 2 and 2 to 4 ft below the bottom of the winch vault.

TPH was detected in Soil Samples U3-19(0 to 2 and 2 to 4 ft) at concentrations of 22 and 15 mg/kg, respectively. Analytical results are presented in Table 4-1. In accordance with our standard operating procedure, Geraghty & Miller authorized the petroleum product identification, following approval by Northrop Grumman. Petroleum product identification indicated the presence of unknown products, tentatively identified by the lab as #6 Fuel Oil. Geraghty & Miller's review of the chromatograph resulting from the analysis confirmed the presence of a degraded petroleum product. Although the product did not exactly match the standards to which it was compared, the lab's interpretation of the chromatograph is that the product detected most closely resembles #6 Fuel Oil. Analytical results are summarized on Table 4-2. Based on the concentrations of #6 Fuel Oil detected in these samples and samples from the storm water dry wells (see above) further analysis for STARS Table 2 parameters was not conducted as the referenced dry well data indicates that the soils in this area would be petroleum impacted and non-hazardous.

PCBs were not detected above method detection limits in either of the U3-19 soil samples. Analytical results are presented on Table 4-5.



Inspection of the arresting cable pulley vaults revealed that they are approximately 4ft x 4ft x 7ft. Probing of the interior of the vault indicates that the bottom is open to the subsurface soils. Although no soil sampling was conducted within the arresting cable winch vault, Northrop Grumman intends to remove the arresting cable pulley vaults, since petroleum impacts were detected in the arresting cable winch vault (which is assumed to have a similar usage). Endpoint samples should be collected from the arresting cable pulley vaults.

4.2 Field Blank Sample

No TPH was detected in the field blank (FB31297) above method detection limits. Analytical results are shown on Table 4-1.

With the exception of chloroform (3 ug/L), no VOCs were detected in FB31297. Analytical results are summarized on Table 4-3.

No metals were detected in FB31297 above method detection limits. Analytical results are shown on Table 4-4.

With the exception of Dalapon detected at 2.4 ug/L, no herbicides were detected in field blank FB31297. In addition, no PCBs were detected. Analytical results are shown on Table 4-5.

The soil data presented in this report was reviewed, utilizing data from the field blank sample and deemed appropriate for use in an environmental assessment. Cross contamination of soil samples is not a concern when interpreting the data collected during this investigation.



5.0 RECOMMENDATIONS

Based on the findings and conclusions presented in Section 4.0 of this report, Geraghty & Miller offers the following recommendations:

1. No further action is required for soils adjacent to the runway, taxiway and runway landing lights.
2. Soil from the 0 to 2 ft interval within storm water dry well U3-D4 should be excavated and disposed of off-site, in accordance with STARS.
3. Based on our analysis of the arresting cable winch vault, and the similar usage associated with the arresting cable pulley vaults, soils from 0 to 5 ft below the bottom of the arresting cable winch and pulley vaults should be excavated. The excavations should be terminated based upon headspace readings and visual inspection of the excavated soils. Endpoint samples should be collected from the bottom of the excavations, and analyzed for Total and TCLP STARS 8270 parameters, to verify that impacted soil has been removed from beneath the vaults. Since no PCBs were detected in the arresting cable winch vault, they will not be analyzed for in the endpoint samples.



6.0 REFERENCES

- Geraghty & Miller, Inc., 1994. Remedial Investigation, Grumman Aerospace Corporation, Bethpage, New York, September 1994.
- Geraghty & Miller, Inc., 1997. Phase I Environmental Site Assessment of the U3 Parcel, Northrop Grumman Corporation, Bethpage, New York, April 1997.
- New York State Department of Environmental Conservation (NYSDEC). April 1996. Inactive Hazardous Waste Disposal Sites in New York State.
- New York State Department of Environmental Conservation (NYSDEC). August 1992. STARS Memo #1 Petroleum-Contaminated Soil Guidance Policy.
- New York State Department of Environmental Conservation (NYSDEC). January 1994. Division Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels.
- New York State Department of Environmental Conservation (NYSDEC). Undated. Proposed Revision Division Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels.

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TABLES



TABLES

Table 3-1. Soil Sample Locations and Rationale for the Phase II Investigation of the U3 Parcel, Northrop Grumman Corporation, Bethpage, New York.^(a)

Sample Location	Analytical Parameters	Sample Depth (ft bg)	Rationale for Sample Locations
U3-9*	1	0-4	Aircraft were staged at these locations and possibly fueled. No previous sampling conducted at this location.
U3-11	1	0-4	Adjacent to the taxiway and the landing signal apparatus. No previous sampling conducted at this location.
S1-13	2	0-4	For additional coverage, runway runoff, possible PCB contamination from runway lights. No previous sampling conducted at this location.
T1-14	2	0-4	For additional coverage, runway runoff, possible PCB contamination from runway lights. No previous sampling conducted at this location.
S1-15	2	0-4	For additional coverage, runway runoff, possible PCB contamination from runway lights. No previous sampling conducted at this location.
T1-16	2	0-4	For additional coverage, runway runoff, possible PCB contamination from runway lights. No previous sampling conducted at this location.
U3-19	3	0-2, 2-4 ^(a)	Arresting cable winch vault, potential hydraulic fluid or lube oil contamination.
U3-D1	4	0-2, 2-4 ^(a)	Dry well, potential contamination due to runway/taxiway runoff.
U3-D2 ^(b)	4	0-2, 2-4 ^(a)	Dry well, potential contamination due to runway/taxiway runoff.
U3-D3	4	0-2, 2-4 ^(a)	Dry well, potential contamination due to runway/taxiway runoff.
U3-D4	4	0-2, 2-4 ^(a)	Dry well, potential contamination due to runway/taxiway runoff.
U3-D5	4	0-2, 2-4 ^(a)	Dry well, potential contamination due to runway/taxiway runoff.

ft bg

1 Feet below grade.
 2 TPH, VOC, and the 8 RCRA METALS. TPH ID, TCLP, and TOTAL STARS will be performed as needed based upon results of TPH analysis.
 3 Analytes from 1 and Herbicides and PCBs.

4 TPH and PCB's. TPH ID, TCLP, and TOTAL STARS will be performed as needed based upon results of TPH analysis.
 5 Analytes from 1 and SVOCs.

* TPH, VOC, Herbicides, PCB, and 8 RCRA Metals.

VOC grab sample will be selected based upon head space analysis. All other parameters composited from 2 locations in the vicinity of the indicated soil boring location.

TPH Total Petroleum Hydrocarbon.

VOC Petroleum Product Identification.

SVOC Volatile Organic Compound.

TCLP Semivolatile organic compound.

PCB Toxicity Characteristic Leachate Procedures.

STARS Polychlorinated Biphenyl.

RCRA NYSDEC Spill Technology and Remediation Series.

^(a) Resource Conservation and Recovery Act.

^(b) Samples will be collected from 0-2 ft, and 2-4 below the bottom of the dry well.

^(c) Due to regrading activities at the site, this proposed location could not be sampled.

Field Blank (FB31297) was collected on 3/12/97, to ensure soil samples were not subjected to cross contamination from sampling equipment.

-Sample was analyzed for parameter #5.



Table 4-1. Results of TPH Analyses of Soil Samples Collected during the Phase II Investigation of the U3 Parcel, Northrop Grumman Corporation, Bethpage, New York.

Sample ID	Sample Depth (in fbls)	Date Sampled	TPH (units in mg/kg)
U3-9	0-4	3/12/97	12
U3-11	0-4	3/12/97	12
U3-19	0-2	5/02/97	22
U3-19	2-4	5/02/97	15
U3-D1	0-2	5/02/97	14
U3-D1	2-4	5/02/97	21
U3-D3	0-2	5/02/97	18
U3-D3	2-4	5/02/97	15
U3-D4	0-2	5/02/97	820
U3-D4	2-4	5/02/97	29
U3-D5	0-2	5/02/97	28
U3-D5	2-4	5/02/97	35
FB31297 ⁽¹⁾		3/12/97	<0.4

Analyses performed by EcoTest Laboratories, Inc. of North Babylon, New York.

mg/kg Milligrams per kilogram.

TPH Total petroleum hydrocarbons.

fbls Feet below land surface.

(1) Field blank is a liquid sample, units are in milligrams per liter.



Table 4-2. Results of TPH Identification Analyses of Soil Samples Collected During the Phase II Investigation of the U3 Parcel, Northrop Grumman Corporation, Bethpage, New York.

Parameter (units in ug/kg)	Sample ID: U3-9		U3-11		U3-19		U3-19		U3-D1		U3-D3		U3-D4		U3-D5	
	Sample Depth: 0-4 Ft	3/12/97	0-4 Ft	3/12/97	0-2 Ft	5/2/97	2-4 Ft	5/2/97	0-2 Ft	5/2/97	0-2 Ft	5/2/97	2-4 Ft	5/2/97	0-2 Ft	5/2/97
Diesel	<200	<200	<200	<220	<210	<220	<220	<220	<220	<210	<220	<230	<210	<220	<210	<210
# 2 Fuel Oil	<200	<200	<200	<220	<210	<220	<220	<220	<220	<210	<220	<230	<210	<220	<210	<210
# 4 Fuel Oil	<200	<200	<200	<220	<210	<220	<220	<220	<220	<210	<220	<230	<210	<220	<210	<210
# 6 Fuel Oil	<200	<200	<200	<220 (a)	<210 (b)	<220 (c)	<220 (d)	<220 (e)	<220 (f)	<210	<220	<230 (e)	<210	<220	<210	<210
Lubricating Oil	<200	<200	<200	<220	<210	<220	<220	<220	<220	<210	<220	<230	<210	<220	<210	<210
Mineral Spirits	<200	<200	<200	<220	<210	<220	<220	<220	<220	<210	<220	<230	<210	<220	<210	<210
JP4	<200	<200	<200	<220	<210	<220	<220	<220	<220	<210	<220	<230	<210	<220	<210	<210
JP5	<200	<200	<200	<220	<210	<220	<220	<220	<220	<210	<220	<230	<210	<220	<210	<210
Jet A	<200	<200	<200	<220	<210	<220	<220	<220	<220	<210	<220	<230	<210	<220	<210	<210
Kerosene	<200	<200	<200	<220	<210	<220	<220	<220	<220	<210	<220	<230	<210	<220	<210	<210

Analyses performed by EcoTest Laboratories, Inc. of North Babylon, New York.

ug/kg Micrograms per kilogram.

TPH Total petroleum hydrocarbons.

Ft Feet.

* GC analysis indicates sample contains product for which closest match found is Lubricating Oil.

(a) Sample contains unknown product at 1500ug/kg (quantified as #6 Fuel Oil).

(b) Sample contains unknown product at 7600ug/kg (quantified as #6 Fuel Oil).

(c) Sample contains unknown product at 6100ug/kg (quantified as #6 Fuel Oil).

(d) Sample contains unknown product at 22000ug/kg (quantified as #6 Fuel Oil).

(e) Sample contains unknown product at 8300ug/kg (quantified as #6 Fuel Oil).

(f) Sample contains unknown product at 940ug/kg (quantified as #6 Fuel Oil).

Table 4-3. Results of VOC Analyses of Soil Samples Collected During the Phase II Investigation of the U3 Parcel, Northrop Grumman Corporation, Bethpage, New York.

Parameter (units in ug/kg)	Sample ID: Sample Depth: Date Sampled:	U3-9 0-4 Ft 3/12/97	U3-11 0-4 Ft 3/12/97	U3-D1 0-2 Ft 5/2/97	U3-D1 2-4 Ft 5/2/97	U3-D3 0-2 Ft 5/2/97	U3-D3 2-4 Ft 5/2/97
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NYSDEC TAGM

4046 Appendix

A Criteria ⁽¹⁾

(units in ug/kg)

Chloromethane	--	< 1	< 2	< 1	< 1	< 1	< 1
Vinyl chloride	200	< 1	< 2	< 1	< 1	< 1	< 1
Bromomethane	--	< 1	< 2	< 1	< 1	< 1	< 1
Chloroethane	1900	< 1	< 2	< 1	< 1	< 1	< 1
Trichlorofluoromethane	--	< 1	< 2	< 1	< 1	< 1	< 1
1,1-Dichloroethene	400	< 1	< 2	< 1	< 1	< 1	< 1
Methylene chloride	100	< 1	< 2	< 1	< 1	< 1	< 1
trans-1,2-Dichloroethene	300	< 1	< 2	< 1	< 1	< 1	< 1
1,1-Dichloroethane	200	< 1	< 2	< 1	< 1	< 1	< 1
Chloroform	300	< 1	< 2	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	800	< 1	< 2	< 1	< 1	< 1	< 1
Carbon tetrachloride	600	< 1	< 2	< 1	< 1	< 1	< 1
Benzene	60	< 1	< 2	< 1	< 1	< 1	< 1
1,2-Dichloroethane	100	< 1	< 2	< 1	< 1	< 1	< 1
Trichloroethene	700	< 1	< 2	< 1	< 1	< 1	< 1
1,2-Dichloropropane	--	< 1	< 2	< 1	< 1	< 1	< 1
Bromodichloromethane	--	< 1	< 2	< 1	< 1	< 1	< 1
2-Chloroethyvinylether	--	< 1	< 2	< 1	< 1	< 1	< 1
trans-1,3-Dichloropropene	--	< 1	< 2	< 1	< 1	< 1	< 1
Toluene	1500	< 1	< 2	< 1	< 1	< 1	< 1
cis-1,3-Dichloropropene	--	< 1	< 2	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	--	< 1	< 2	< 1	< 1	< 1	< 1
Tetrachloroethene	1400	< 1	< 2	< 1	< 1	< 1	< 1
Chlorodibromomethane	--	< 1	< 2	< 1	< 1	< 1	< 1
Chlorobenzene	1700	< 1	< 2	< 1	< 1	< 1	< 1
Ethylbenzene	5500	< 1	< 2	< 1	< 1	< 1	< 1
m + p Xylene	1200*	< 2	< 4	< 2	< 2	< 2	< 2
o-Xylene	1200*	< 1	< 2	< 1	< 1	< 1	< 1
Bromoform	--	< 1	< 2	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	600	< 1	< 2	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	7900	< 1	< 2	< 1	< 1	< 1	< 1
1,3-Dichlorobenzene	1600	< 1	< 2	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	8500	< 1	< 2	< 1	< 1	< 1	< 1
Isopropylbenzene	--	< 1	< 2	< 1	< 1	< 1	< 1
n-Propylbenzene	--	< 1	< 2	< 1	< 1	< 1	< 1
p-Isopropyltoluene	--	< 1	< 2	< 1	< 1	< 1	< 1
1,2,4-Trimethylbenzene	--	< 1	< 2	< 1	< 1	< 1	< 1
1,3,5-Trimethylbenzene	--	< 1	< 2	< 1	< 1	< 1	< 1
n-Butylbenzene	--	< 1	< 2	< 1	< 1	< 1	< 1
sec-Butylbenzene	--	< 1	< 2	< 1	< 1	< 1	< 1
Naphthalene	1300	< 1	< 2	< 1	< 1	< 1	< 1
Metyl tert-butyl ether	--	< 1	< 2	< 1	< 1	< 1	< 1

Analyses performed by EcoTest Laboratories, Inc. of North Babylon, New York.

ug/kg Micrograms per kilogram.

VOC Volatile organic compound.

Ft Feet.

TAGM Technical and Administrative Guidance Memorandum.

NYSDEC New York State Department of Environmental Conservation.

* Total xylenes.

-- Not applicable or not available.

1 HWR-94-4046 January 24, 1994 (Revised), and proposed revisions (undated)

2 Elevated detection levels due to interference in sample.

3 Field blank is a liquid sample, units are in micrograms per kilogram.



Table 4-3. Results of VOC Analyses of Soil Samples Collected During the Phase II Investigation of the U3 Parcel, Northrop Grumman Corporation, Bethpage, New York.

