# FREUDENTHAL & ELKOWITZ CONSULTING GROUP, INC.

Theresa Elkowitz, President Hugo D. Freudenthal (Retired-1994) December 27, 2001

#### VIA FACSIMILE AND U.S. MAIL

Mr. John Shea, Executive Director Board of Cooperative Educational Services of Nassau County Division of Business Services - Facilities Services Department Haskett Drive Complex 100 Haskett Drive, Building C Syosset, New York 11791

Re: Phase II Environmental Site Assessment Report Industrial Property 71 Clinton Road Incorporated Village of Garden City, New York 368 Veterans Memorial Highway
Commack, New York 11725
Tel: (631) 499-2222
Fax: (631) 499-5928

Dear Mr. Shea:

Pursuant to your request, Freudenthal & Elkowitz Consulting Group, Inc. (F&E) has completed the Phase II Environmental Site Assessment (ESA) activities at portions of the above-referenced site. The purpose of the Phase II ESA was to determine if historic industrial practices conducted on the overall 16-acre property have impacted underlying soil and/or groundwater quality.

The Nassau County Board of Cooperative Educational Services (BOCES) is considering leasing, with an option to purchase, a portion of the site improved with an office building (i.e., subject office building). Several other buildings occupy the site. A portion of the overall property will be leased/purchased as a condominium, BOCES will also utilize portions of the common areas of the overall property (such as parking).

#### Introduction

F&E completed a Phase I ESA for the overall property on December 6, 2001. The Phase I ESA was prepared to determine evidence of recognized environmental conditions and/or potential environmental concerns associated with the commercial property located at 71 Clinton Road, Garden City, New York. Access to the subject office building and the parking lots of the overall property was gained. However, access to the interiors of the other on-site buildings was not permitted.

F&E was not provided with the exact number or locations' of common areas. Additionally, several areas of environmental concerns identified through historic sources were not accessible due to new construction or tenant issues. Therefore, F&E's Phase II ESA could not address/target the exact location of areas of concern across the entire 16-acre overall property.

Presently, the subject office building is unoccupied with the exception of a professional office in the south wing. The remainder of the overall property includes three other buildings: 506 Stewart Avenue (which houses the Epilepsy Foundation Center and Level 3 Communications); 510 Stewart Avenue (which is utilized by Federal Express as a shipping depot); and an old boiler house (no longer functional, which is used for storage).

The overall property was developed in 1917 for use by Curtiss Engineering Corporation which became Curtiss Aeroplane and Motor Corporation in the early 1920s. The Garden City plant was closed in 1931. The site was vacant until 1933 and then had several occupants between 1933 and 1939, none of which were manufacturers. Sperry Gyroscope leased the overall property from 1940 until 1948 and engaged in military research and development, in particular, activities involving unmanned torpedo planes. Many buildings were erected and demolished during that period of time.

From 1948 through 1970, Oxford Filing Supply Co., Inc. occupied the overall property for the manufacturing of filing equipment. In 1971, Oxford Pendaflex was reportedly the new owner of the overall property and manufactured filing supplies for approximately ten years. Esselte Pendaflex took over ownership, still for the manufacturing of paper-based supplies, through 1990. Esselte Pendaflex continued to utilize the premises for office space until last year.

The Phase I revealed recognized environmental conditions and potential environmental concerns in connection with the overall property, as follows:

- 1. Given the long history of industrial operations/manufacturing (i.e., Curtiss-Wright, Sperry Gyroscope, Esselte Pendaflex, etc.) many years of which pre-dated the existence of municipal sanitary sewers, there was a significant potential for on-site disposal of hazardous materials. As such activities would have occurred as early as 1917, records pertaining to same are either non-existent or very limited. Thus, no representation could be made within the scope of the Phase I ESA regarding soil and groundwater conditions resulting from historic property uses.
- 2. Multiple large-capacity underground storage tanks (USTs) for fuel oil and gasoline were identified; some of these tanks appear in the records as early as 1925. No documentation is available pertaining to the final status/decommissioning of any of the tanks identified through the available records (with the exception of one 3,000 gallon No. 2 fuel oil UST). Some of the tanks may still be present on the site beneath asphalt pavement or structures.

#### **Summary of Previous Environmental Assessments**

Norfolk Environmental (Norfolk) of Fairfield, Connecticut prepared a Phase I ESA in September of 1995 for Lazarus Berman Associates of Syosset, New York.<sup>1</sup> Norfolk was able to inspect the Esselte Pendaflex facility while it was still in operation. In addition, Norfolk was able to interview Esselte representatives who had knowledge of manufacturing operations historically conducted on the site and the locations of associated site features.

Based upon review of Norfolk's Phase I ESA, additional information pertaining to historic site features and operations is summarized below for the overall property:

- Coal was used for on-site heating until 1971;
- An undocumented UST was found during Norfolk's site inspection between Building Nos. 1 (subject office building) and 2 (adjacent Level 3/Epilepsy Foundation building). No evidence of this UST is currently present;
- An on-site sanitary system was located at the southern property boundary to the south of what is now the Level 3 building. Circular marks in the asphalt are still visible at this location;
- Fifty drums of hazardous waste were formerly stored on asphalt, outdoors along the southern property boundary. Wastes included adhesives, oils and organic liquids. The drums were located to the south of what is now the Federal Express building. The drums were removed by Chemical Pollution Control. No soil samples were collected subsequent to drum removal to ascertain associated surface and subsurface conditions;
- A 20,000 gallon No. 2 fuel oil UST located southwest of the Federal Express building was still in service at the time of Norfolk's inspection (reportedly, the tank has since been removed);
- The floor drains in the boiler house (Building No. 7) discharge in-situ. Same received boiler blow-down (the boilers have since been removed); and

<sup>&</sup>lt;sup>1</sup>This report was provided to F&E after the F&E Phase I ESA was complete and after initiation of the F&E Phase II field investigation activities.