Parameter (units in ug/kg)	Sample ID: Sample Depth: Date Sampled:	U3-D4 ⁽²⁾ 0-2 Ft 5/2/1997	U3-D4 2-4 Ft 5/2/97	U3-D5 0-2 Ft 5/2/97	U3-D5 2-4 Ft 5/2/97	FB31297 ⁽³⁾ 3/12/97
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NYSDEC TAGM
4046 Appendix
A Criteria ⁽¹⁾
(units in ug/kg)

Chloromethane	--	<170	<1	<1	<1	<1
Vinyl chloride	200	<170	<1	<1	<1	<1
Bromomethane	--	<170	<1	<1	<1	<1
Chloroethane	1900	<170	<1	<1	<1	<1
Trichlorofluoromethane	--	<170	<1	<1	<1	<1
1,1-Dichloroethene	400	<170	<1	<1	<1	<1
Methylene chloride	100	<170	<1	<1	<1	<1
trans-1,2-Dichloroethene	300	<170	<1	<1	<1	<1
1,1-Dichloroethane	200	<170	<1	<1	<1	<1
Chloroform	300	<170	<1	<1	<1	3
1,1,1-Trichloroethane	800	<170	<1	<1	<1	<1
Carbon tetrachloride	600	<170	<1	<1	<1	<1
Benzene	60	<170	<1	<1	<1	<1
1,2-Dichloroethane	100	<170	<1	<1	<1	<1
Trichloroethene	700	<170	<1	<1	<1	<1
1,2-Dichloropropane	--	<170	<1	<1	<1	<1
Bromodichloromethane	--	<170	<1	<1	<1	<1
2-Chloroethyvinylether	--	<170	<1	<1	<1	<1
trans-1,3-Dichloropropene	--	<170	<1	<1	<1	<1
Toluene	1500	<170	<1	<1	<1	<1
cis-1,3-Dichloropropene	--	<170	<1	<1	<1	<1
1,1,2-Trichloroethane	--	<170	<1	<1	<1	<1
Tetrachloroethene	1400	<170	<1	<1	<1	<1
Chlorodibromomethane	--	<170	<1	<1	<1	<1
Chlorobenzene	1700	<170	<1	<1	<1	<1
Ethylbenzene	5500	<170	<1	<1	<1	<1
m + p Xylene	1200*	<330	<2	<2	<2	<2
o-Xylene	1200*	<170	<1	<1	<1	<1
Bromoform	--	<170	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	600	<170	<1	<1	<1	<1
1,2-Dichlorobenzene	7900	<170	<1	<1	<1	<1
1,3-Dichlorobenzene	1600	<170	<1	<1	<1	<1
1,4-Dichlorobenzene	8500	<170	<1	<1	<1	<1
Isopropylbenzene	--	<170	<1	<1	<1	<1
n-Propylbenzene	--	<170	<1	<1	<1	<1
p-Isopropyltoluene	--	<170	<1	<1	<1	<1
1,2,4-Trimethylbenzene	--	<170	<1	<1	<1	<1
1,3,5-Trimethylbenzene	--	<170	<1	<1	<1	<1
n-Butylbenzene	--	<170	<1	<1	<1	<1
sec-Butylbenzene	--	<170	<1	<1	<1	<1
Naphthalene	1300	<170	<1	<1	<1	<1
Metyl tert-butyl ether	--	<170	<1	<1	<1	<1

Analyses performed by EcoTest Laboratories, Inc. of North Babylon, New York.

ug/kg Micrograms per kilogram.

VOC Volatile organic compound.

Ft Feet.

TAGM Technical and Administrative Guidance Memorandum.

NYSDEC New York State Department of Environmental Conservation.

* Total xylenes.

-- Not applicable or not available.

1 HWR-94-4046 January 24, 1994 (Revised), and proposed revisions (undated)

2 Elevated detection levels due to interference in sample.

3 Field blank is a liquid sample, units are in micrograms per kilogram.



Table 4-4. Results of Eight RCRA Metals Analyses of Soil Samples Collected During the Phase II Investigation of the U3 Parcel, Northrop Grumman Corporation, Bethpage, New York.

Parameter (units in mg/kg)	Sample ID:											
	U3-9 0-4 Ft 3/12/97	U3-11 0-4 Ft 3/12/97	U3-D1 0-2 Ft 5/2/97	U3-D1 2-4 Ft 5/2/97	U3-D3 0-2 Ft 5/2/97	U3-D3 2-4 Ft 5/2/97	U3-D4 0-2 Ft 5/2/97	U3-D4 2-4 Ft 5/2/97	U3-D5 0-2 Ft 5/2/97	U3-D5 2-4 Ft 5/2/97	U3-D5 2-4 Ft 5/2/97	FB31297 ⁽⁴⁾ 3/12/97
	Eastern USA Background (1) (units in mg/kg)											
Arsenic	1.4	1.4	1.8	1.0	1.8	2.6	4.5	1.9	2.2	1.1		<0.002
Barium	12	28	4.5	2.7	11	15	12	4.1	8.7	4		<0.05
Cadmium	<0.10	<0.10	<0.11	<0.11	3.1	1.5	0.29	<0.11	<0.1	<0.1		<0.01
Chromium	5.8	9.7	7.4	3.5	12	13	6.5	7.6	6.3	2.3		<0.02
Lead	4.3	5.9	13	5.1	3.5	4.4	27	2.2	4.9	1.2		<0.10
Mercury	0.026	0.020	0.012	0.0088	0.026	0.032	0.061	0.0097	0.013	0.007		<0.00025
Selenium	<0.40	<0.40	<0.44	<0.44	<0.43	<0.43	<0.5	<0.45	<0.42	<0.42		<0.002
Silver	<0.10	<0.10	<0.11	0.39	2.4	1.7	0.2	<0.11	<0.1	<0.1		<0.01

Analyses performed by EcoTest Laboratories, Inc. of North Babylon, New York.

mg/kg Milligrams per kilogram.

Ft Feet.

* New York State background.

** Average background level in metropolitan or suburban areas near highways.

N/A Not available.

TAGM Technical and Administrative Guidance Memorandum. No. 4046.

RCRA Resource Conservation and Recovery Act.

(1) HWR-94-4046 January 24, 1994 (Revised), and proposed revisions (undated)

(2) 40 CFR Part 261 Subpart C 261.24

(3) Proposed TAGM Appendix A Criteria.

(4) Field blank is a liquid sample, units are in milligrams per liter.



Table 4-5. Results of PCB and Herbicide Analyses of Soil Samples Collected During the Phase II Investigation of the U3 Parcel, Northrop Grumman Corporation, Bethpage, New York.

Parameter (units in ug/kg)	S1-13 0-4 Ft 3/14/97	T1-14 0-4 Ft 3/14/97	S1-15 0-4 Ft 3/12/97	T1-16 0-4 Ft 3/12/97	U3-19 0-2 Ft 5/2/97	U3-19 2-4 Ft 5/2/97	FB31297 ⁽²⁾ 3/12/97
NYSDEC TAGM							
4046 Appendix							
A Criteria⁽¹⁾							
Herbicides	(units in ug/kg)						
2,4-D	<12	<11	<10	<10	-	-	<0.1
Dalapon	<120	<110	<100	<100	-	-	2.4
Dicamba	<95	<88	<80	<80	-	-	<0.8
Dinoseb	-	<22	<20	<20	-	-	<0.2
Pentachlorophenol	1000	<4	<4	<4	-	-	<0.04
Pichloram	-	<11	<10	<10	-	-	<0.1
2,4,5-TP	1900	<6	<5	<5	-	-	<0.05
PCBs							
Aroclor 1016	1000*	<44	<40	<40	<44	<43	<1
Aroclor 1221	1000*	<44	<40	<40	<44	<43	<1
Aroclor 1232	1000*	<44	<40	<40	<44	<43	<1
Aroclor 1242	1000*	<44	<40	<40	<44	<43	<1
Aroclor 1248	1000*	<44	<40	<40	<44	<43	<1
Aroclor 1254	1000*	<44	<40	<40	<220**	<43	<1
Aroclor 1260	1000*	<44	<40	<40	<220**	<43	<1

Analyses performed by EcoTest Laboratories, Inc. of North Babylon, New York.

ug/kg Micrograms per kilogram.

Ft Feet.

* Total PCBs.

TAGM Technical and Administrative Guidance Memorandum.

PCBs Polychlorinated Biphenyl.

NYSDEC New York State Department of Environmental Conservation.

-- Not applicable or not available.

** Interferences in sample prevented analysis to a lower detection limit.

(1) HWR-94-4046 January 24, 1994 (Revised), and proposed revisions (undated)

(2) Field blank is a liquid sample, units are in micrograms per liter.



Table 4-7. Results of TCLP STARS Semivolatile Organic Compound Analyses of Soil Samples Collected During the Phase II Investigation of the U3 Parcel, Northrop Grumman Corporation, Bethpage, New York.

Parameter (units in ug/L)	Sample ID: U3-D1 U3-D4 U3-D5		
	Sample Depth: 2-4 Ft	U3-D4 0-2 Ft	U3-D5 0-2 Ft
	Date Sampled: 5/2/97 5/2/97 5/2/97		
STARS TCLP			
<u>Extraction</u>			
<u>Guidance Value</u>			
(units in ug/L)			
<u>Semivolatile Organic Compounds</u>			
Naphthalene	10	<10	<10
Acenaphthene	20	<10	<10
Fluorene	50	<10	<10
Phenanthrene	50	<10	<10
Anthracene	50	<10	<10
Fluoranthene	50	<10	<10
Pyrene	50	<10	<10
Benzo(a)anthracene	0.002	<10	<10
Chrysene	0.002	<10	<10
Benzo(b)fluoranthene	0.002	<10	<10
Benzo(k)fluoranthene	0.002	<10	<10
Benzo(a)pyrene	0.002	<10	<10
Indeno (1,2,3-cd)pyrene	0.002	<10	<10
Dibenzo(a,h)anthracene	50	<10	<10
Benzo(g,h,i)perylene	0.002	<10	<10

Analyses performed by EcoTest Laboratories, Inc. of North Babylon, New York.

ug/L Micrograms per liter.

TCLP Toxicity Characteristics Leachate Procedures.

STARS NYSDEC Spill Technology and Remediation Series.

NYSDEC New York State Department of Environmental Conservation.



FIGURES

FIGURES

DRAFTER: G.

APPROVED: C.S.G.

CHECKED: J.S.

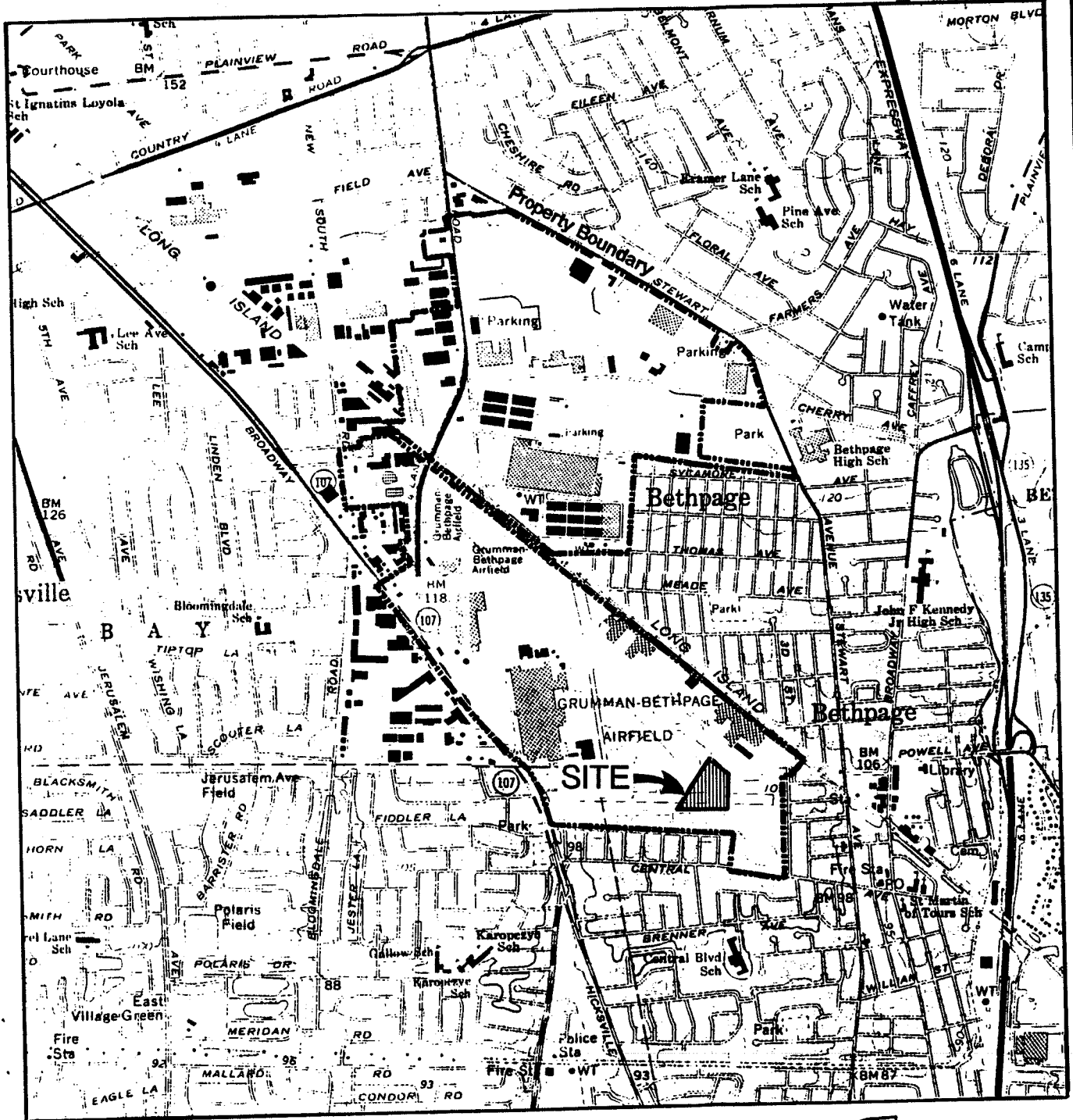
DRAWING: S

FILE: 1695

PRCT NO.: NY0080.40

5-17-94

DWC



From Amityville, Freeport, Hicksville, Huntington, New York
 USGS Quadrangles, 1979.

0 2000 FT



QUADRANGLE LOCATION

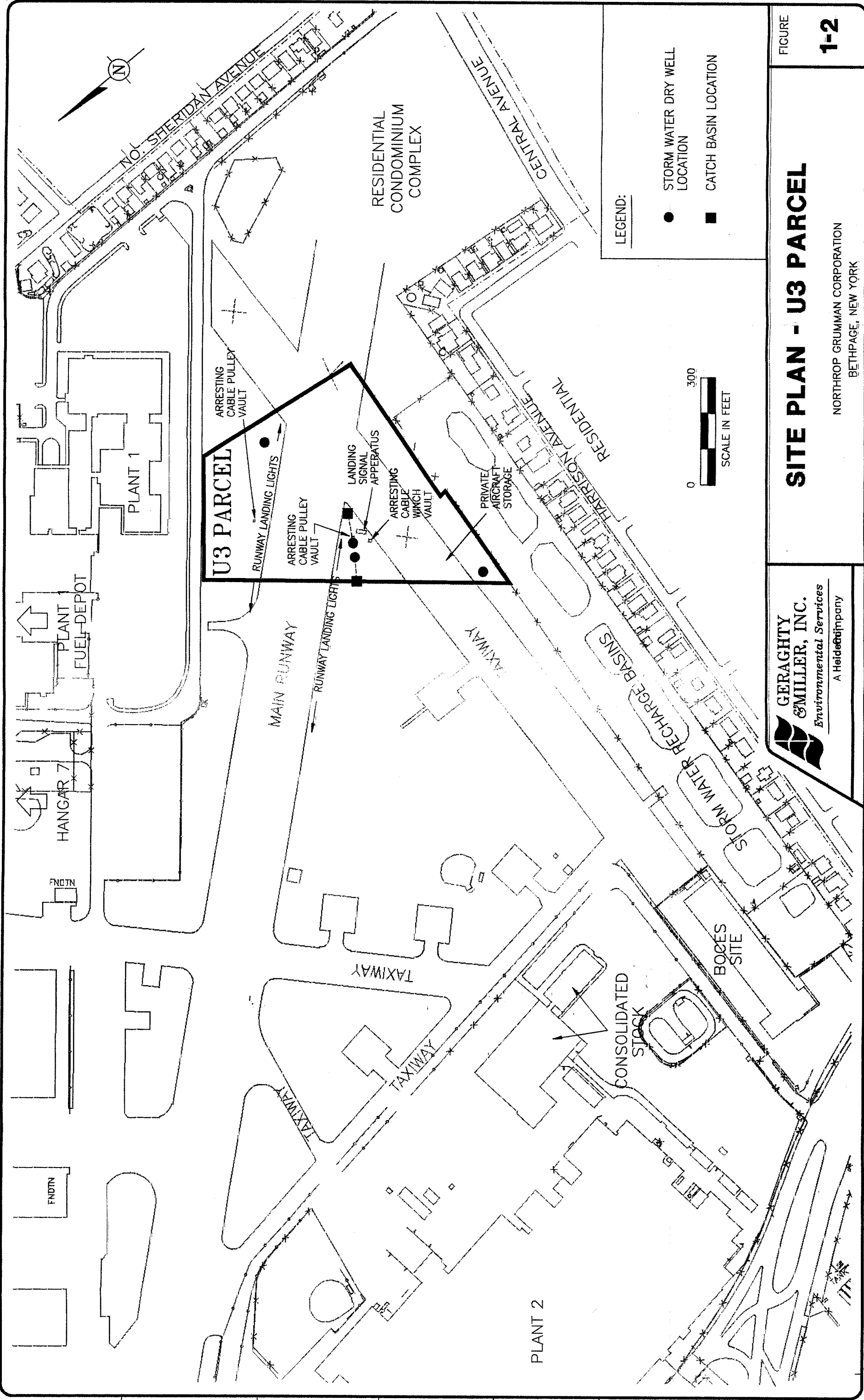


**SITE LOCATION
 U3 PARCEL**

**NORTHROP GRUMMAN CORPORATION
 BETHPAGE, NEW YORK**

FIGURE

1-1



LEGEND:

- STORM WATER DRY WELL LOCATION
- CATCH BASIN LOCATION

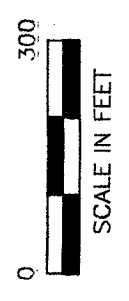


FIGURE
1-2

SITE PLAN - U3 PARCEL

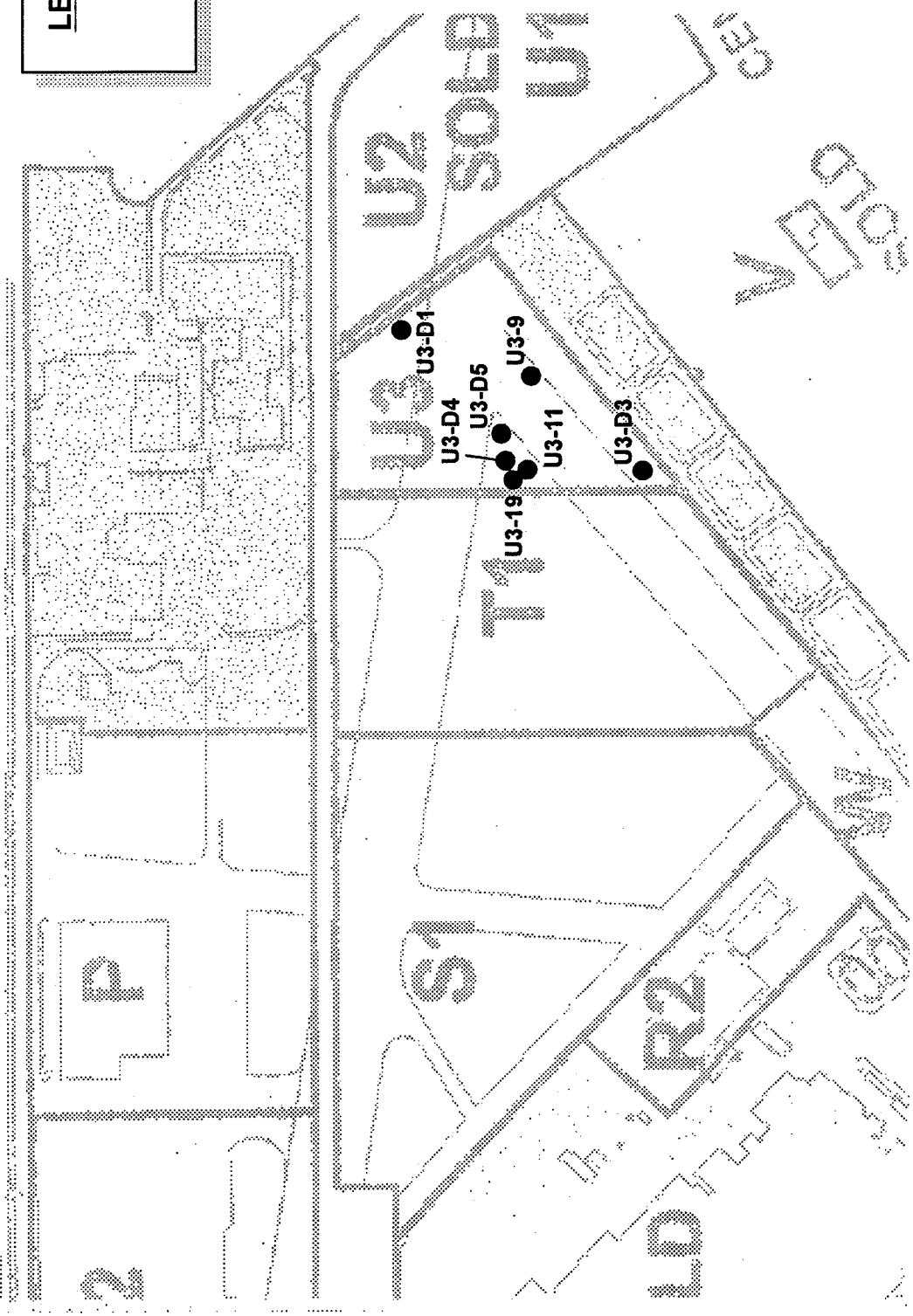
NORTHROP GRUMMAN CORPORATION
BETHPAGE, NEW YORK

GERAGHTY & MILLER, INC.
Environmental Services
A Heideco Company

Long Island Railroad

LEGEND:

● U3-9 SOIL BORING LOCATION



GERAGHTY & MILLER, INC.
Environmental Services
A Heidemijl Company

SOIL BORING LOCATIONS FOR PHASE II ENVIRONMENTAL SITE ASSESSMENT OF THE U3 PARCEL

NORTHROP GRUMMAN CORPORATION
BETHPAGE, NEW YORK

FIGURE

1-3



APPENDIX A

FIELD MEMOS

Memorandum

TO: Robert Porsche, Carlo San Giovanni
FROM: Donna M. Brown *DMB*
DATE: July 7, 1997
SUBJECT: Soil Sampling for S, T, and U Properties at Northrop-Grumman Bethpage Facility (Project No. NY0008.132.006, 009, 012))

Soil sampling was carried out for the S, T, and U properties at the Northrop-Grumman Bethpage New York facility on March 12, 1997. Donna M. Brown and Gary Williams of Geraghty & Miller carried out the sampling assisted by Zebra Environmental Inc. using a Geoprobe sampling system.

At Soil Borings S1-1 through S1-4 and T1-10, a four-point composite soil sample was collected in the following manner: at each location, four samples were collected from 0 to 4 feet below grade (ft bg) at points surrounding (north, south, east, and west) each paved area. Each sample was collected and screened with a photoionization detector (PID); a volatile organic compound (VOC) grab sample was selected at each soil boring location from the sample with the highest head space reading. The soils remaining at each soil boring location were then composited and samples were collected for analysis of total petroleum hydrocarbon (TPH), and the eight RCRA metals; T1-10 was also analyzed for herbicides.

At Soil Boring locations S1-5, S1-6, S1-12, S1-15, T1-16, and U3-11, one soil sample was collected from each location from 0 to 4 ft bg. A VOC grab sample was collected from the 0 to 4 ft interval and the remaining soils from the 0 to 4 ft interval was then composited and samples were collected for analysis of TPH and the eight RCRA metals; S1-5 and S1-6 was also analyzed for phosphorus and nitrogen compounds; S1-12, S1-15, and T1-16 were also analyzed for herbicides; and S1-15 and T1-16 were also analyzed for polychlorinated byphenols (PCBs).

At Soil Borings T1-7, T1-8, and U3-9, a two-point composite soil sample was collected in the following manner: at each location, two samples were collected from 0 to 4 feet below grade (ft bg) at points (north and south) of the taxiway. Each sample was collected and screened with a photoionization detector (PID); a volatile organic compound (VOC) grab sample was selected at each soil boring location from the sample with the highest head space reading. The soils remaining at each soil boring location

were then composited and samples were collected for analysis of total petroleum hydrocarbon (TPH) and the eight RCRA metals.

At each sample location, an extra sample container was filled and submitted to the lab for the possible analysis of TPH ID, TCLP, and Total STARS parameters. Analysis of these samples was dependent upon the results of the TPH analysis.

All samples were cooled in ice filled coolers and hand delivered to Ecotest Labs. Strict Chain-of-Custody Protocols were maintained throughout this investigation. Chain-of-Custody forms, diagram of Sample Locations, and a PID reading table are included in this memo.

G:\PROJECT\GRUMMAN\NY0008.132\STU_PROP\STU1MEM.doc

Table of PID Readings.

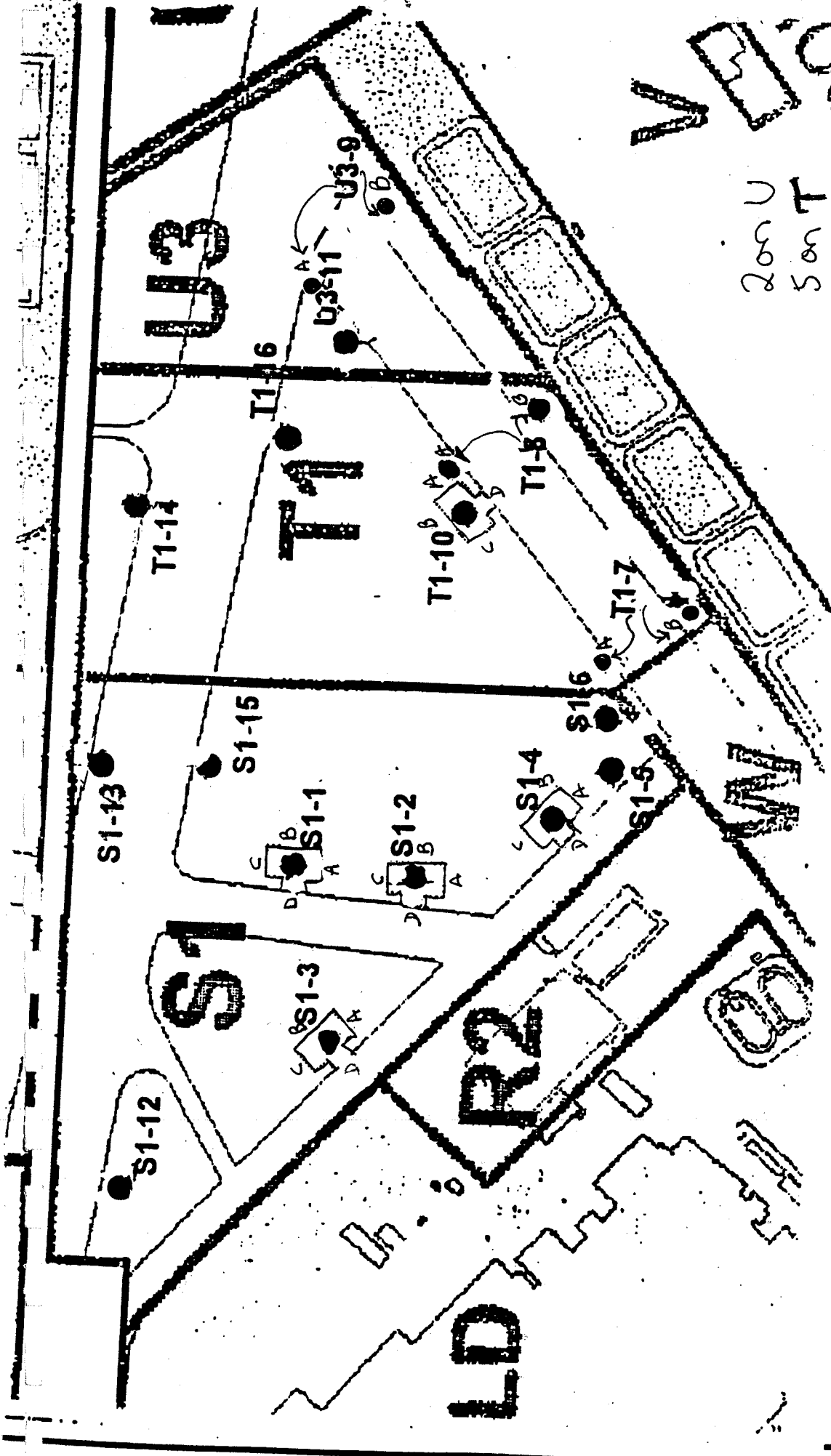
Soil Boring	Sample Location	PID Reading in ppm
S1-1*	A	13.3
S1-1	B	11.4
S1-1	C	12.0
S1-1	D	13.1
S1-2	A	5.6
S1-2*	B	7.6
S1-2	C	6.1
S1-2	D	6.1
S1-3	A	5.3
S1-3*	B	8.7
S1-3	C	7.2
S1-3	D	6.2
S1-4*	A	12.6
S1-4	B	10.9
S1-4	C	8.7
S1-4	D	7.2
T1-10	A	1.1
T1-10	B	2.9
T1-10*	C	3.9
T1-10	D	3.6
T1-7	A	7.8
T1-7*	B	8.1
T1-8	A	2.5
T1-8*	B	3.0
U3-9	A	3.1
U3-9*	B	3.6

* Volatile organic compound sample collected and analyzed from this sample location.

ppm Parts per million.

Sample Log

Date	Sample ID	Sample Description
March 12, 1997	U3-11	3 1/2' recovery silty sand moist at bottom brown to lighter tan at 3 ft.
March 12, 1997	S1-2	A = 5.6 3 1/2 silty sand 3 ft medium to sand with gravel
		B = 7.6 3' silty sand 2' moist silty sand brown tan
		C = 6.1 3' silty sand 2' moist silty sand brown tan
		D = 6.1 3 silty sand 2' silty sand brown fine gravel
March 12, 1997	S1-1	A = 13.3 ppm 3 1/2' topsoil 8" sand layer 2' thin brown to silty sand with
		with some gravel than fine to medium sand with gravel.
		B = 11.4 ppm 3 1/2' topsoil silty sand, fine to coarse and with gravel
		C = 12.0 ppm 3 1/2' topsoil silty sand coarse sand with gravel
		D = 13.1 ppm 3 1/2' topsoil silty sand coarse sand with gravel
March 12, 1997	S1-3	A = 5.3 ppm 3 ft 6" topsoil 6" sand moist dark silty sandy and tan silty sand with gravel
		B = 8.7 ppm 3 1/2' 6" topsoil 6" fine sand moist dark silty sandy and tan silty sand with gravel
		C = 7.2 ppm 3' 6" topsoil 6" fine sand small clay lense at bottom
		D = 6.2 ppm 3' 6" topsoil 6" fine sand small clay no lense at bottom
March 12, 1997	S1-12	3 ft silty sand small sandy layer at bottom
March 12, 1997	T-16	3 1/2" 3/4 silty sand 1/4 sand with gravel
March 12, 1997	U3-9	A=3.1 ppm 3 1/2' recovery same type
		B=3.6 ppm
March 12, 1997	T1-10	A = 1.1 ppm 3' recovery same type
		B = 2.9 ppm 3 1/2' recovery brown to orange coarse sand at 3 ft.
		C = 3.9 ppm 3' recovery brown silty sand tan coarse sand
		D = 3.6 ppm 3' recovery brown silty sand tan coarse sand
March 12, 1997	T1-08	A = 2.5 ppm 3' silty sand brown to lighter tan
		B = 3.0 ppm 4' silty sand with stone
March 12, 1997	T1-7	A = 7.8 ppm 3 1/2 silty sand to fine stone with gravel
		B = 8.1 ppm 3 1/2 silty sand brown
March 12, 1997	S1-6	2 Maros 2' and 3' recovery silty sand
March 12, 1997	S1-5	3 1/2' silty clay with some brown to orange gravel brownish gray clay at 3'
March 12, 1997	S1-4	A = 12.6ppm 3 1/2' dark to silty sand to coarse sand top sand and gravel
		B = 10.9ppm 3 1/2' Dark to soil to coarse sand with gravel to fine sand with gravel
		C = 8.7ppm 3' silty sand top 3 ft coarse sand with gravel to bottom
		D = 7.2ppm 3 1/2 silty sand to 2 ft fine silty sand



**PROPOSED SOIL BORING LOCATION
ENVIRONMENTAL SITE ASSESSMENT
OF THE S1, T1, AND U3 PROJECTIONS**

**NORTHROP GRUMMAN CORPORATION
BETHPAGE, NEW YORK**

GERAGHTY & MILLER, INC.
Environmental Services
A Heidemij Company



Laboratory Task Order No. _____

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number W4000817002
 Project Location BETHLEHEM NJ
 Laboratory ECOTEST
 Sampler(s)/Affiliation W. BROWN

SAMPLE IDENTITY Code _____ Date/Time Sampled _____ Lab ID _____

SAMPLE IDENTITY Code	Date/Time Sampled	Lab ID	SAMPLE BOTTLE / CONTAINER DESCRIPTION										TOTAL			
S1-1	3-12-97		202 TMR	82400	202 TMR	3021 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	4
S1-2			202 TMR		202 TMR	3021 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	4
S1-3			202 TMR		202 TMR	3021 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	4
S1-4			202 TMR		202 TMR	3021 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	4
S1-5			202 TMR		202 TMR	3021 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	4
S1-6			202 TMR		202 TMR	3021 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	4
S1-12			202 TMR		202 TMR	3021 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	4
S1-15			202 TMR		202 TMR	3021 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	4
T1-7			202 TMR		202 TMR	3021 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	4
T1-8			202 TMR		202 TMR	3021 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	4
T1-10			202 TMR		202 TMR	3021 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	4
T1-16			202 TMR		202 TMR	3021 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	4
U3-9			202 TMR		202 TMR	3021 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	4
U3-11			202 TMR		202 TMR	3021 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	802 TMR	4
SEE ATTACHED LIST 4272019000															7	

Sample Code: L = Liquid; S = Solid; A = Air

Relinquished by: _____ Organization: _____ Date: _____ Time: _____ Seal Intact? Yes No N/A

Received by: _____ Organization: _____ Date: _____ Time: _____ Seal Intact? Yes No N/A

Relinquished by: _____ Organization: _____ Date: _____ Time: _____ Seal Intact? Yes No N/A

Received by: _____ Organization: _____ Date: _____ Time: _____ Seal Intact? Yes No N/A

Special Instructions/Remarks: _____

Delivery Method: In Person Common Carrier Lab Courier Other _____



Laboratory Task Order No. _____

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number NY00028115002

Project Location BAITFAGE NY

Laboratory ECOTEST

Sampler(s)/Affiliation SAWILLIERS

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID	SAMPLE BOTTLE / CONTAINER DESCRIPTION						TOTAL	
SR-02	(04)	3/14/97		1	1	2	2	2	2	2	2
SR-01	(4-15)			1	1	2	2	2	2	2	2
SR-02	(4-15)			1	1	2	2	2	2	2	2
SI-13	(0-1)			1	1	2	2	2	2	2	2
SI-13	(4-1)			1	1	2	2	2	2	2	2
SI-14	(0-4)			1	1	2	2	2	2	2	2
SI-14	(4-15)			1	1	2	2	2	2	2	2
SI-14	(4-15)			1	1	2	2	2	2	2	2
SR-07	(04)			1	1	2	2	2	2	2	2
SR-07	(4-15)			1	1	2	2	2	2	2	2
SR-07	(4-15)			1	1	2	2	2	2	2	2
SR-08	(0-1)			1	1	2	2	2	2	2	2
SR-08	(4-15)			1	1	2	2	2	2	2	2
SR-08	(4-15)			1	1	2	2	2	2	2	2

Sample Code: L = Liquid; S = Solid; A = Air

SEE ATTACHED LIST FOR TURNAROUNDS

Relinquished by: SA HW Organization: ECOTEST

Received by: SA HW Organization: ECOTEST

Relinquished by: _____ Organization: _____

Received by: _____ Organization: _____

Date: 3/14/97 Time: 4:15

Date: 1/1 Time: _____

Seal Intact? Yes No N/A

Seal Intact? Yes No N/A

Special Instructions/Remarks: PLEASE INCLUDE PARAMETER LIST FOR ANALYSIS. I TO 8240 ANALYSIS
IF THIS METHODED NORTH ROBINSHE FOR PARAMETER 8015 (PBO) ANALYSIS. AFTER SUBMITTING
TPN TO ADDITIONAL & TOTAL AND TLP 270 STARS WITH 2 ANALYSIS MAY BE NEEDED

Delivery Method: In Person Common Carrier



Laboratory Task Order No. _____

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number NY0008117002
 Project Location BETHPAGE NY
 Laboratory ECOTPS
 Sampler(s)/Affiliation 6 CONSULTANTS
L. P. (2002)

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID	SAMPLE BOTTLE / CONTAINER DESCRIPTION	Total No. of Bottles/ Containers	Seal Intact? Yes No N/A				
FB31297	S	3-12-97		40ml water 8240 1 CTRIC N-827 527 PROGRESSIVE 1 (N-214) 1 (N-213) 1 (N-212) 1 (N-211) 1 (N-210) 1 (N-209) 1 (N-208) 1 (N-207) 1 (N-206) 1 (N-205) 1 (N-204) 1 (N-203) 1 (N-202) 1 (N-201) 1 (N-200) 1 (N-199) 1 (N-198) 1 (N-197) 1 (N-196) 1 (N-195) 1 (N-194) 1 (N-193) 1 (N-192) 1 (N-191) 1 (N-190) 1 (N-189) 1 (N-188) 1 (N-187) 1 (N-186) 1 (N-185) 1 (N-184) 1 (N-183) 1 (N-182) 1 (N-181) 1 (N-180) 1 (N-179) 1 (N-178) 1 (N-177) 1 (N-176) 1 (N-175) 1 (N-174) 1 (N-173) 1 (N-172) 1 (N-171) 1 (N-170) 1 (N-169) 1 (N-168) 1 (N-167) 1 (N-166) 1 (N-165) 1 (N-164) 1 (N-163) 1 (N-162) 1 (N-161) 1 (N-160) 1 (N-159) 1 (N-158) 1 (N-157) 1 (N-156) 1 (N-155) 1 (N-154) 1 (N-153) 1 (N-152) 1 (N-151) 1 (N-150) 1 (N-149) 1 (N-148) 1 (N-147) 1 (N-146) 1 (N-145) 1 (N-144) 1 (N-143) 1 (N-142) 1 (N-141) 1 (N-140) 1 (N-139) 1 (N-138) 1 (N-137) 1 (N-136) 1 (N-135) 1 (N-134) 1 (N-133) 1 (N-132) 1 (N-131) 1 (N-130) 1 (N-129) 1 (N-128) 1 (N-127) 1 (N-126) 1 (N-125) 1 (N-124) 1 (N-123) 1 (N-122) 1 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Sample Code: L = Liquid; S = Solid; A = Air

Relinquished by: _____ Organization: _____
 Received by: _____ Organization: _____
 Relinquished by: _____ Organization: _____
 Received by: _____ Organization: _____
 Special Instructions/Remarks: _____

Delivery Method: In Person Common Carrier Lab Courier Other

Memorandum

TO: Robert Porsche, Carlo San Giovanni
FROM: Gary Williams
DATE: June 27, 1997
SUBJECT: Supplemental Soil Sampling for S, T, and U Properties at Northrop-Grumman Bethpage Facility (Project No. NY0008.132.006, 009, 012))

Supplemental soil sampling was carried out for the S, T, and U properties at the Northrop-Grumman Bethpage New York facility on April 29, 30, and May 2, 1997. Gary Williams of Geraghty & Miller carried out the sampling assisted by Zebra Environmental Inc. using a Geoprobe sampling system.

Seventeen drywells were sampled with two discrete samples (0-2', 2-4') taken at each location. All sample locations were sampled for VOC's (method 8260 STARS), TPH (method 418.1), Total SVOC's (method 8270 STARS), and 8 RCRA metals. Additionally samples were taken for TPH ID (Method 8015), TCLP 8270 STARS and TCLP 8260 STARS. These analyses would be requested based on results of the original parameters analyzed. Turnaround times were expedited with each analysis to allow all analyses to be available for testing within their prescribed holding times. These times are listed on the individual chain-of-custody forms attached to this memo.

Mercury impacts at sample location S1-12 were further delineated by sampling the previous location at intervals of 0-1', 1-2', and 2-4'. Additional samples were collected at four points (North, South, East and West) at points approximately 5' from the original sample location at depths of 0-1', 1-2' and 2-4'. The samples were analyzed for mercury (Hg) with a rush (2 business day) turnaround time. The remaining four samples were held pending results from S1-12 (0-1', 1-2' and 2-4').

To further delineate two sample locations from a previous sampling (S1-13 and T1-14), additional samples were taken at each of these locations in the 0-1', 1-2' and 2-4' intervals. Additional samples were taken 50 ft east and 50 ft west of the two previous sample points. A single point was sampled between S1-13 and T1-14 and was marked T1-14W. These samples were analyzed for Total and TCLP 8270 STARS parameters.

Two underground vaults associated with the arresting cable winches were investigated during this sampling event. It was found that both of these vaults had no bottom, so two samples from 0-2' and 2-4' were taken from the base of the vault. These samples are actually about 6-8' and 8-10' below land surface. They were analyzed for

TPH, and PCBs. Additional jars were filled for analysis of VOCs, SVOCs, TCLP SVOCs, and TPH ID based on TPH results. Turnaround times were expedited to allow all parameters to be analyzed within their prescribed holding times.

At the former location of the blast fence, near the center of the S1 parcel, two discrete soil samples were collected from 0-2 and 2-4 ft below land surface. Samples were submitted for analysis of TPH, 8 RCRA metals, and SVOCs. TPH ID and TCLP SVOCs will be performed based upon results of TPH and Total SVOC analyses.

With the exception of U3-D5, drywells sampled in this event were approximately 16' deep. U3-D5 was only 6-7 feet deep. Because the property was regraded, U3-D2 could not be located and was not sampled. Drywell samples were collected for analysis of TPH, VOCs, 8 RCRA metals and SVOCs. Additional jars were filled for analysis of TPH ID, SVOCs and TCLP SVOCs based on results of TPH analysis.

All samples were cooled in ice filled coolers and hand delivered to Ecotest Labs opening the following morning. Strict Chain-of-Custody Protocols were maintained throughout this investigation. Chain-of-Custody forms are included in this memo.

G:\APROJECT\GRUMMANN\NY0008.132\STU_PROP\STUMEM2.doc

Sample Log

Date	Sample ID	Sample Description
April 30, 1997	S1-D5	
April 30, 1997	S1-D6	7' water in drywell
April 30, 1997	T1-D6	Site access problem
April 30, 1997	T1-D7	water
April 30, 1997	T1-D5	no water - some fine sand at bottom
April 30, 1997	T1-D4	Coarse Fine sand
April 30, 1997	T1-D3	Fine medium coarse sand gravel
April 30, 1997	T1-D1	
May 2, 1997	S1-D1	
May 2, 1997	T1-D6	
May 2, 1997	U3-D5	7' Deep Single Ring
May 2, 1997	U3-D4	Vault fine sand clay layer at 1 1/2'
May 2, 1997	U3-19	
May 2, 1997	U3-D3	Grate missing, drywell appears to be filled in with surface soils drove LB blind to 16' and took sample.
May 2, 1997	S1-D2	Large stone and fine medium coarse sand below to fine sand
May 2, 1997	S1-D3	
May 2, 1997	S1-D4	Petro odor
June 29, 1997	S1-12	Soil Topsoil some fill Coarse medium sand stone
June 29, 1997	S1-12W	Topsoil Topsoil some fill Coarse medium sand some moisture silty sand
June 29, 1997	S1-12S	Topsoil Topsoil Moist silty sand with fines medium coarse sand below

Sample Log

Date	Sample ID	Sample Description
June 29, 1997	S1-12E	7' away from S1-12 due to utilities
		Topsoil
		Moist silty sand
		Fine medium coarse sand gravel
June 29, 1997	S1-12W	Topsoil
		Moist silty sand
		Moist fine medium coarse sand top to dry fine medium coarse
June 29, 1997	S1-17	Vault has no bottom
		Fine, medium, coarse sand stone
		Fine, medium, coarse sand stone
June 29, 1997	S1-18	Topsoil with fine, medium, coarse sand boring
		Fine, medium, coarse sand stone



Project Number NY0008132

Project Location BETHPAGE NY

Laboratory ECOTEST

Sampler(s)/Affiliation G. LITZ (BAMS)

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

SAMPLE BOTTLE / CONTAINER DESCRIPTION

*202 STAR
8160+STRAS
202 TRR
807 TRR
802 TRR
8160 TRR
TPH + 8270 STRAS
81604 MEXRYS*

DATE/TIME SAMPLED Lab ID

SAMPLE IDENTITY	Code	Date/Time	Sampled	Lab ID	TOTAL
S1-D1-6-2	S	5-25-97			3
S1-D1-6-4	S				3
T1-D6-6-2					3
T1-D6-6-4					3
U3-D1-6-2					3
U3-D1-6-4					3
U3-D-5-6-2					3
U3-D-5-6-4					3
U3-D-4-6-2					3
U3-D3-6-2					3
U3-D3-6-4					3

Sample Code: L = Liquid; S = Solid; A = Air

Total No. of Bottles/ Containers 21

Relinquished by: John C. Organization: ECOTEST Seal Intact? Yes No / N/A
 Received by: John C. Organization: ECOTEST Seal Intact? Yes No / N/A
 Relinquished by: _____ Date 5-27-97 Time 4:00
 Received by: _____ Date _____ Time _____

Special Instructions/Remarks: TPH + 8270 STRAS - ANALYZE FOR PCB'S AND PCP'S

Delivery Method: In Person Common Carrier Lab Courier Other



Project No. 8132 006

Project Location BEHRAVE NY

Laboratory ECOTEST

Sampler(s)/Affiliation G. WILSON

CHAIN-OF-CUSTODY RECORD

Page of

SAMPLE IDENTITY	Code	Date/Time	Sampled	Lab ID	SAMPLE BOTTLE / CONTAINER DESCRIPTION				TOTAL
S1-D-5	(0-2)	S	4-30-97		202 TRM	8260 + 5 TRMS	202 TRM	8260 + 5 TRMS	3
S1-D-5	(2-4)				802 TRM	TPH 802 TRM	802 TRM	TPH 802 TRM	3
S1-D-6	(0-2)				802 TRM	TPH 802 TRM	802 TRM	TPH 802 TRM	3
S1-D-6	(2-4)				802 TRM	TPH 802 TRM	802 TRM	TPH 802 TRM	3
I1-D-7	(0-2)				8260	TPH 8260	TPH 8260	TPH 8260	3
I1-D-7	(2-4)				8270	TPH 8270	TPH 8270	TPH 8270	3
I1-D-5	(0-2)				TPH	TPH	TPH	TPH	3
I1-D-5	(2-4)				TPH	TPH	TPH	TPH	3
I1-D-4	(0-2)				TPH	TPH	TPH	TPH	3
I1-D-4	(2-4)				TPH	TPH	TPH	TPH	3
I1-O-3	(0-2)				TPH	TPH	TPH	TPH	3
I1-O-3	(2-4)				TPH	TPH	TPH	TPH	3
I1-O-2	(0-2)				TPH	TPH	TPH	TPH	3
I1-O-2	(2-4)				TPH	TPH	TPH	TPH	3
I1-O-1	(0-2)				TPH	TPH	TPH	TPH	3
I1-O-1	(2-4)				TPH	TPH	TPH	TPH	3
Total No. of Bottles/ Containers									48

Sample Code: L = Liquid; S = Solid; A = Air

Relinquished by: SAHIL W Organization: 6TM

Received by: _____ Organization: _____

Relinquished by: _____ Organization: _____

Received by: _____ Organization: _____

Special Instructions/Remarks: TPH TO 8015 PRO ANALYSIS

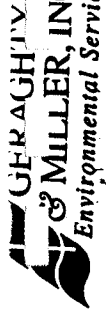
Date: 5/1/97 Time: 9:30

Date: 1/1 Time: _____

Seal Intact? Yes No N/A

Seal Intact? Yes No N/A

Delivery Method: In Person Common Carrier Lab Courier Other



Laboratory Task Order No. _____

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number NY 0008132 006

Project Location BEAUFORT NY

Laboratory ECOTEST

Sampler(s)/Affiliation G. W. DRAMS

SAMPLE BOTTLE / CONTAINER DESCRIPTION

802 TRK RND TCRP
8770 STNG

SAMPLE IDENTITY Code Date/Time Sampled Lab ID

SAMPLE IDENTITY Code	Date/Time Sampled	Lab ID	TOTAL
11-14E(0-1)	S 4:30:17		1
11-14E(1-2)			1
11-14E(2-4)			1
11-14(0-1)			1
11-14(1-2)			1
11-14(2-4)			1
11-14W(0-1)			1
11-14W(1-2)			1
11-14W(2-4)			1
11-13(0-1)			1
11-13(1-2)			1
11-13(2-4)			1
11-13W(0-1)			1
11-13W(1-2)			1
11-13W(2-4)			1
Total No. of Bottles/Containers			15

5 DAM TUBAROUND

Sample Code: L = Liquid; S = Solid; A = Air

Relinquished by: _____ Organization: 67M

Received by: _____ Organization: _____

Relinquished by: _____ Organization: _____

Received by: _____ Organization: _____

Date 5/17/00 Time 9:30

Date / / Time

Seal Intact? Yes No N/A

Seal Intact? Yes No N/A

Special Instructions/Remarks: REPORT TO COUNTY POLICE

Delivery Method: In Person Common Carrier Lab Courier Other



Laboratory Insk Order No. _____

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number NY0008132006

Project Location BETHPAGE NY

Laboratory ECOPREST

Sampler(s)/Affiliation G. LABERANS

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID	SAMPLE BOTTLE / CONTAINER DESCRIPTION				TOTAL
SI-D-260S	S	4-29-97		1	1	1	1	3
SI-D-2 (2-4)				1	1	1	1	3
SI-D-3 (0-2)				1	1	1	1	3
SI-D-3 (7-2)				1	1	1	1	3
SI-D-1 (0-2)				1	1	1	1	3
SI-D-4 (2-4)				1	1	1	1	3
8260					50 DAY			
TPH					20 DAY			
TPH ID					20 DAY (100% methanol w/ 1 part t/d)			
SUDC (820)					30 DAY			
8RCRA MIT CALL					REJECT PARCEL (10 DAY)			

Sample Code: L = Liquid; S = Solid; A = Air

Relinquished by: S. J. W. Organization: 67th

Received by: _____ Organization: _____

Relinquished by: _____ Organization: _____

Received by: _____ Organization: _____

Date: 1/30/97 Time: 8:00

Date: 1/1 Time: _____

Seal Intact? Yes No N/A. 18

Seal Intact? Yes No N/A.