• Steam conveyances throughout the site (underground tunnels) are lined with aircell insulation which contains asbestos. The steam tunnel at the subject office building was not accessible for inspection. Norfolk estimated the amount of asbestos insulation at 5,000 linear feet.

Norfolk subsequently conducted a Phase II ESA in February of 1996 on behalf of Stewart & Clinton Co. LLC.<sup>2</sup> Norfolk identified eight areas of concern (AOCs) which required investigation:

- 1. The former drum storage area to the south of the Federal Express building;
- 2. Three USTs;
- 3. The on-site sanitary system south of Building No. 6 (now the parking lot south of the Level 3 building);
- 4. The recharge basin at the east side of the property and an historic recharge basin which occupied roughly the same area;
- 5. A 20 foot by 20 foot sump and three drywells at what is now the southern portion of the Federal Express building. These structures would likely have been filled to accommodate construction of the current building;
- 6. A motor testing area which was formerly located inside what is now the central portion of the Federal Express building;
- 7. An undocumented on-site sanitary system located north of what is now the northern portion of the Federal Express building; and
- 8. The quality of groundwater both on- and off-site.

<sup>&</sup>lt;sup>2</sup>This report was also provided to F&E on the day after initiation of Phase II investigation activities.

Norfolk's investigation involved the installation of 30 soil borings across the site; the collection of sediment samples from two on-site sanitary systems; and the collection of 15 groundwater samples to ascertain subsurface conditions associated with the eight AOCs (see Attachment A).

- 1. <u>Former Drum Storage Area (DSA)</u> Three soil borings were installed to 12 feet below grade surface (bgs) equally spaced along the length of the DSA (see Figure 1 in Appendix A). Three soil samples and four groundwater samples (one shallow and one deep groundwater sample from the same boring) were analyzed. All three soil samples were non-detect for Volatile Organic Compounds (VOCs) and Semi-Volatile Organic Compounds (SVOCs). Trichloroethene (TCE) (5.7 micrograms per liter [ug/L]) and tetrachloroethene (PCE) (13.0 ug/L) were detected in the shallow groundwater sample at location SP-1. This location was south of the boiler house and roughly corresponds with F&E's groundwater sampling location S-13.
- 2. <u>USTs</u> Three USTs were investigated including:
  - 20,000 Gallon No. 2 Fuel Oil UST Three soil borings were installed a. around the then in-service 20,000 gallon No. 2 fuel oil UST at the southwest corner of the Federal Express building. This 20,000 gallon UST is believed to have replaced an earlier UST (possibly 30,000 gallon capacity) at the same location. Two borings installed around the eastern end of the tank exhibited no evidence of contamination. The boring at the western end exhibited a strong fuel oil odor from 14 feet to 20 feet bgs. A sample collected from 23 feet bgs had a Total Petroleum Hydrocarbon (TPH) concentration of 450 milligrams per kilogram (mg/kg). A downgradient groundwater sample (SP-2) was non-detect for VOCs, SVOCs and TPH. It should be noted that the NYSDEC does not have an actionable concentration for TPH. During F&E's Phase II, similar conditions were found at the western end of the tank grave.
  - b. <u>Former 10,000 Gallon No. 2 Fuel Oil UST</u> Two soil borings were installed within the tank grave of a former 10,000 gallon No. 2 fuel oil UST to the south of former Building No. 6 (now the parking lot south of the Level 3 building). This tank appears to correspond with the fuel oil tank indicated on historic Sanborn maps. No evidence of contamination was found by Norfolk. F&E encountered refusal at several locations in this area; likely the result of foundation remnants from the demolition of Building No. 6 under the existing parking lot. As discussed later, evidence appears to indicate that this UST does not presently exist at this location.

- c. <u>Undocumented UST</u> Norfolk observed evidence (fill pipe) of an undocumented UST in the courtyard area between Building Nos. 1 (the subject office building) and 2. The cap to the fill pipe was removed and the inside diameter of the tank was measured at four feet. Approximately ten inches of water (apparently) was present in the tank. Norfolk attempted several borings around the tank but hit refusal and had further difficulties due to underground utility lines. There is currently no visible evidence of this tank. As previously discussed, F&E had not been provided with a copy of the Norfolk Phase II ESA prior to the date that the geophysical survey was conducted by this firm. Therefore, the area of this UST was not investigated.
- 3. <u>On-Site Sanitary System South of Building No. 6</u> Two cesspools were observed by Norfolk at this location (currently represented by circular marks in the asphalt). The cesspools were 21 to 22 feet deep and contained standing liquid. Bottom sediment samples were collected from each of the two pools. Low levels of BTEX<sup>3</sup> and chlorobenzene were found in one sample, and slightly elevated concentrations of zinc (60 mg/kg) and chromium (79 mg/kg) were also detected. Two downgradient groundwater samples were collected from the same boring (one shallow, one deep), however, according to Norfolk's sampling location figure, it did not appear that the location was actually situated downgradient of the cesspools. No VOCs or metals were detected in the groundwater sample.
- 4. <u>Recharge Basins</u> The existing recharge basin was constructed circa 1959 and reportedly replaced a prior recharge basin which had to be filled to accommodate construction of the southern portion of what is now the Federal Express building. Norfolk installed one upgradient and one downgradient boring at the existing recharge basin. A third boring was installed at a location corresponding with the prior recharge basin at the northeast corner of the southern portion of the Federal Express building. Lead (0.10 milligrams per liter [mg/L]) was detected in the groundwater sample representative of the historic recharge basins. F&E collected one confirmatory groundwater sample from downgradient of the existing recharge basin which found no impacts to same.

<sup>&</sup>lt;sup>3</sup>Benzene, toluene, ethylbenzene and xylenes - typical gasoline constituents.

- 5. <u>Impacts of Sump and Drywells Pre-Dating Southern Portion of Federal Express</u> <u>Building</u> - Two soil samples (19 to 21 feet and 23 to 25 feet bgs) and one groundwater sample were collected from a location corresponding with the former sump. No constituents of concern were detected in either of the samples. As this sampling location corresponds with the interior of the Federal Express building, F&E was not able to investigate this area.
- 6. <u>Former Motor Testing Area</u> This facility was associated with historic Curtiss-Wright operations and was located at what is now the central portion of the Federal Express building. Three soil borings were installed inside the premises; one was advanced to groundwater. No constituents were present in the samples above NYSDEC TAGM Recommended Soil Cleanup Objectives (RSCOs)<sup>4</sup> (for soils) or above NYSDOH ambient water-quality standards.<sup>5</sup> Very minor concentrations of BTEX were detected in one soil sample, but same were below the applicable RSCOs.
- 7. <u>Undocumented On-Site Sanitary System</u> Norfolk identified this site feature during the 1995 site inspection. Same was observed to be to the north of the Federal Express building. Two soil borings were installed to assess subsurface conditions associated with the system. One sample was analyzed for VOCs, metals and TPH. No elevated concentrations of constituents were detected. No further investigation of this site feature was conducted by F&E (other than the site-wide groundwater investigation).

<sup>&</sup>lt;sup>4</sup>NYSDEC Recommended Soil Clean-up Objectives (RSCOs) provided in the NYSDEC Technical Administrative Guidance Memorandum (TAGM) 94-4046, revised April 1995.

<sup>&</sup>lt;sup>5</sup>NYSDOH Division of Water Technical and Operational Guidance Series (TOGS 1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations issued October 22, 1993 and revised June 1998.

8. <u>On- and Off-Site Groundwater Quality</u> - Norfolk identified the presence of TCE in one "deep" groundwater sample at the northern (upgradient) property boundary. No VOCs were detected in any of the four shallow upgradient samples. Norfolk concluded that this "deep" contamination was migrating on to the site from an upgradient, documented plume (Roosevelt Field). VOC contamination was also identified at two downgradient locations (on-site sanitary system south of the parking lot south of the Level 3 building) and at the western portion of the former drum storage area. As neither of the soil/sediment samples from the cesspools or the drum storage area had detectable concentrations of the same contaminants found in the downgradient groundwater samples (PCE and TCE), Norfolk concluded that the contamination was from an off-site, upgradient source.

Norfolk recommended closure of the small, undocumented UST between Building Nos. 1 and 2; permitting or closure of the boiler house floor drains (pursuant to USEPA Underground Injection Control [UIC] Program regulations); possible removal of the petroleum-impacted soils associated with the 20,000 gallon fuel oil UST; and remediation of the two contaminated cesspools at the southern property boundary.

As discussed below, F&E collected soil and groundwater from several complimentary sampling points. The data confirmed the results of the Norfolk Phase II ESA. Therefore, F&E utilized the Norfolk data in order to provide an overall assessment of the environmental conditions at the facility, as discussed below.

#### F&E Investigation Methodology

#### Geophysical Survey

F&E conducted a geophysical survey of the parking lots of the overall property on December 9, 2001 to evaluate the existence of out-of-service USTs and buried cesspools. Additionally, each of 35 proposed sampling locations were cleared for the presence of underground utilities.

The geophysical survey was conducted utilizing ground penetrating radar (GPR), magnetometer and cable-avoidance tool techniques. As indicated on Figure 1 and Table 1, there were five locations where historic records indicated the presence of USTs. One location was within the existing Federal Express building while a second location was off of the site to the northeast. These two locations were not investigated during the geophysical survey. The reported locations of three USTs situated in the southern parking lot were evaluated as part of the geophysical survey.

#### Soil and Groundwater Sampling

As previously discussed, F&E received copies of the Norfolk Phase I and Phase II ESAs prepared for the subject property in September 1995 and February 1996, respectively. The reports were received by F&E after the initiation of the subject Phase II ESA. However, the scope of the F&E Phase II ESA was adjusted to confirm, but not repeat, the work conducted by Norfolk, as well as provide data in areas of the site not previously investigated.