Special Instructions/Remarks:

X ALL THE ABOVE DATA HAS SAMPLE TO RIGHT SIDE OF BOTTLE 7/11/97 8:00

X ALL THE ABOVE DATA HAS SAMPLE TO LEFT SIDE OF BOTTLE 7/11/97 8:00

Delivery Method: In Person Common Carrier Lab Courier Other



Laboratory Task Order No. _____

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number NY 008132006
 Project Location BENHAGEN NY
 Laboratory ECOTES
 Sampler(s)/Affiliation G. WILLIAMS

SAMPLE BOTTLE / CONTAINER DESCRIPTION

802-746-2-114
HQ RSH 2-114

SAMPLE IDENTITY Code Date/Time Sampled Lab ID

SAMPLE IDENTITY Code	Date/Time Sampled	Lab ID	SAMPLE BOTTLE / CONTAINER DESCRIPTION				TOTAL
SI-12 (0-1)	4-29-97						1
SI-12 (1-2)							1
SI-12 (2-4)							1
SI-12N (0-1)							1
SI-12N (1-2)							1
SI-12N (2-4)							1
SI-12E (0-1)							1
SI-12E (1-2)							1
SI-12E (2-4)							1
SI-12S (0-1)							1
SI-12S (1-2)							1
SI-12S (2-4)							1
SI-12W (0-1)							1
SI-12W (1-2)							1
SI-12W (2-4)							1
SI-12 (0-1)							1
SI-12 (1-2)							1
SI-12 (2-4)							1
TOTAL							15

Sample Code: L = Liquid; S = Solid; A = Air

Relinquished by: _____ Organization: _____ Date: / / Time: _____ Seal Intact? Yes No N/A

Received by: _____ Organization: _____ Date: / / Time: _____ Seal Intact? Yes No N/A

Relinquished by: _____ Organization: _____ Date: / / Time: _____

Received by: _____ Organization: _____ Date: / / Time: _____

Special Instructions/Remarks: _____

802-746-2-114 HQ RSH 2-114

Delivery Method: In Person Common Carrier Lab Courier Other

APPENDIX B



APPENDIX B

LABORATORY DATA

ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971043/15

03/25/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY 0008117.002
COLLECTED BY: Client DATE COL'D: 03/12/97 RECEIVED: 03/12/97

SAMPLE: Water sample, FB31297

ANALYTICAL PARAMETERS
Petrol. Hydrocarbons mg/L <0.4

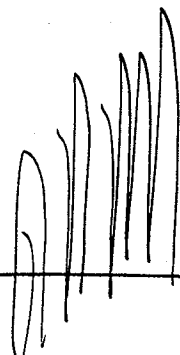
ANALYTICAL PARAMETERS

TPH

cc:

REMARKS:

DIRECTOR



rn=

6412

NYSDOH ID# 10320

ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971043/15

03/25/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY 0008117.002
COLLECTED BY: Client DATE COL'D: 03/12/97 RECEIVED: 03/12/97

SAMPLE: Water sample, FB31297

ANALYTICAL PARAMETERS

Arsenic as As	mg/L	<0.002
Barium as Ba	mg/L	<0.05
Cadmium as Cd	mg/L	<0.01
Chromium as Cr	mg/L	<0.02
Lead as Pb	mg/L	<0.10
Mercury as Hg	mg/L	<0.00025
Selenium as Se	mg/L	<0.002
Silver as Ag	mg/L	<0.01


ANALYTICAL PARAMETERS

Metals

cc:

REMARKS:

DIRECTOR



rn=

6413

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971043/15

03/25/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY 0008117.002
COLLECTED BY: Client DATE COL'D: 03/12/97 RECEIVED: 03/12/97

SAMPLE: Water sample, FB31297

ANALYTICAL PARAMETERS

2,4-D	ug/L	<0.1
Dalapon	ug/L	2.4
Dicamba	ug/L	<0.8
Dinoseb	ug/L	<0.2
Pentachlorophenol	ug/L	<0.04
Pichloram	ug/L	<0.1
2,4,5-TP	ug/L	<0.05

ANALYTICAL PARAMETERS

Herb

Aroclor 1016	ug/L	<1
Aroclor 1221	ug/L	<1
Aroclor 1232	ug/L	<1
Aroclor 1242	ug/L	<1
Aroclor 1248	ug/L	<1
Aroclor 1254	ug/L	<1
Aroclor 1260	ug/L	<1

PCB

cc:

REMARKS:

DIRECTOR



rn=

6414

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971043/15

03/25/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY 0008117.002

COLLECTED BY: Client DATE COL'D: 03/12/97 RECEIVED: 03/12/97

SAMPLE: Water sample, FB31297

ANALYTICAL PARAMETERS

Chloromethane	ug/L	<1
Vinyl Chloride	ug/L	<1
Bromomethane	ug/L	<1
Chloroethane	ug/L	<1
Trichlorofluomethane	ug/L	<1
1,1 Dichloroethene	ug/L	<1
Methylene Chloride	ug/L	<1
t-1,2-Dichloroethene	ug/L	<1
1,1 Dichloroethane	ug/L	<1
Chloroform	ug/L	3
111 Trichloroethane	ug/L	<1
Carbon Tetrachloride	ug/L	<1
Benzene	ug/L	<1
1,2 Dichloroethane	ug/L	<1
Trichloroethene	ug/L	<1
1,2 Dichloropropane	ug/L	<1
Bromodichloromethane	ug/L	<1
2chloroethvinylether	ug/L	<1
t-1,3Dichloropropene	ug/L	<1
Toluene	ug/L	<1
c-1,3Dichloropropene	ug/L	<1
112 Trichloroethane	ug/L	<1
Tetrachloroethene	ug/L	<1
Chlorodibromomethane	ug/L	<1
Chlorobenzene	ug/L	<1

ANALYTICAL PARAMETERS

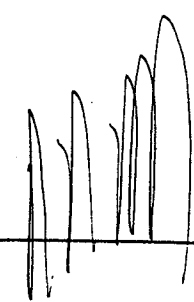
Ethyl Benzene	ug/L	<1
m + p Xylene	ug/L	<2
o Xylene	ug/L	<1
Bromoform	ug/L	<1
1122Tetrachloroethan	ug/L	<1
1,2 Dichlorobenzene	ug/L	<1
1,3 Dichlorobenzene	ug/L	<1
1,4 Dichlorobenzene	ug/L	<1
Isopropylbenzene	ug/L	<1
n-Propylbenzene	ug/L	<1
p-Isopropyltoluene	ug/L	<1
124-Trimethylbenzene	ug/L	<1
135-Trimethylbenzene	ug/L	<1
n-Butylbenzene	ug/L	<1
sec-Butylbenzene	ug/L	<1
Naphthalene	ug/L	<1
ter. ButylMethylEther	ug/L	<1
tert-Butylbenzene	ug/L	<1

VOC

cc:

REMARKS: Analysis was performed by GC/MS, EPA Method 8260.

DIRECTOR _____



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971043/13

03/25/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY 0008117.002
COLLECTED BY: Client DATE COL'D: 03/12/97 RECEIVED: 03/12/97

SAMPLE: Soil sample, U3-9

ANALYTICAL PARAMETERS

Chloromethane	ug/Kg	<1.1
Vinyl Chloride	ug/Kg	<1.1
Bromomethane	ug/Kg	<1.1
Chloroethane	ug/Kg	<1.1
Trichlorofluomethane	ug/Kg	<1.1
1,1 Dichloroethene	ug/Kg	<1.1
Methylene Chloride	ug/Kg	<1.1
t-1,2-Dichloroethene	ug/Kg	<1.1
1,1 Dichloroethane	ug/Kg	<1.1
Chloroform	ug/Kg	<1.1
111 Trichloroethane	ug/Kg	<1.1
Carbon Tetrachloride	ug/Kg	<1.1
Benzene	ug/Kg	<1.1
1,2 Dichloroethane	ug/Kg	<1.1
Trichloroethene	ug/Kg	<1.1
1,2 Dichloropropane	ug/Kg	<1.1
Bromodichloromethane	ug/Kg	<1.1
2chloroethvinylether	ug/Kg	<1.1
t-1,3Dichloropropene	ug/Kg	<1.1
Toluene	ug/Kg	<1.1
c-1,3Dichloropropene	ug/Kg	<1.1
112 Trichloroethane	ug/Kg	<1.1
Tetrachloroethene	ug/Kg	<1.1
Chlorodibromomethane	ug/Kg	<1.1
Chlorobenzene	ug/Kg	<1.1

ANALYTICAL PARAMETERS

Ethyl Benzene	ug/Kg	<1.1
m + p Xylene	ug/Kg	<2.2
o Xylene	ug/Kg	<1.1
Bromoform	ug/Kg	<1.1
1122Tetrachloroethan	ug/Kg	<1.1
1,2 Dichlorobenzene	ug/Kg	<1.1
1,3 Dichlorobenzene	ug/Kg	<1.1
1,4 Dichlorobenzene	ug/Kg	<1.1
Isopropylbenzene	ug/Kg	<1.1
n-Propylbenzene	ug/Kg	<1.1
p-Isopropyltoluene	ug/Kg	<1.1
124-Trimethylbenzene	ug/Kg	<1.1
135-Trimethylbenzene	ug/Kg	<1.1
n-Butylbenzene	ug/Kg	<1.1
sec-Butylbenzene	ug/Kg	<1.1
Naphthalene	ug/Kg	<1.1
ter. ButylMethylEther	ug/Kg	<1.1
% Solids		90
tert-Butylbenzene	ug/Kg	<1.1

cc:

REMARKS: Analysis was performed by GC/MS, EPA Method 8260.
Results reported on a dry weight basis.
Corrected Report.DIRECTOR 

rn=

6405

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971043/13

03/25/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747
ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY 0008117.002
COLLECTED BY: Client DATE COL'D: 03/12/97 RECEIVED: 03/12/97

SAMPLE: Soil sample, U3-9

ANALYTICAL PARAMETERS
Petrol. Hydrocarbons mg/Kg 13

ANALYTICAL PARAMETERS

cc:

REMARKS: Results reported on a dry weight basis.
Corrected Report.

DIRECTOR _____



rn=

6406

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971043/13

03/25/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY 0008117.002
COLLECTED BY: Client DATE COL'D: 03/12/97 RECEIVED: 03/12/97

SAMPLE: Soil sample, U3-9

ANALYTICAL PARAMETERS

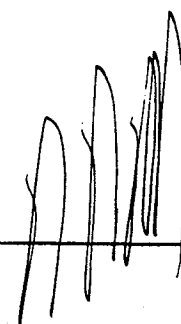
Arsenic as As	mg/Kg	1.6
Barium as Ba	mg/Kg	13
Cadmium as Cd	mg/Kg	<0.11
Chromium as Cr	mg/Kg	6.4
Lead as Pb	mg/Kg	4.8
Mercury as Hg	mg/Kg	0.029
Selenium as Se	mg/Kg	<0.44
Silver as Ag	mg/Kg	<0.11

ANALYTICAL PARAMETERS

cc:

REMARKS: Results reported on a dry weight basis.
Corrected Report.

DIRECTOR



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971043/13

03/25/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747
ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY 0008117.002
COLLECTED BY: Client DATE COL'D: 03/12/97 RECEIVED: 03/12/97

SAMPLE: Soil sample, U3-9

ANALYTICAL PARAMETERS

Diesel	ug/Kg	<220
#2 Fuel Oil	ug/Kg	<220
#4 Fuel Oil	ug/Kg	<220
#6 Fuel Oil	ug/Kg	<220
Lubricating Oil	ug/Kg	<220
Mineral Spirits	ug/Kg	<220
JP4	ug/Kg	<220
JP5	ug/Kg	<220
Jet A	ug/Kg	<220
Kerosene	ug/Kg	<220

ANALYTICAL PARAMETERS

cc:

REMARKS: Analyses performed by Modified 8015 Method.
Diesel Range Organics.
Results reported on a dry weight basis.
Corrected Report.

DIRECTOR _____



rn=

6967

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971043/14

03/25/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY 0008117.002
COLLECTED BY: Client DATE COL'D: 03/12/97 RECEIVED: 03/12/97

SAMPLE: Soil sample, U3-11

ANALYTICAL PARAMETERS

Chloromethane	ug/Kg	<2.3
Vinyl Chloride	ug/Kg	<2.3
Bromomethane	ug/Kg	<2.3
Chloroethane	ug/Kg	<2.3
Trichlorofluomethane	ug/Kg	<2.3
1,1 Dichloroethene	ug/Kg	<2.3
Methylene Chloride	ug/Kg	<2.3
t-1,2-Dichloroethene	ug/Kg	<2.3
1,1 Dichloroethane	ug/Kg	<2.3
Chloroform	ug/Kg	<2.3
111 Trichloroethane	ug/Kg	<2.3
Carbon Tetrachloride	ug/Kg	<2.3
Benzene	ug/Kg	<2.3
1,2 Dichloroethane	ug/Kg	<2.3
Trichloroethene	ug/Kg	<2.3
1,2 Dichloropropane	ug/Kg	<2.3
Bromodichloromethane	ug/Kg	<2.3
2chloroethvinylether	ug/Kg	<2.3
t-1,3Dichloropropene	ug/Kg	<2.3
Toluene	ug/Kg	<2.3
c-1,3Dichloropropene	ug/Kg	<2.3
112 Trichloroethane	ug/Kg	<2.3
Tetrachloroethene	ug/Kg	<2.3
Chlorodibromomethane	ug/Kg	<2.3
Chlorobenzene	ug/Kg	<2.3

ANALYTICAL PARAMETERS

Ethyl Benzene	ug/Kg	<2.3
m + p Xylene	ug/Kg	<4.7
o Xylene	ug/Kg	<2.3
Bromoform	ug/Kg	<2.3
1122Tetrachloroethan	ug/Kg	<2.3
1,2 Dichlorobenzene	ug/Kg	<2.3
1,3 Dichlorobenzene	ug/Kg	<2.3
1,4 Dichlorobenzene	ug/Kg	<2.3
Isopropylbenzene	ug/Kg	<2.3
n-Propylbenzene	ug/Kg	<2.3
p-Isopropyltoluene	ug/Kg	<2.3
124-Trimethylbenzene	ug/Kg	<2.3
135-Trimethylbenzene	ug/Kg	<2.3
n-Butylbenzene	ug/Kg	<2.3
sec-Butylbenzene	ug/Kg	<2.3
Naphthalene	ug/Kg	<2.3
ter. ButylMethylEther	ug/Kg	<2.3
% Solids		86
tert-Butylbenzene	ug/Kg	<2.3

cc:

REMARKS: Analysis was performed by GC/MS, EPA Method 8260.
Results reported on a dry weight basis.
Corrected Report.DIRECTOR 

rn= 6408

NYSDOH ID# 10320

ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971043/14

03/25/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY 0008117.002

COLLECTED BY: Client DATE COL'D: 03/12/97 RECEIVED: 03/12/97

SAMPLE: Soil sample, U3-11

ANALYTICAL PARAMETERS

Petrol. Hydrocarbons mg/Kg 14

ANALYTICAL PARAMETERS

cc:

REMARKS: Results reported on a dry weight basis.
Corrected Report.

DIRECTOR _____



rn= 6409

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971043/14

03/25/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747
ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY 0008117.002
COLLECTED BY: Client DATE COL'D: 03/12/97 RECEIVED: 03/12/97

SAMPLE: Soil sample, U3-11

ANALYTICAL PARAMETERS

Arsenic as As	mg/Kg	1.6
Barium as Ba	mg/Kg	33
Cadmium as Cd	mg/Kg	<0.12
Chromium as Cr	mg/Kg	11
Lead as Pb	mg/Kg	6.7
Mercury as Hg	mg/Kg	0.023
Selenium as Se	mg/Kg	<0.47
Silver as Ag	mg/Kg	<0.12

ANALYTICAL PARAMETERS

cc:

REMARKS: Results reported on a dry weight basis.
Corrected Report.