During the F&E Phase II ESA, several of the specific AOCs identified in the two Phase I ESAs (i.e., Norfolk Phase I ESA, dated September 1995 and F&E's Phase I ESA, dated December 2001) were not accessible due to tenant issues and/or new construction, therefore, F&E conducted a site-wide groundwater sampling program to evaluate the potential impacts of past site uses. As indicated in Table 1, groundwater sampling locations were selected to be hydraulically downgradient (e.g., south-southwest) of specific AOCs. Additionally, the multiple sampling points conducted by both F&E and Norfolk were designed to evaluate the presence of impacts associated with out-of-service cesspools which were utilized at the site since its construction circa 1917 through the time the facility was connected to the Nassau County sewer system circa the 1950s.

At each location, groundwater samples were collected from 32 to 36 feet bgs utilizing the Geoprobe drilling technique.<sup>6</sup> Groundwater samples were collected by inserting a length of new, pre-cleaned polyethylene tubing, equipped with a check valve, into the screened interval; vigorously oscillating the tubing thereby driving water to the surface and collecting the groundwater in appropriate laboratory-supplied glassware.

Two soil borings were advanced in the vicinity of one of the former UST graves (20,000 gallon No. 2 fuel oil). Soil samples were collected utilizing the Geoprobe technique and evaluated for the presence of contaminants utilizing a Photoionization Detector (PID) and by visual and olfactory inspection.

#### Analytical Testing

In F&E's experience, contaminants associated with aircraft and aircraft- component manufacturing activities are a result of the use of a wide-range of industrial products including halogenated solvents (e.g., PCE, TCE, 1,1,1-trichloroethane [TCA], etc.), petroleum products (e.g., oils, aviation fuel, petroleum-based cleaners, vehicle gasoline, fuel oil, etc.) and metals (e.g., aluminum, beryllium, chromium, cadmium, nickel, zinc, etc.). Based upon these former manufacturing activities, soil and groundwater samples were analyzed for one or more of the following:

<sup>&</sup>lt;sup>6</sup>All sampling equipment was thoroughly decontaminated prior to each use.

- NYSDEC Target Compound List (TCL) VOCs by EPA Method 8260. This analytical suite includes parameters such as halogenated solvents and gasoline-related compounds;
- NYSDEC STARS VOCs and SVOCs by EPA Methods 8021 and 8270, respectively. These analytical suites are specifically utilized by the NYSDEC to address the potential impacts from gasoline and/or fuel oil releases; and
- NYSDEC Target Analyte List (TAL) Metals by USEPA 6010/7000 Series. This list of analytes includes the metals typically associated with the historic aircraft manufacturing industry. Due to the nature of the Geoprobe technique, the groundwater samples were very turbid. The unpreserved samples were allowed to settle out in the laboratory and the decant was analyzed. This technique leads to high-biased results for typical clay minerals (e.g., aluminum, calcium, potassium and sodium). The analytical results provide good-quality data for industrial metals such as beryllium, chromium, cadmium, nickel, zinc, etc.

The full list of analytes is included in the laboratory data sheets in Attachment B.

#### F&E Phase II Investigation Results

#### Geophysical Survey

The geophysical survey did not indicate the presence of USTs in the southern parking lot of the facility. An on-site contractor (Action Environmental), who was conducting demolition activities within the Administration building during F&E's Phase II activities, indicated that Action Environmental had excavated the 20,000 gallon fuel oil UST located behind the Federal Express building. He further stated that a Nassau County Department of Health (NCDH) representative was on the site during the removal. He stated that associated documentation regarding the UST removal, if found, would be forwarded to F&E. Same has not been received to date.

Several underground utilities including natural gas, water and electric services were found and marked during the survey. The fiber optic subsurface lines for Level 3 Communications were marked by that company. No subsurface utilities were encountered during the investigation.

#### UST Evaluation

Soil borings S-34 and S-35 were conducted within the former grave of the 20,000 gallon fuel oil UST to the southwest of the Federal Express building. Visual and olfactory evidence of petroleum contamination was encountered in boring S-34 from approximately 19 to 20 feet bgs. No indications of fuel oil were evident in the soils from boring S-35.

As indicated on Table 2, a soil sample from each boring was analyzed for NYSDEC STARS VOCs and SVOCs. Several STARS VOCs and SVOCs were detected in the S-34 (19-20 foot) soil sample. However, none were present above their respective NYSDEC RSCOs. No STARS VOCs were detected in the S-35 (14-16 foot) soil sample. Of two STARS SVOCs detected in the S-35 sample, only benzo-(a)-pyrene (320 ug/kg) was detected above its respective NYSDEC RSCO (61 ug/kg).

A groundwater sample was also collected from boring S-34 and analyzed for NYSDEC STARS VOCs and SVOCs. As indicated on Table 3, no STARS VOCs or SVOC, were detected in the underlying groundwater sample. Based upon these data, there is evidence of a release of petroleum product associated with the former 20,000 gallon UST or possibly an earlier UST located southwest of the Federal Express building. However, with the exception of one SVOC detected just above its NYSDEC RSCO, none of the contaminants were detected above NYSDEC actionable concentrations. Additionally, it does not appear that the petroleum release has impacted groundwater. Both F&E's and Norfolk's data support these conclusions.

Petroleum-related VOCs were not detected downgradient of any of the other suspected former UST locations. Therefore, it appears that the contents of former USTs have not impacted soil conditions at sufficient concentrations to have affected groundwater quality.

#### Site-Wide Groundwater Evaluation

As previously discussed, TAL Metals were analyzed in groundwater samples collected from S-1, S-4, S-14, S-15, S-20, S-25 and S-26 to evaluate groundwater conditions downgradient of areas of the property where metals may have been handled. The groundwater sample collected from S-30 was analyzed for TAL Metals to evaluate upgradient conditions. As indicated in Table 4, none of the metals typically associated with aircraft manufacturing (e.g., aluminum, beryllium, cadmium, chromium, nickel and zinc) were detected in any of the groundwater samples above concentrations of concern. The metals that were detected at elevated concentrations (iron, potassium, manganese and sodium) are either naturally occurring in Long Island groundwater or representative of clay minerals due to the turbid nature of the groundwater samples. Based upon these analytical results, site-related metals-handling activities have not adversely impacted groundwater beneath the subject property.

Halogenated solvents, including PCE and TCE, were not detected in any of the upgradient sampling locations (Figure 2). Low concentrations of PCE (e.g., 1 to 4 ug/l) and TCE (1 to 14 ug/l) were detected in groundwater samples collected from S-13, S-14, S-15, S-18, S-20 and S-21 located in the southwest portion of the facility's parking lot. These data were very consistent with the data included in the Norfolk Phase II ESA. The absence of halogenated solvents in the upgradient sampling locations and the presence of same in the downgradient locations indicates that there is a source of PCE and/or TCE in the unsaturated soils of the site. The source could be the former drum storage area or a site feature not yet identified. However, due to the minor level of impact (the NYSDOH Class GA standards for both PCE and TCE is 5 ug/l), the contamination does not appear to be significant.

The only gasoline-related compounds detected in a downgradient sampling location were toluene (2 ug/l), ethylbenzene (2 ug/l) and total xylenes (11 ug/l) in the groundwater sample collected from S-20. This sampling point was located just downgradient of a roof-drain drywell which may be the source of the impacts.<sup>7</sup> Only total xylenes were detected above the respective Class GA standard of 5 ug/l. Benzene (2 ug/l), toluene (53 ug/l), ethylbenzene (4 ug/l) and total xylenes (20 ug/l) were detected in the S-25 groundwater sample. These data indicate a gasoline-related source of contamination exists to the north off of the subject property or that a release of gasoline (possibly from a vehicle) occurred on the site in the vicinity of S-25. Former Building No. 8, which is located on Village-owned property, was formerly utilized as a garage and is located upgradient of the S-25 sampling location. It should be noted that the gasoline additive MTBE was not detected in any of the groundwater samples indicating that the potential sources of gasoline impacts are relatively old (i.e., prior to the use of MTBE).

#### Summary and Recommendations

Based upon F&E's current investigation and the results of Norfolk's previous Phase II ESA, the following conclusions are offered.

- There are remnant petroleum-related soil impacts at the location of the former 20,000 gallon fuel oil UST located behind the Federal Express building. Same have not impacted underlying or downgradient groundwater quality. The limited analytical data indicate that STARS VOCs and SVOCs are not generally present above NYSDEC RSCOs.
- Other than a small, undocumented UST present near the front of the overall property, there were no large-capacity USTs still present at locations indicated on historic Sanborn maps.

<sup>&</sup>lt;sup>7</sup>A release of gasoline from a vehicle could have impacted the drywell.

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- According to Norfolk, the bottom sediments from two out-of-service cesspools are impacted above regulatory guidelines. Out-of-service boiler blowdown pits inside Building No. 7 may have received inadvertent discharges in contravention of USEPA UIC regulations.
- A minor source area of halogenated solvents is likely present in the southwestern portion of the overall property based upon the low concentrations of same in on-site groundwater. The impact to groundwater is minimal and just exceeds NYSDOH Class GA groundwater quality standards.
- The bottom sediments within the roof-drain drywell located at the southwest corner of the subject office building may be impacted by petroleum (gasoline) products.
- There may be an off-site and upgradient source of gasoline-related contaminants impacting groundwater quality in the north-central portion of the property.

Based upon the above, F&E recommends the following:

- A limited soil investigation should be conducted in the vicinity of the former 20,000 gallon No. 2 fuel oil UST located behind the Federal Express building. The purpose of the investigation would be to confirm that none of the detected contaminants are indeed present above NYSDEC RSCOs. The NYSDEC should be provided with the analytical data for its concurrence that no further action is necessary. Based upon our current knowledge of the site, it is not expected that the costs to conduct this investigation task would exceed \$4,000. The costs to properly remove and dispose of the impacted soils, if required, is not expected to exceed \$20,000 to \$30,000.
- The bottom sediments from within of the blowdown pits and roof-drain drywell should be collected and analyzed to determine if they are impacted above USEPA/NCDH action levels. The estimated cost to conduct this task is not expected to exceed \$3,000.
- The bottom sediments within the out-of-service cesspools on the south side of the property, the blowdown pits and roof-drain drywell should be remediated, as warranted, under appropriate regulatory oversight. In F&E's experience, the typical cost to remediate such structures range between \$4,000 and \$7,000 per impacted leaching pool.
- The location of the small undocumented UST identified by Norfolk should be confirmed and some should be removed with appropriate regulatory oversight.

• It should be noted that the apparent impacts to soil and groundwater, especially with respect to former USTs and halogenated solvents are relatively minor, given the long standing industrial use of the property. Notwithstanding this, there are documented areas of impact (e.g., shallow groundwater) in contravention of NYS Standards. Thus, Nassau County BOCES may wish to consider formal consultation with the NYSDEC to determine whether regulatory action would be required and to further evaluate potential liability.