DIRECTOR



rn=

6410

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO.C971043/14

03/25/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747
ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY 0008117.002
COLLECTED BY: Client DATE COL'D:03/12/97 RECEIVED:03/12/97

SAMPLE: Soil sample, U3-11

ANALYTICAL PARAMETERS

Diesel	ug/Kg	<230
#2 Fuel Oil	ug/Kg	<230
#4 Fuel Oil	ug/Kg	<230
#6 Fuel Oil	ug/Kg	<230
Lubricating Oil	ug/Kg	<230
Mineral Spirits	ug/Kg	<230
JP4	ug/Kg	<230
JP5	ug/Kg	<230
Jet A	ug/Kg	<230
Kerosene	ug/Kg	<230

ANALYTICAL PARAMETERS

cc:

REMARKS: Analyses performed by Modified 8015 Method.
Diesel Range Organics.
Results reported on a dry weight basis.
Corrected Report.

DIRECTOR _____



rn=

6968

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO.C971930/1

05/12/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132.006
COLLECTED BY: Client DATE COL'D:05/02/97 RECEIVED:05/02/97

SAMPLE: Soil sample, U3-19, 0-2

ANALYTICAL PARAMETERS

Petrol. Hydrocarbons mg/Kg 22
% Solids 90

ANALYTICAL PARAMETERS

cc:

REMARKS: EPA Method 418.1.
Results reported on a dry weight basis.

DIRECTOR 

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971930/1

05/12/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132.006
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-19, 0-2

ANALYTICAL PARAMETERS

Aroclor 1016	ug/Kg	<44
Aroclor 1221	ug/Kg	<44
Aroclor 1232	ug/Kg	<44
Aroclor 1242	ug/Kg	<44
Aroclor 1248	ug/Kg	<44
Aroclor 1254	ug/Kg	<220*
Aroclor 1260	ug/Kg	<220*

ANALYTICAL PARAMETERS

cc:

REMARKS: Results reported on a dry weight basis.
*Interferences in sample prevented analysis to a lower detection limit.

DIRECTOR 

rn= 12773

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO.C971930/1

05/12/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132.006
COLLECTED BY: Client DATE COL'D:05/02/97 RECEIVED:05/02/97

SAMPLE: Soil sample, U3-19, 0-2

ANALYTICAL PARAMETERS

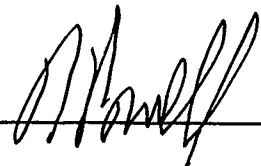
Diesel	ug/Kg	<220*
#2 Fuel Oil	ug/Kg	<220*
#4 Fuel Oil	ug/Kg	<220*
#6 Fuel Oil	ug/Kg	<220*
Lubricating Oil	ug/Kg	<220*
Mineral Spirits	ug/Kg	<220*
JP4	ug/Kg	<220*
JP5	ug/Kg	<220*
Jet A	ug/Kg	<220*
Kerosene	ug/Kg	<220*

ANALYTICAL PARAMETERS

cc:

REMARKS: Results reported on a dry weight basis.
Analyses performed by Modified 8015 Method.
Diesel Range Organics.
*Sample contains unknown product at 15000ug/Kg(quantified as #6 Fuel Oil).

DIRECTOR _____



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971930/2

05/12/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132.006
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-19, 2-4

ANALYTICAL PARAMETERS

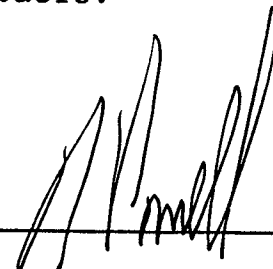
Petrol. Hydrocarbons mg/Kg 15
% Solids 94

ANALYTICAL PARAMETERS

cc:

REMARKS: EPA Method 418.1.
Results reported on a dry weight basis.

DIRECTOR



rn= 12774

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971930/2

05/12/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132.006

COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-19, 2-4

ANALYTICAL PARAMETERS

Aroclor 1016	ug/Kg	<43
Aroclor 1221	ug/Kg	<43
Aroclor 1232	ug/Kg	<43
Aroclor 1242	ug/Kg	<43
Aroclor 1248	ug/Kg	<43
Aroclor 1254	ug/Kg	<43
Aroclor 1260	ug/Kg	<43

ANALYTICAL PARAMETERS

cc:

REMARKS: Results reported on a dry weight basis.

DIRECTOR 

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971930/2

05/12/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132.006
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-19, 2-4

ANALYTICAL PARAMETERS

Diesel	ug/Kg	<210*
#2 Fuel Oil	ug/Kg	<210*
#4 Fuel Oil	ug/Kg	<210*
#6 Fuel Oil	ug/Kg	<210*
Lubricating Oil	ug/Kg	<210*
Mineral Spirits	ug/Kg	<210*
JP4	ug/Kg	<210*
JP5	ug/Kg	<210*
Jet A	ug/Kg	<210*
Kerosene	ug/Kg	<210*

ANALYTICAL PARAMETERS

cc:

REMARKS: Results reported on a dry weight basis.
Analyses performed by Modified 8015 Method.
Diesel Range Organics.
*Sample contains unknown product at 7600ug/Kg (quantified as #6 Fuel Oil).

DIRECTOR 

rn= 12933

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/5

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132

COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D1, 0-2

ANALYTICAL PARAMETERS

Chloromethane	ug/Kg	<1
Vinyl Chloride	ug/Kg	<1
Bromomethane	ug/Kg	<1
Chloroethane	ug/Kg	<1
Trichlorofluomethane	ug/Kg	<1
1,1 Dichloroethene	ug/Kg	<1
Methylene Chloride	ug/Kg	<1
t-1,2-Dichloroethene	ug/Kg	<1
1,1 Dichloroethane	ug/Kg	<1
Chloroform	ug/Kg	<1
111 Trichloroethane	ug/Kg	<1
Carbon Tetrachloride	ug/Kg	<1
Benzene	ug/Kg	<1
1,2 Dichloroethane	ug/Kg	<1
Trichloroethene	ug/Kg	<1
1,2 Dichloropropane	ug/Kg	<1
Bromodichloromethane	ug/Kg	<1
2chloroethvinylether	ug/Kg	<1
t-1,3Dichloropropene	ug/Kg	<1
Toluene	ug/Kg	<1
c-1,3Dichloropropene	ug/Kg	<1
112 Trichloroethane	ug/Kg	<1
Tetrachloroethene	ug/Kg	<1
Chlorodibromomethane	ug/Kg	<1
Chlorobenzene	ug/Kg	<1

ANALYTICAL PARAMETERS

Ethyl Benzene	ug/Kg	<1
m + p Xylene	ug/Kg	<2
o Xylene	ug/Kg	<1
Bromoform	ug/Kg	<1
1122Tetrachloroethan	ug/Kg	<1
1,2 Dichlorobenzene	ug/Kg	<1
1,3 Dichlorobenzene	ug/Kg	<1
1,4 Dichlorobenzene	ug/Kg	<1
Isopropylbenzene	ug/Kg	<1
n-Propylbenzene	ug/Kg	<1
p-Isopropyltoluene	ug/Kg	<1
124-Trimethylbenzene	ug/Kg	<1
135-Trimethylbenzene	ug/Kg	<1
n-Butylbenzene	ug/Kg	<1
sec-Butylbenzene	ug/Kg	<1
Naphthalene	ug/Kg	<1
ter. ButylMethylEther	ug/Kg	<1

cc:

REMARKS: Analysis was performed by GC/MS, EPA Method 8260.
Results reported on a dry weight basis.

DIRECTOR



rn= 12740

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/5

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132

COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D1, 0-2

ANALYTICAL PARAMETERS

Petrol. Hydrocarbons mg/Kg 14
% Solids 91

ANALYTICAL PARAMETERS

cc:

REMARKS: EPA Method 418.1.
Results reported on a dry weight basis.

DIRECTOR 

rn= 12741

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/5

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132

COLLECTED BY: Client

DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D1, 0-2

UNITS: ug/Kg

ANALYTICAL PARAMETERS

Naphthalene	<33
Acenaphthene	<33
Fluorene	<33
Phenanthrene	<33
Anthracene	<33
Fluoranthene	<33
Pyrene	<33
Benzo(a)anthracene	<33
Chrysene	<33
Benzo(b)fluoranthene	<33
Benzo(k)fluoranthene	<33
Benzo(a)pyrene	<33
Dibenzo(a,h)anthracene	<33
Indeno(1,2,3-cd)pyrene	<33
Benzo(ghi)perylene	<33

ANALYTICAL PARAMETERS

cc:

REMARKS: EPA Method 8270.

Results reported on a dry weight basis.

DIRECTOR



rn= 12742

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/5

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747
ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D1, 0-2

ANALYTICAL PARAMETERS

Arsenic as As	mg/Kg	1.8
Barium as Ba	mg/Kg	4.5
Cadmium as Cd	mg/Kg	<0.11
Chromium as Cr	mg/Kg	7.4
Lead as Pb	mg/Kg	13
Mercury as Hg	mg/Kg	0.012
Selenium as Se	mg/Kg	<0.44
Silver as Ag	mg/Kg	<0.11

ANALYTICAL PARAMETERS

cc:

REMARKS: Results reported on a dry weight basis.

DIRECTOR 

rn= 12743

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/5

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747
ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D1, 0-2

ANALYTICAL PARAMETERS

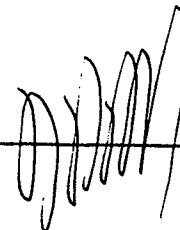
Diesel	ug/Kg	<220*
#2 Fuel Oil	ug/Kg	<220*
#4 Fuel Oil	ug/Kg	<220*
#6 Fuel Oil	ug/Kg	<220*
Lubricating Oil	ug/Kg	<220*
Mineral Spirits	ug/Kg	<220*
JP4	ug/Kg	<220*
JP5	ug/Kg	<220*
Jet A	ug/Kg	<220*
Kerosene	ug/Kg	<220*

ANALYTICAL PARAMETERS

cc:

REMARKS: Results reported on a dry weight basis.
Analyses performed by Modified 8015 Method.
Diesel Range Organics.
*Sample contains unknown product at 6100ug/Kg (quantified as #6 Fuel Oil).

DIRECTOR _____



rn= 12924

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/6

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747
ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D:05/02/97 RECEIVED:05/02/97

SAMPLE: Soil sample, U3-D1, 2-4

ANALYTICAL PARAMETERS

Chloromethane	ug/Kg	<1
Vinyl Chloride	ug/Kg	<1
Bromomethane	ug/Kg	<1
Chloroethane	ug/Kg	<1
Trichlorofluomethane	ug/Kg	<1
1,1 Dichloroethene	ug/Kg	<1
Methylene Chloride	ug/Kg	<1
t-1,2-Dichloroethene	ug/Kg	<1
1,1 Dichloroethane	ug/Kg	<1
Chloroform	ug/Kg	<1
111 Trichloroethane	ug/Kg	<1
Carbon Tetrachloride	ug/Kg	<1
Benzene	ug/Kg	<1
1,2 Dichloroethane	ug/Kg	<1
Trichloroethene	ug/Kg	<1
1,2 Dichloropropane	ug/Kg	<1
Bromodichloromethane	ug/Kg	<1
2chloroethvinylether	ug/Kg	<1
t-1,3Dichloropropene	ug/Kg	<1
Toluene	ug/Kg	<1
c-1,3Dichloropropene	ug/Kg	<1
112 Trichloroethane	ug/Kg	<1
Tetrachloroethene	ug/Kg	<1
Chlorodibromomethane	ug/Kg	<1
Chlorobenzene	ug/Kg	<1

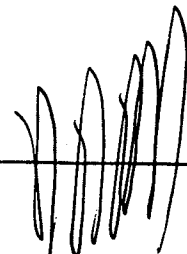
ANALYTICAL PARAMETERS

Ethyl Benzene	ug/Kg	<1
m + p Xylene	ug/Kg	<2
o Xylene	ug/Kg	<1
Bromoform	ug/Kg	<1
1122Tetrachloroethan	ug/Kg	<1
1,2 Dichlorobenzene	ug/Kg	<1
1,3 Dichlorobenzene	ug/Kg	<1
1,4 Dichlorobenzene	ug/Kg	<1
Isopropylbenzene	ug/Kg	<1
n-Propylbenzene	ug/Kg	<1
p-Isopropyltoluene	ug/Kg	<1
124-Trimethylbenzene	ug/Kg	<1
135-Trimethylbenzene	ug/Kg	<1
n-Butylbenzene	ug/Kg	<1
sec-Butylbenzene	ug/Kg	<1
Naphthalene	ug/Kg	<1
ter. ButylMethylEther	ug/Kg	<1

cc:

REMARKS: Analysis was performed by GC/MS, EPA Method 8260.
Results reported on a dry weight basis.

DIRECTOR



rn= 12744

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/6

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132

COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D1, 2-4

ANALYTICAL PARAMETERS

Petrol. Hydrocarbons mg/Kg 21
% Solids 90

ANALYTICAL PARAMETERS

cc:

REMARKS: EPA Method 418.1.
Results reported on a dry weight basis.

DIRECTOR



rn= 12745

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/6

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132

COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D1, 2-4

UNITS: ug/Kg

ANALYTICAL PARAMETERS

Naphthalene	<33
Acenaphthene	<33
Fluorene	<33
Phenanthrene	72
Anthracene	<33
Fluoranthene	200
Pyrene	230
Benzo(a)anthracene	83
Chrysene	97
Benzo(b)fluoranthene	70^^
Benzo(k)fluoranthene	70^^
Benzo(a)pyrene	68
Dibenzo(a,h)anthracene	<33
Indeno(1,2,3-cd)pyrene	<33
Benzo(ghi)perylene	<33

ANALYTICAL PARAMETERS

cc:

REMARKS: EPA Method 8270.

Results reported on a dry weight basis.

^^Total = 140 ug/Kg, unable to separate isomers.

DIRECTOR 

rn= 12746

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/6

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132

COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D1, 2-4

ANALYTICAL PARAMETERS

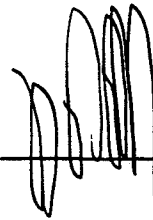
Arsenic as As	mg/Kg	1.0
Barium as Ba	mg/Kg	2.7
Cadmium as Cd	mg/Kg	<0.11
Chromium as Cr	mg/Kg	3.5
Lead as Pb	mg/Kg	5.1
Mercury as Hg	mg/Kg	0.0088
Selenium as Se	mg/Kg	<0.44
Silver as Ag	mg/Kg	0.39

ANALYTICAL PARAMETERS

cc:

REMARKS: Results reported on a dry weight basis.

DIRECTOR _____



rn= 12747

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO.C971929/6

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747
ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D:05/02/97 RECEIVED:05/02/97

SAMPLE: Soil sample, U3-D1, 2-4

ANALYTICAL PARAMETERS

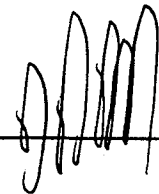
Diesel	ug/Kg	<220*
#2 Fuel Oil	ug/Kg	<220*
#4 Fuel Oil	ug/Kg	<220*
#6 Fuel Oil	ug/Kg	<220*
Lubricating Oil	ug/Kg	<220*
Mineral Spirits	ug/Kg	<220*
JP4	ug/Kg	<220*
JP5	ug/Kg	<220*
Jet A	ug/Kg	<220*
Kerosene	ug/Kg	<220*

ANALYTICAL PARAMETERS

cc:

REMARKS: Results reported on a dry weight basis.
Analyses performed by Modified 8015 Method.
Diesel Range Organics.
*Sample contains unknown product at 22000ug/Kg(quantified as #6 Fuel Oil).

DIRECTOR



rn= 12925

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/6

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132, TCLPSTARBN
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D1, 2-4
UNITS: ug/L*

ANALYTICAL PARAMETERS

Naphthalene	<10
Acenaphthene	<10
Fluorene	<10
Phenanthrene	<10
Anthracene	<10
Fluoranthene	<10
Pyrene	<10
Benzo(a)anthracene	<10
Chrysene	<10
Benzo(b)fluoranthene	<10
Benzo(k)fluoranthene	<10
Benzo(a)pyrene	<10
Indeno(1,2,3-cd)pyrene	<10
Dibenzo(a,h)anthracene	<10
Benzo(ghi)perylene	<10

ANALYTICAL PARAMETERS

cc:

REMARKS: * Analysis performed on TCLP Leachate according to USEPA Method 1311.

DIRECTOR



rn= 13112

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/11

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D:05/02/97 RECEIVED:05/02/97

SAMPLE: Soil sample, U3-D3, 0-2

ANALYTICAL PARAMETERS

Chloromethane	ug/Kg	<1
Vinyl Chloride	ug/Kg	<1
Bromomethane	ug/Kg	<1
Chloroethane	ug/Kg	<1
Trichlorofluomethane	ug/Kg	<1
1,1 Dichloroethene	ug/Kg	<1
Methylene Chloride	ug/Kg	<1
t-1,2-Dichloroethene	ug/Kg	<1
1,1 Dichloroethane	ug/Kg	<1
Chloroform	ug/Kg	<1
111 Trichloroethane	ug/Kg	<1
Carbon Tetrachloride	ug/Kg	<1
Benzene	ug/Kg	<1
1,2 Dichloroethane	ug/Kg	<1
Trichloroethene	ug/Kg	<1
1,2 Dichloropropane	ug/Kg	<1
Bromodichloromethane	ug/Kg	<1
2chloroethvinylether	ug/Kg	<1
t-1,3Dichloropropene	ug/Kg	<1
Toluene	ug/Kg	<1
c-1,3Dichloropropene	ug/Kg	<1
112 Trichloroethane	ug/Kg	<1
Tetrachloroethene	ug/Kg	<1
Chlorodibromomethane	ug/Kg	<1
Chlorobenzene	ug/Kg	<1

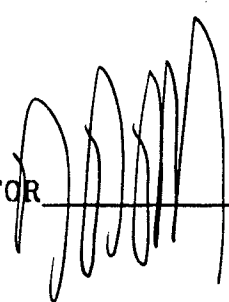
ANALYTICAL PARAMETERS

Ethyl Benzene	ug/Kg	<1
m + p Xylene	ug/Kg	<2
o Xylene	ug/Kg	<1
Bromoform	ug/Kg	<1
1122Tetrachloroethan	ug/Kg	<1
1,2 Dichlorobenzene	ug/Kg	<1
1,3 Dichlorobenzene	ug/Kg	<1
1,4 Dichlorobenzene	ug/Kg	<1
Isopropylbenzene	ug/Kg	<1
n-Propylbenzene	ug/Kg	<1
p-Isopropyltoluene	ug/Kg	<1
124-Trimethylbenzene	ug/Kg	<1
135-Trimethylbenzene	ug/Kg	<1
n-Butylbenzene	ug/Kg	<1
sec-Butylbenzene	ug/Kg	<1
Naphthalene	ug/Kg	<1
ter. ButylMethylEther	ug/Kg	<1

cc:

REMARKS: Analysis was performed by GC/MS, EPA Method 8260.
Results reported on a dry weight basis.

DIRECTOR



rn= 12764

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/11

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747
ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D3, 0-2

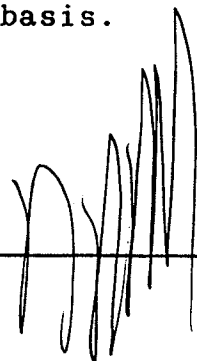
ANALYTICAL PARAMETERS
Petrol. Hydrocarbons mg/Kg 18
% Solids 94

ANALYTICAL PARAMETERS

cc:

REMARKS: EPA Method 418.1.
Results reported on a dry weight basis.

DIRECTOR



rn= 12765

NYSDOH ID# 10320

ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/11

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747
ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D3, 0-2
UNITS: ug/Kg

ANALYTICAL PARAMETERS

Naphthalene	<32
Acenaphthene	<32
Fluorene	<32
Phenanthrene	<32
Anthracene	<32
Fluoranthene	<32
Pyrene	<32
Benzo(a)anthracene	<32
Chrysene	<32
Benzo(b)fluoranthene	<32
Benzo(k)fluoranthene	<32
Benzo(a)pyrene	<32
Benzo(a,h)anthracene	<32
Indeno(1,2,3-cd)pyrene	<32
Benzo(ghi)perylene	<32

ANALYTICAL PARAMETERS

cc:

REMARKS: EPA Method 8270.
Results reported on a dry weight basis.

DIRECTOR 

rn= 12766

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/11

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132

COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D3, 0-2

ANALYTICAL PARAMETERS

Arsenic as As	mg/Kg	1.8
Barium as Ba	mg/Kg	11
Cadmium as Cd	mg/Kg	3.1
Chromium as Cr	mg/Kg	12
Lead as Pb	mg/Kg	3.5
Mercury as Hg	mg/Kg	0.026
Selenium as Se	mg/Kg	<0.43
Silver as Ag	mg/Kg	2.4

ANALYTICAL PARAMETERS

cc:

REMARKS: Results reported on a dry weight basis.

DIRECTOR



rn= 12767

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/11

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D:05/02/97 RECEIVED:05/02/97

SAMPLE: Soil sample, U3-D3, 0-2

ANALYTICAL PARAMETERS

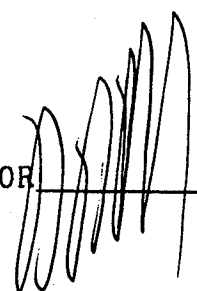
ANALYTICAL PARAMETERS

Diesel	ug/Kg	<210
#2 Fuel Oil	ug/Kg	<210
#4 Fuel Oil	ug/Kg	<210
#6 Fuel Oil	ug/Kg	<210
Lubricating Oil	ug/Kg	<210
Mineral Spirits	ug/Kg	<210
JP4	ug/Kg	<210
JP5	ug/Kg	<210
Jet A	ug/Kg	<210
Kerosene	ug/Kg	<210

cc:

REMARKS: Results reported on a dry weight basis.
Analyses performed by Modified 8015 Method.
Diesel Range Organics.

DIRECTOR



rn= 12930

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/12

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D3, 2-4

ANALYTICAL PARAMETERS

Chloromethane	ug/Kg	<1
Vinyl Chloride	ug/Kg	<1
Bromomethane	ug/Kg	<1
Chloroethane	ug/Kg	<1
Trichlorofluomethane	ug/Kg	<1
1,1 Dichloroethene	ug/Kg	<1
Methylene Chloride	ug/Kg	<1
t-1,2-Dichloroethene	ug/Kg	<1
1,1 Dichloroethane	ug/Kg	<1
Chloroform	ug/Kg	<1
111 Trichloroethane	ug/Kg	<1
Carbon Tetrachloride	ug/Kg	<1
Benzene	ug/Kg	<1
1,2 Dichloroethane	ug/Kg	<1
Trichloroethene	ug/Kg	<1
1,2 Dichloropropane	ug/Kg	<1
Bromodichloromethane	ug/Kg	<1
2chloroethvinylether	ug/Kg	<1
t-1,3Dichloropropene	ug/Kg	<1
Toluene	ug/Kg	<1
c-1,3Dichloropropene	ug/Kg	<1
112 Trichloroethane	ug/Kg	<1
Tetrachloroethene	ug/Kg	<1
Chlorodibromomethane	ug/Kg	<1
Chlorobenzene	ug/Kg	<1

ANALYTICAL PARAMETERS

Ethyl Benzene	ug/Kg	<1
m + p Xylene	ug/Kg	<2
o Xylene	ug/Kg	<1
Bromoform	ug/Kg	<1
1122Tetrachloroethan	ug/Kg	<1
1,2 Dichlorobenzene	ug/Kg	<1
1,3 Dichlorobenzene	ug/Kg	<1
1,4 Dichlorobenzene	ug/Kg	<1
Isopropylbenzene	ug/Kg	<1
n-Propylbenzene	ug/Kg	<1
p-Isopropyltoluene	ug/Kg	<1
124-Trimethylbenzene	ug/Kg	<1
135-Trimethylbenzene	ug/Kg	<1
n-Butylbenzene	ug/Kg	<1
sec-Butylbenzene	ug/Kg	<1
Naphthalene	ug/Kg	<1
ter. ButylMethylEther	ug/Kg	<1

cc:

REMARKS: Analysis was performed by GC/MS, EPA Method 8260.
Results reported on a dry weight basis.DIRECTOR 

rn= 12768

NYSDOH ID# 10320

ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/12

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D3, 2-4

ANALYTICAL PARAMETERS

Petrol. Hydrocarbons mg/Kg 15
% Solids 93

ANALYTICAL PARAMETERS

cc:

REMARKS: EPA Method 418.1.
Results reported on a dry weight basis.

DIRECTOR 

rn= 12769

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/12

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D3, 2-4
UNITS: ug/Kg

ANALYTICAL PARAMETERS

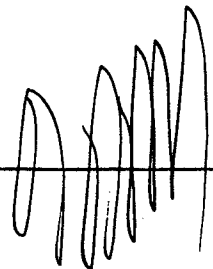
ANALYTICAL PARAMETERS

Naphthalene	<32
Acenaphthene	<32
Fluorene	<32
Phenanthrene	<32
Anthracene	<32
Fluoranthene	<32
Pyrene	<32
Benzo(a)anthracene	<32
Chrysene	<32
Benzo(b)fluoranthene	<32
Benzo(k)fluoranthene	<32
Benzo(a)pyrene	<32
Dibenzo(a,h)anthracene	<32
Indeno(1,2,3-cd)pyrene	<32
Benzo(ghi)perylene	<32

cc:

REMARKS: EPA Method 8270.
Results reported on a dry weight basis.

DIRECTOR



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/12

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL.'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D3, 2-4

ANALYTICAL PARAMETERS

Arsenic as As	mg/Kg	2.6
Barium as Ba	mg/Kg	15
Cadmium as Cd	mg/Kg	1.5
Chromium as Cr	mg/Kg	13
Lead as Pb	mg/Kg	4.4
Mercury as Hg	mg/Kg	0.032
Selenium as Se	mg/Kg	<0.43
Silver as Ag	mg/Kg	1.7

ANALYTICAL PARAMETERS

cc:

REMARKS: Results reported on a dry weight basis.

DIRECTOR



rn= 12771

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/12

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL.'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D3, 2-4

ANALYTICAL PARAMETERS

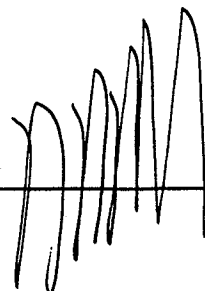
Diesel	ug/Kg	<220
#2 Fuel Oil	ug/Kg	<220
#4 Fuel Oil	ug/Kg	<220
#6 Fuel Oil	ug/Kg	<220
Lubricating Oil	ug/Kg	<220
Mineral Spirits	ug/Kg	<220
JP4	ug/Kg	<220
JP5	ug/Kg	<220
Jet A	ug/Kg	<220
Kerosene	ug/Kg	<220

ANALYTICAL PARAMETERS

cc:

REMARKS: Results reported on a dry weight basis.
Analyses performed by Modified 8015 Method.
Diesel Range Organics.

DIRECTOR



rn=

12931

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/9

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D4, 0-2

ANALYTICAL PARAMETERS

Chloromethane	ug/Kg	<170
Vinyl Chloride	ug/Kg	<170
Bromomethane	ug/Kg	<170
Chloroethane	ug/Kg	<170
Trichlorofluomethane	ug/Kg	<170
1,1 Dichloroethene	ug/Kg	<170
Methylene Chloride	ug/Kg	<170
t-1,2-Dichloroethene	ug/Kg	<170
1,1 Dichloroethane	ug/Kg	<170
Chloroform	ug/Kg	<170
111 Trichloroethane	ug/Kg	<170
Carbon Tetrachloride	ug/Kg	<170
Benzene	ug/Kg	<170
1,2 Dichloroethane	ug/Kg	<170
Trichloroethene	ug/Kg	<170
1,2 Dichloropropane	ug/Kg	<170
Bromodichloromethane	ug/Kg	<170
Chloroethvinylether	ug/Kg	<170
t-1,3Dichloropropene	ug/Kg	<170
Toluene	ug/Kg	<170
c-1,3Dichloropropene	ug/Kg	<170
112 Trichloroethane	ug/Kg	<170
Tetrachloroethene	ug/Kg	<170
Chlorodibromomethane	ug/Kg	<170
Chlorobenzene	ug/Kg	<170

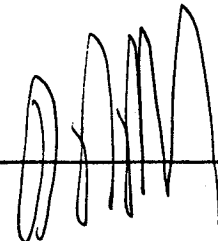
ANALYTICAL PARAMETERS

Ethyl Benzene	ug/Kg	<170
m + p Xylene	ug/Kg	<330
o Xylene	ug/Kg	<170
Bromoform	ug/Kg	<170
1122Tetrachloroethan	ug/Kg	<170
1,2 Dichlorobenzene	ug/Kg	<170
1,3 Dichlorobenzene	ug/Kg	<170
1,4 Dichlorobenzene	ug/Kg	<170
Isopropylbenzene	ug/Kg	<170
n-Propylbenzene	ug/Kg	<170
p-Isopropyltoluene	ug/Kg	<170
124-Trimethylbenzene	ug/Kg	<170
135-Trimethylbenzene	ug/Kg	<170
n-Butylbenzene	ug/Kg	<170
sec-Butylbenzene	ug/Kg	<170
Naphthalene	ug/Kg	<170
ter. ButylMethylEther	ug/Kg	<170

cc:

REMARKS: Analysis was performed by GC/MS, EPA Method 8260.
Results reported on a dry weight basis.
Elevated detection levels due to interference in sample.

DIRECTOR



rn= 12756

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/9

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D4, 0-2

ANALYTICAL PARAMETERS

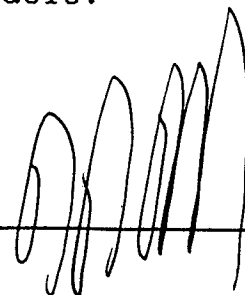
Petrol. Hydrocarbons mg/Kg 820
% Solids 80

ANALYTICAL PARAMETERS

cc:

REMARKS: EPA Method 418.1.
Results reported on a dry weight basis.

DIRECTOR _____



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/9

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D4, 0-2
UNITS: ug/Kg

ANALYTICAL PARAMETERS

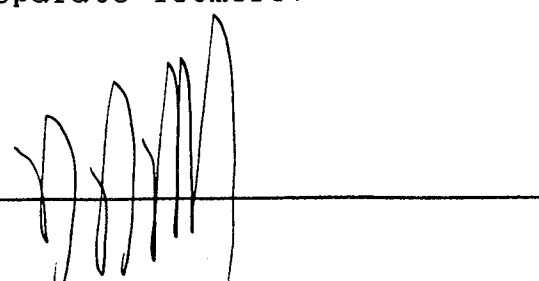
Naphthalene	<100
Acenaphthene	<100
Fluorene	<100
Phenanthrene	1400
Anthracene	<100
Fluoranthene	1500
Pyrene	1700
Benzo(a)anthracene	280
Chrysene	590
Benzo(b)fluoranthene	400^^
Benzo(k)fluoranthene	400^^
Benzo(a)pyrene	300
Dibenzo(a,h)anthracene	<100
Indeno(1,2,3-cd)pyrene	<100
Benzo(ghi)perylene	<100

ANALYTICAL PARAMETERS

cc:

REMARKS: EPA Method 8270.
Results reported on a dry weight basis.
^^Total = 800 ug/Kg, unable to separate isomers.

DIRECTOR



rn= 12758

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/9

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D4, 0-2

ANALYTICAL PARAMETERS

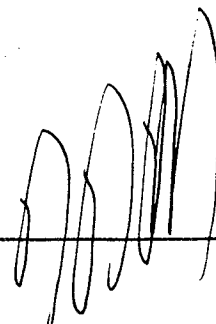
Arsenic as As	mg/Kg	4.5
Barium as Ba	mg/Kg	12
Cadmium as Cd	mg/Kg	0.29
Chromium as Cr	mg/Kg	6.5
Lead as Pb	mg/Kg	27
Mercury as Hg	mg/Kg	0.061
Selenium as Se	mg/Kg	<0.5
Silver as Ag	mg/Kg	0.2

ANALYTICAL PARAMETERS

cc:

REMARKS: Results reported on a dry weight basis.

DIRECTOR _____



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/9

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D4, 0-2

ANALYTICAL PARAMETERS

Diesel	ug/Kg	<1300
#2 Fuel Oil	ug/Kg	<1300
#4 Fuel Oil	ug/Kg	<1300
#6 Fuel Oil	ug/Kg	<1300
Lubricating Oil	ug/Kg	100000*
Mineral Spirits	ug/Kg	<1300
JP4	ug/Kg	<1300
JP5	ug/Kg	<1300
Jet A	ug/Kg	<1300
Kerosene	ug/Kg	<1300

ANALYTICAL PARAMETERS

cc:

REMARKS: Results reported on a dry weight basis.
Analyses performed by Modified 8015 Method.
Diesel Range Organics.*GC analysis indicates sample contains product for which
closest match found is Lubricating Oil
Quality of match = Good.DIRECTOR 

rn= 12928

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/9

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132, TCLPSTARBN
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D4, 0-2
UNITS: ug/L*

ANALYTICAL PARAMETERS

ANALYTICAL PARAMETERS


Naphthalene	<10
Acenaphthene	<10
Fluorene	<10
Phenanthrene	<10
Anthracene	<10
Fluoranthene	<10
Pyrene	<10
Benzo(a)anthracene	<10
Chrysene	<10
Benzo(b)fluoranthene	<10
Benzo(k)fluoranthene	<10
Benzo(a)pyrene	<10
Indeno(1,2,3-cd)pyrene	<10
Dibenzo(a,h)anthracene	<10
Benzo(ghi)perylene	<10

-
-

cc:

REMARKS: * Analysis performed on TCLP Leachate according to USEPA Method 1311.