Should you have any further questions, please feel free to contact me.

Sincerely,

FREUDENTHAL & ELKOWITZ CONSULTING GROUP, INC.

R1B

Richard J. Baldwin, CPG Project Director

RJB/ba enc. cc: David Brauner, Esq. David Kay, Esq.



20,000 gallon No. 2 UST

# Legend:

Buildings present in 1925

New Building Number 10 erected by Oxford Filing Company

- Buildings erected by Sperry Gyroscope until 1944
- Buildings erected after 1948.
  - **x** Historical tank locations according to Plot plans and Sanborn maps.

# Figure 1 - Site Details

2001 Aerial photograph provided by the New York State Geographical Information System orthoimagery database.



#### Table 1

#### Sampling Rationale

Sample	r 		Intended	Analyses
Identification	Location	Matrix	Purpose	Conducted
S-1	South of existing recharge basin.	GW <sup>1</sup>	Evaluate potential discharges to recharge basin and confirm prior Norfolk detection of lead.	TCL VOCs, TAL Metals
S-2	Northeast corner of property.	GW	Evaluate conditions downgradient of former Curtiss- Wright accessory buildings (including "Globe Wireless" and "Dope Storage" buildings) and upgradient of majority of on-site existing and historic infrastructure.	TCL VOCs
S-3	Northeast corner of property.	GW	Evaluate conditions downgradient of former Curtiss- Wright accessory buildings and upgradient of majority of on-site existing and historic infrastructure.	TCL VOCs
S-4	Eastern portion of property	GW	Evaluate conditions downgradient of former Curtiss- Wright accessory buildings and upgradient of majority of on-site existing and historic infrastructure.	TCL VOCs, TAL Metals
S-7	Southeastern portion of property	GW	Evaluate conditions downgradient of existing and former recharge basins.	TCL VOCs
S-13	South property line.	GW	Confirm Norfolk data and evaluate conditions downgradient of former boiler house / leaching system.	TCL VOCs
S-14	South property line.	GW	Confirm Norfolk data and evaluate conditions downgradient of former tin shop/metals storage building and former 10,000 gallon UST.	TCL VOCs, TAL Metals, STARS SVOCs
S-15	Southwest property line.	GW	Confirm Norfolk data and evaluate conditions downgradient of former tin shop septic system.	TCL VOCs, TAL Metals
S-17	Southwest property line.	GW	Downgradient of former manufacturing building and chemical laboratory.	TCL VOCs
S-18	Southwest property line.	GW	Downgradient of former manufacturing building.	TCL VOCs
S-20	Southwest property line.	GW	Downgradient of administration building and roof drain drywell.	TCL VOCs, TAL Metals
S-21	West property line.	GW	Evaluate conditions downgradient of Administration building (subject office building).	TCL VOCs
S-24	Northwest property line.	GW	Evaluate conditions downgradient of former Building 20 and upgradient to main portion of property.	TCL VOCs
S-25	North property line.	GW	Evaluate conditions downgradient of former Building 8 (garage) and upgradient to main portion of property.	TCL VOCs, TAL Metals
S-26	North property line.	GW	Evaluate conditions downgradient of former Sperry Building X and Canvas Enclosure and upgradient to main portion of property.	TCL VOCs, TAL Metals
S-27	North property line.	GW	Evaluate conditions downgradient of former Sperry Building X and Canvas Enclosure and upgradient to main portion of property.	TCL VOCs
S-28	Northeast property line.	GW	Evaluate conditions downgradient of reported off- site tank and upgradient to main portion of property.	TCL VOCs
S-29	Northeast property line.	GW	Evaluate conditions downgradient of reported off- site tank and upgradient to main portion of property.	TCL VOCs
S-30	Northeast corner of property.	GW	Evaluate conditions upgradient to main portion of property.	TCL VOCs, TAL Metals
S-31	Southwest parking lot.	GW	Evaluate location of former gasoline UST.	TCL VOCs
S-34	Behind Federal Express	GW/Soil	Confirm Norfolk data and evaluate conditions	STARS VOCs,
S-35	Behind Federal Express	Soil	Confirm Norfolk data and evaluate conditions	STARS VOCs,
	Dunding.	ı	associated with former 20,000 gallon fuel off US1.	i svocs

Notes:

<sup>1</sup> GW - Groundwater.

#### Table 2

	S-34	S-35	
VOCs (ug/kg)	(19-20 ft)	(14-16 ft)	NYSDEC TAGM
4-Isopropyltoluene	360	ND	10,000
n-Propylbenzene	210	ND	3,700
1,2,4-Trimethylbenzene	930	ND	10,000
Isopropylbenzene	160	ND	2,300
sec-Butylbenzene	440	ND	10,000
Naphthalene	200	ND	13,000
	S-34	S-35	
SVOCs (ug/kg)	(19-20 ft)	(14-16 ft)	NYSDEC TAGM
Acenaphthene	800	ND	50,000
Fluorene	1,300	ND	50,000
Phenanthrene	3,500	ND	50,000
Anthracene	890	ND	50,000
Pyrene	1,200	ND	50,000
Benzo-(a)-pyrene	ND	320	61
Benzo-(g,h,i)-perylene	ND	350	50,000

#### Summary of STARS VOC and SVOCs Detected in Soil Samples

Notes:

NYSDEC TAGM - Recommended Soil Cleanup Objectives,

HWR-94-4046, Revised 4/95 and other indicated documents.

ND - Analyte was not detected above method detection limit.

NA - Not Available.

Bolded Value indicates detected concentration exceeded guidance value.

#### Summary of VOCs Detected in Groundwater Samples

	S-1	S-2	S-3	S-4	S-7	S-13	S-14	S-15	S-17	S-18	S-20	S-21	S-24	S-25	S-26	S-27	S-28	S-29	S-30	S-31	S-34	NYSDEC
VOCs (ug/L)	(32-36 ft)	GA Standard																				
Benzene	ND	2	ND	1																		
Ethylbenzene	ND	2	ND	ND	4	ND	5															
Trichloroethene	ND	ND	ND	ND	ND	10	14	5	ND	ND	2	1	ND	NA	5							
Tetrachloroethene	ND	ND	ND	ND	ND	2	4	1	ND	1	ND	NA	5									
Toluene	ND	3	ND	ND	53	ND	5															
Total Xylenes	ND	11	ND	ND	20	ND	5															

Notes:

NYSDEC Class GA Ambient Water Quality Standard or Guidance Value

ND - Analyte was not detected above method detection limit.

NA - Not Analyzed.

Bolded Values indicates detected concentration exceeded guidance value.

#### Table 4

	S-1	S-4	S-14	S-15	S-20	S-25	S-26	S-30	NYSDEC
Metals (ug/L)	(32-36 ft)	GA							
Silver	ND	50							
Aluminum	60	1,830	74	28	111	123	782	709	NA
Arsenic	ND	25							
Barium	44	58	101	59	60	199	85	220	1,000
Beryllium	ND	3 (GV)							
Calcium	13,600	14,600	26,500	20,100	27,600	33,600	40,600	22,100	NA
Cadmium	ND	5							
Cobalt	26	47	ND	ND	ND	40	22	ND	NA
Chromium	ND	50							
Copper	ND	200							
Iron	139	9,930	552	2,400	533	988	1,020	322	300
Potassium	3,720	3,430	8,200	3,040	4,810	6,950	3,920	3,740	NA
Magnesium	3,260	2,910	3,830	2,220	3,180	3,340	4,640	5,120	35,000 (GV)
Manganese	10,500	1,980	5,080	5,160	819	2,720	1,730	2,120	300
Sodium	6,180	14,900	23,300	12,300	15,200	85,000	19,700	52,200	20,000
Nickel	ND	ND	ND	44	ND	ND	ND	ND	100
Lead	ND	25							
Antimony	ND	3							
Selenium	ND	10							
Thallium	ND	0.5 (GV)							
Vanadium	ND	NA							
Zinc	25	37	23	39	21	21	21	49	2,000 (GV)
Mercury	ND	0.7							

#### Summary of Target Analyte List (TAL) Metals in Groundwater Samples

Notes:

NYSDEC Class GA Ambient Water Quality Standard or Guidance Value

ND - Analyte was not detected above method detection limit.

NA - Not Available.

Bolded Values indicates detected concentration exceeded

Class GA Standards

(GV) - Class GA Guidance Value

### ATTACHMENT A

FREUDENTHAL & ELKOWITZ CONSULTING GROUP, INC.

Draft: Attorney Work Product Privileged & Confidential

# PHASE II ENVIRONMENTAL ASSESSMENT

Esselte-Pendaflex Company, Inc. 71 Clinton Road Garden City, New York 11530

February 1996

**Prepared For:** 

Stewart & Clinton Co. LLC 575 Underhill Blvd. Syosset, New York

**Prepared By:** 

Norfolk Environmental 1583 Post Road Fairfield, Connecticut 06430 (203)259-7722

#### 1.0 INTRODUCTION

This Phase II investigation (Phase II) was implemented by Norfolk Environmental (Norfolk) to assist Stewart & Clinton Co. LLC (S&C) in the evaluation of its proposed acquisition of property located at 71 Clinton Road, Garden City, New York (the Property). Norfolk conducted a Phase I Environmental Assessment (Phase I) at the Property in September 1995. The Phase I was conducted in accordance with ASTM Standard E 1527-94 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. The Phase I thoroughly addressed historical use of the Property and potential concerns with surrounding properties, and identified those areas requiring further investigation (Phase II). Accordingly, consistent with customary commercial practice, the scope of work conducted during the Phase II investigation was intended to confirm or refute the presence of suspected contamination identified during the Phase I. This report describes the work performed and results of the Phase II investigation.

The Phase I indicated that the Property has a long history of manufacturing since it was first developed in 1917 by the Curtiss Aeroplane and Motor Corporation (Curtiss). In addition to use by Curtiss into the 1940's, the Property was used by the Sperry Gyroscope Corporation during World War II. The Property was sold to the Oxford File Supply Corporation in 1948, which later became Esselte Pendaflex, and is the current occupant of the Property.

Norfolk identified eight potential areas of concern (AOCs) in the Phase I that required further investigation under the Phase II program. The scope of work developed for the Phase II investigation included sampling of soil and ground water at specific AOCs that were identified in the Phase I by historical review and on-site inspection activities. The objectives of the Phase II were to : (1) Determine if soil contamination currently exists at areas of the Property which represent the most significant potential to have been adversely impacted by operations over many years of industrial activity; (2) Assess existing ground

1

water quality underlying the Property from off-site sources; and (3) Evaluate the potential for on-site contribution to ground water contamination, if any.