DIRECTOR _____



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/10

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D4, 2-4

ANALYTICAL PARAMETERS

Chloromethane	ug/Kg	<1
Vinyl Chloride	ug/Kg	<1
Bromomethane	ug/Kg	<1
Chloroethane	ug/Kg	<1
Trichlorofluomethane	ug/Kg	<1
1,1 Dichloroethene	ug/Kg	<1
Methylene Chloride	ug/Kg	<1
t-1,2-Dichloroethene	ug/Kg	<1
1,1 Dichloroethane	ug/Kg	<1
Chloroform	ug/Kg	<1
111 Trichloroethane	ug/Kg	<1
Carbon Tetrachloride	ug/Kg	<1
Benzene	ug/Kg	<1
1,2 Dichloroethane	ug/Kg	<1
Trichloroethene	ug/Kg	<1
1,2 Dichloropropane	ug/Kg	<1
Bromodichloromethane	ug/Kg	<1
2-chloroethvinylether	ug/Kg	<1
t-1,3Dichloropropene	ug/Kg	<1
Toluene	ug/Kg	<1
c-1,3Dichloropropene	ug/Kg	<1
112 Trichloroethane	ug/Kg	<1
Tetrachloroethene	ug/Kg	<1
Chlorodibromomethane	ug/Kg	<1
Chlorobenzene	ug/Kg	<1

ANALYTICAL PARAMETERS

Ethyl Benzene	ug/Kg	<1
m + p Xylene	ug/Kg	<2
o Xylene	ug/Kg	<1
Bromoform	ug/Kg	<1
1122Tetrachloroethan	ug/Kg	<1
1,2 Dichlorobenzene	ug/Kg	<1
1,3 Dichlorobenzene	ug/Kg	<1
1,4 Dichlorobenzene	ug/Kg	<1
Isopropylbenzene	ug/Kg	<1
n-Propylbenzene	ug/Kg	<1
p-Isopropyltoluene	ug/Kg	<1
124-Trimethylbenzene	ug/Kg	<1
135-Trimethylbenzene	ug/Kg	<1
n-Butylbenzene	ug/Kg	<1
sec-Butylbenzene	ug/Kg	<1
Naphthalene	ug/Kg	<1
ter. ButylMethylEther	ug/Kg	<1

cc:

REMARKS: Analysis was performed by GC/MS, EPA Method 8260.
Results reported on a dry weight basis.

DIRECTOR

rn= 12760

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/10

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747
ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D4, 2-4

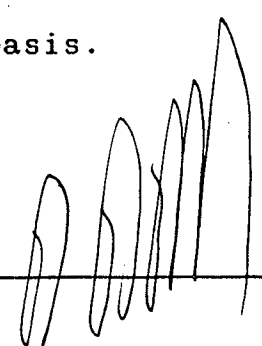
ANALYTICAL PARAMETERS
Petrol. Hydrocarbons mg/Kg 29
% Solids 89

ANALYTICAL PARAMETERS

cc:

REMARKS: EPA Method 418.1.
Results reported on a dry weight basis.

DIRECTOR _____



rn= 12761

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/10

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D4, 2-4
UNITS: ug/Kg

ANALYTICAL PARAMETERS

ANALYTICAL PARAMETERS

Naphthalene	<34
Acenaphthene	<34
Fluorene	<34
Phenanthrene	<34
Anthracene	<34
Fluoranthene	<34
Pyrene	<34
Benzo(a)anthracene	<34
Chrysene	<34
Benzo(b)fluoranthene	<34
Benzo(k)fluoranthene	<34
Benzo(a)pyrene	<34
Dibenzo(a,h)anthracene	<34
Indeno(1,2,3-cd)pyrene	<34
Benzo(ghi)perylene	<34

cc:

REMARKS: EPA Method 8270.
Results reported on a dry weight basis.

DIRECTOR



rn= 12762

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/10

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D4, 2-4

ANALYTICAL PARAMETERS

Arsenic as As	mg/Kg	1.9
Barium as Ba	mg/Kg	4.1
Cadmium as Cd	mg/Kg	<0.11
Chromium as Cr	mg/Kg	7.6
Lead as Pb	mg/Kg	2.2
Mercury as Hg	mg/Kg	0.0097
Selenium as Se	mg/Kg	<0.45
Silver as Ag	mg/Kg	<0.11

ANALYTICAL PARAMETERS

cc:

REMARKS: Results reported on a dry weight basis.

DIRECTOR



rn= 12763

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/10

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D4, 2-4

ANALYTICAL PARAMETERS

ANALYTICAL PARAMETERS

Diesel	ug/Kg	<230*
#2 Fuel Oil	ug/Kg	<230*
#4 Fuel Oil	ug/Kg	<230*
#6 Fuel Oil	ug/Kg	<230*
Lubricating Oil	ug/Kg	<230*
Mineral Spirits	ug/Kg	<230*
JP4	ug/Kg	<230*
JP5	ug/Kg	<230*
Jet A	ug/Kg	<230*
Kerosene	ug/Kg	<230*

cc:

REMARKS: Results reported on a dry weight basis.
Analyses performed by Modified 8015 Method.
Diesel Range Organics.
*Sample contains unknown product at 8300ug/Kg (quantified as #6 Fuel Oil).

DIRECTOR



rn= 12929

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/7

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D:05/02/97 RECEIVED:05/02/97

SAMPLE: Soil sample, U3-D5, 0-2

ANALYTICAL PARAMETERS

Chloromethane	ug/Kg	<1
Vinyl Chloride	ug/Kg	<1
Bromomethane	ug/Kg	<1
Chloroethane	ug/Kg	<1
Trichlorofluomethane	ug/Kg	<1
1,1 Dichloroethene	ug/Kg	<1
Methylene Chloride	ug/Kg	<1
t-1,2-Dichloroethene	ug/Kg	<1
1,1 Dichloroethane	ug/Kg	<1
Chloroform	ug/Kg	<1
111 Trichloroethane	ug/Kg	<1
Carbon Tetrachloride	ug/Kg	<1
Benzene	ug/Kg	<1
1,2 Dichloroethane	ug/Kg	<1
Trichloroethene	ug/Kg	<1
1,2 Dichloropropane	ug/Kg	<1
Bromodichloromethane	ug/Kg	<1
2chloroethvinylether	ug/Kg	<1
t-1,3Dichloropropene	ug/Kg	<1
Toluene	ug/Kg	<1
c-1,3Dichloropropene	ug/Kg	<1
112 Trichloroethane	ug/Kg	<1
Tetrachloroethene	ug/Kg	<1
Chlorodibromomethane	ug/Kg	<1
Chlorobenzene	ug/Kg	<1

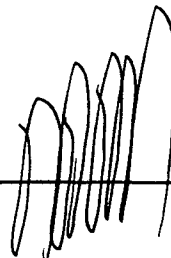
ANALYTICAL PARAMETERS

Ethyl Benzene	ug/Kg	<1
m + p Xylene	ug/Kg	<2
o Xylene	ug/Kg	<1
Bromoform	ug/Kg	<1
1122Tetrachloroethan	ug/Kg	<1
1,2 Dichlorobenzene	ug/Kg	<1
1,3 Dichlorobenzene	ug/Kg	<1
1,4 Dichlorobenzene	ug/Kg	<1
Isopropylbenzene	ug/Kg	<1
n-Propylbenzene	ug/Kg	<1
p-Isopropyltoluene	ug/Kg	<1
124-Trimethylbenzene	ug/Kg	<1
135-Trimethylbenzene	ug/Kg	<1
n-Butylbenzene	ug/Kg	<1
sec-Butylbenzene	ug/Kg	<1
Naphthalene	ug/Kg	<1
ter. ButylMethylEther	ug/Kg	<1

cc:

REMARKS: Analysis was performed by GC/MS, EPA Method 8260.
Results reported on a dry weight basis.

DIRECTOR



rn= 12748

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/7

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132

COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D5, 0-2

ANALYTICAL PARAMETERS

Petrol. Hydrocarbons mg/Kg 28
% Solids 96

ANALYTICAL PARAMETERS

cc:

REMARKS: EPA Method 418.1.
Results reported on a dry weight basis.

DIRECTOR _____



rn= 12749

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/7

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D:05/02/97 RECEIVED:05/02/97

SAMPLE: Soil sample, U3-D5, 0-2
UNITS: ug/Kg

ANALYTICAL PARAMETERS

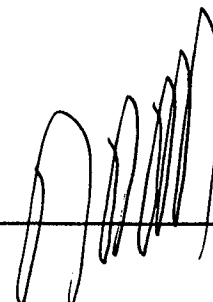
Naphthalene	<31
Acenaphthene	<31
Fluorene	<31
Phenanthrene	54
Anthracene	<31
Fluoranthene	79
Pyrene	86
Benzo(a)anthracene	<31
Chrysene	38
Benzo(b)fluoranthene	<31
Benzo(k)fluoranthene	<31
Benzo(a)pyrene	<31
Dibenzo(a,h)anthracene	<31
Indeno(1,2,3-cd)pyrene	<31
Benzo(ghi)perylene	<31

ANALYTICAL PARAMETERS

cc:

REMARKS: EPA Method 8270.
Results reported on a dry weight basis.

DIRECTOR



rn= 12750

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/7

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D5, 0-2

ANALYTICAL PARAMETERS

ANALYTICAL PARAMETERS

Arsenic as As	mg/Kg	2.2
Barium as Ba	mg/Kg	8.7
Cadmium as Cd	mg/Kg	<0.1
Chromium as Cr	mg/Kg	6.3
Lead as Pb	mg/Kg	4.9
Mercury as Hg	mg/Kg	0.013
Selenium as Se	mg/Kg	<0.42
Silver as Ag	mg/Kg	<0.1

cc:

REMARKS: Results reported on a dry weight basis.

DIRECTOR



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/7

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D:05/02/97 RECEIVED:05/02/97

SAMPLE: Soil sample, U3-D5, 0-2

ANALYTICAL PARAMETERS

Diesel	ug/Kg	<210*
#2 Fuel Oil	ug/Kg	<210*
#4 Fuel Oil	ug/Kg	<210*
#6 Fuel Oil	ug/Kg	<210*
Lubricating Oil	ug/Kg	<210*
Mineral Spirits	ug/Kg	<210*
JP4	ug/Kg	<210*
JP5	ug/Kg	<210*
Jet A	ug/Kg	<210*
Kerosene	ug/Kg	<210*

ANALYTICAL PARAMETERS

cc:

REMARKS: Results reported on a dry weight basis.
Analyses performed by Modified 8015 Method.
Diesel Range Organics.
*Sample contains unknown product at 940ug/Kg(quantified as #6 Fuel Oil).

DIRECTOR _____



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/7

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132, TCLPSTARBN
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D5, 0-2
UNITS: ug/L*

ANALYTICAL PARAMETERS

Naphthalene	<10
Acenaphthene	<10
Fluorene	<10
Phenanthrene	<10
Anthracene	<10
Fluoranthene	<10
Pyrene	<10
Benzo(a)anthracene	<10
Chrysene	<10
Benzo(b)fluoranthene	<10
Benzo(k)fluoranthene	<10
Benzo(a)pyrene	<10
Indeno(1,2,3-cd)pyrene	<10
Dibenzo(a,h)anthracene	<10
Benzo(ghi)perylene	<10

ANALYTICAL PARAMETERS

cc:

REMARKS: * Analysis performed on TCLP Leachate according to USEPA Method 1311.

DIRECTOR



rn= 13113

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/8

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D5, 2-4

ANALYTICAL PARAMETERS

Chloromethane	ug/Kg	<1
Vinyl Chloride	ug/Kg	<1
Bromomethane	ug/Kg	<1
Chloroethane	ug/Kg	<1
Trichlorofluomethane	ug/Kg	<1
1,1 Dichloroethene	ug/Kg	<1
Methylene Chloride	ug/Kg	<1
t-1,2-Dichloroethene	ug/Kg	<1
1,1 Dichloroethane	ug/Kg	<1
Chloroform	ug/Kg	<1
111 Trichloroethane	ug/Kg	<1
Carbon Tetrachloride	ug/Kg	<1
Benzene	ug/Kg	<1
1,2 Dichloroethane	ug/Kg	<1
Trichloroethene	ug/Kg	<1
1,2 Dichloropropane	ug/Kg	<1
Bromodichloromethane	ug/Kg	<1
2chloroethvinylether	ug/Kg	<1
t-1,3Dichloropropene	ug/Kg	<1
Toluene	ug/Kg	<1
c-1,3Dichloropropene	ug/Kg	<1
112 Trichloroethane	ug/Kg	<1
Tetrachloroethene	ug/Kg	<1
Chlorodibromomethane	ug/Kg	<1
Chlorobenzene	ug/Kg	<1

ANALYTICAL PARAMETERS

Ethyl Benzene	ug/Kg	<1
m + p Xylene	ug/Kg	<2
o Xylene	ug/Kg	<1
Bromoform	ug/Kg	<1
1122Tetrachloroethan	ug/Kg	<1
1,2 Dichlorobenzene	ug/Kg	<1
1,3 Dichlorobenzene	ug/Kg	<1
1,4 Dichlorobenzene	ug/Kg	<1
Isopropylbenzene	ug/Kg	<1
n-Propylbenzene	ug/Kg	<1
p-Isopropyltoluene	ug/Kg	<1
124-Trimethylbenzene	ug/Kg	<1
135-Trimethylbenzene	ug/Kg	<1
n-Butylbenzene	ug/Kg	<1
sec-Butylbenzene	ug/Kg	<1
Naphthalene	ug/Kg	<1
ter. ButylMethylEther	ug/Kg	<1

cc:

REMARKS: Analysis was performed by GC/MS, EPA Method 8260.
Results reported on a dry weight basis.DIRECTOR 

rn= 12752

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/8

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747
ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D5, 2-4

ANALYTICAL PARAMETERS

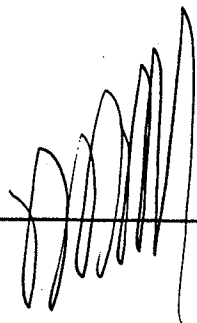
Petrol. Hydrocarbons mg/Kg 35
% Solids 96

ANALYTICAL PARAMETERS

cc:

REMARKS: EPA Method 418.1.
Results reported on a dry weight basis.

DIRECTOR



rn= 12753

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/8

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132

COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D5, 2-4

UNITS: ug/Kg

ANALYTICAL PARAMETERS

Naphthalene	<31
Acenaphthene	<31
Fluorene	<31
Phenanthrene	<31
Anthracene	<31
Fluoranthene	<31
Pyrene	<31
Benzo(a)anthracene	<31
Chrysene	<31
Benzo(b)fluoranthene	<31
Benzo(k)fluoranthene	<31
Benzo(a)pyrene	<31
Benzo(a,h)anthracene	<31
Indeno(1,2,3-cd)pyrene	<31
Benzo(ghi)perylene	<31

ANALYTICAL PARAMETERS

cc:

REMARKS: EPA Method 8270.
Results reported on a dry weight basis.

DIRECTOR 

In=

12754

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/8

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747

ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132

COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D5, 2-4

ANALYTICAL PARAMETERS

Arsenic as As	mg/Kg	1.1
Barium as Ba	mg/Kg	4
Cadmium as Cd	mg/Kg	<0.1
Chromium as Cr	mg/Kg	2.3
Lead as Pb	mg/Kg	1.2
Mercury as Hg	mg/Kg	0.007
Selenium as Se	mg/Kg	<0.42
Silver as Ag	mg/Kg	<0.1

ANALYTICAL PARAMETERS

cc:

REMARKS: Results reported on a dry weight basis.

DIRECTOR



rn= 12755

NYSDOH ID# 10320

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971929/8

05/19/97

Geraghty & Miller, Incorporated
88 Duryea Road
Melville, NY 11747
ATTN: Robert Porsche

SOURCE OF SAMPLE: Bethpage, NY0008.132
COLLECTED BY: Client DATE COL'D: 05/02/97 RECEIVED: 05/02/97

SAMPLE: Soil sample, U3-D5, 2-4

ANALYTICAL PARAMETERS

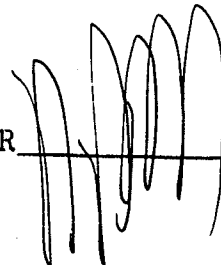
ANALYTICAL PARAMETERS

Diesel	ug/Kg	<210
#2 Fuel Oil	ug/Kg	<210
#4 Fuel Oil	ug/Kg	<210
#6 Fuel Oil	ug/Kg	<210
Lubricating Oil	ug/Kg	<210
Mineral Spirits	ug/Kg	<210
JP4	ug/Kg	<210
JP5	ug/Kg	<210
Jet A	ug/Kg	<210
Kerosene	ug/Kg	<210

cc:

REMARKS: Results reported on a dry weight basis.
Analyses performed by Modified 8015 Method.
Diesel Range Organics.

DIRECTOR



rn= 12927

NYSDOH ID# 10320