The individual AOCs and the methods employed to investigate these areas are described more fully in Section 2.0 and Appendix A. A brief summary is provided below of the seven principal on-site AOCs and the potential impact of degraded regional ground water quality on the Property.

Former Drum Storage Area - The Property was cited in 1986 by the Nassau County Department of Health for the improper storage of chemical waste in drums along the railroad on the southern portion of the site. Phase II activities in this area, which was not sampled during the 1986 drum removal program, included sampling to determine if underlying soils or ground water were impaired.

<u>Underground Storage Tanks (USTs)</u> - The location of three current and former USTs were investigated to identify any impact to soils or ground water that may be attributable to historic underground storage and transfer activities at the Property.

Former Septic System - The Phase I investigation identified the presence of a former onsite septic system on the southern portion of the Property, between Building No. 6 and the railroad tracks. Sampling of soils/sediments and ground water was conducted to identify any contamination that may have resulted from discharge to this former septic system.

<u>Recharge Basins</u> - Stormwater from portions of the Property is currently discharged to a large recharge basin located at the eastern end of the Property. This earthen recharge basin is thought to have replaced a former basin that was located directly adjacent to the current northeast corner of Building No. 10. Soil and ground water sampling was conducted to identify any adverse environmental impacts that may have resulted from discharge into these recharge basins.

Former Sump and Dry Wells in Building No. 10 - Historical drawings indicate the presence of a 20' X 20' sump and three dry wells at the current location of Building No. 10, prior to its construction. The purpose of these structures, and the types of materials that may have been discharged into them, could not be determined through review of available information. Soil and ground water samples were collected from this area to identify any adverse environmental impact that may have resulted from discharge into these structures.

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Former Motor Testing Area - Historical fire insurance drawings of the Property from the period of Curtiss's operation, indicate that a motor testing area had been located at the current location of Building No. 19/19A and the western end of Building No. 8. Phase II investigative activities were conducted in the former motor testing area to determine if residual VOC's and petroleum contaminants are present in underlying soils or ground water attributable to historical operations.

#### Undocumented Septic Field (North of Building No. 3A/3B)

On-site inspection activities identified the presence of a former leaching ring system in the grassy area north of Buildings No. 3A& 3B. It appears that the majority of the area was part of a sanitary septic system. Soil samples were collected from the former septic system area to determine if any adverse environmental impact resulted from historical discharge.

<u>Ground Water Quality</u> - A report prepared by the United States Geological Society (USGS) in 1989, using data generated in the early and mid 1980's, indicated that ground water underlying the Property was impacted by VOCs, primarily trichloroethylene (TCE) and tetrachloroethylene (PCE). The maximum concentration of any of these chemicals in the area surrounding the Property was 250 ug/l. The source of these contaminants was reported to be the former Roosevelt Field airfield, located directly upgradient from the subject Property (north). Phase II activities included ground water sampling at (1)

3

upgradient locations on the Property to determine if contaminants continue to migrate onto the Property from the Roosevelt Field plume, and (2) at on-site AOCs to determine if these areas are contributory sources to the regional ground water contamination.

Based upon the results of the Phase II investigation, soil contamination was identified in only three of the suspected on-site AOCs; (1) the active 20,000 gallon fuel oil UST, (2) the former septic system (southern portion of the Property) and (3) the former motor testing area. The impact of soil contamination at the former 20,000 gallon UST and former septic system appears to be contained, and limited excavation may be necessary. Only low levels of contamination were detected in the former motor testing area. This area represents minimal risk to human health or the environment and no additional action is recommended.

The Phase II demonstrated that low concentrations of TCE and PCE are present in ground water underlying the Property. These constituents were detected in ground water at locations upgradient of all historic on-site operations, indicating that some migration from the Roosevelt Field plume is moving onto the Property

No detectable concentrations of either TCE or PCE were present in any soil samples collected on the Property, indicating that none of the AOCs is a contributory source of these chemicals to the regional ground water contamination.

A small subsurface vessel was identified in the courtyard between Buildings No. 1 and No. 2. This vessel is out of service and should be properly closed. Closure should include characterization and appropriate disposal of tank contents, followed by excavation and appropriate management of the vessel and any contaminated soils that may be identified.

A leaching ring/dry well located south of the boiler room currently appears to receive discharge from the boiler should be evaluated for compliance with the federal Underground Injection Control (UIC) program and applicable local requirements. Based

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on the current information, discharge from the boiler room to the leaching ring could constitute an unpermitted discharge to an underground injection well. As such, any discharge should be discontinued or properly permitted (if possible). If the discharge is discontinued, the leaching ring/dry well should be appropriately closed, in accordance with all applicable requirements. Closure would require sampling of the soils/sediments in the leaching ring/dry well, and appropriate management of such materials.

#### 3.0 SUMMARY OF FINDINGS AND CONCLUSIONS

The Phase I investigation had identified a total of eight potential AOCs at the Property in Garden City, New York. Based upon the results of the Phase II investigation, only three AOCs were identified as having environmental impacts associated with historical operations conducted at the property. Contamination was identified in soils at the following AOCs.

- Active 20,000 gallon fuel UST
- Former Septic System (southern portion of the Property)
- Former Motor Testing Area

The soil contamination detected at each of the three AOCs is confined both horizontally and vertically. There was no significant ground water contamination attributable to any on-site soil contamination.

In addition, low levels of TCE and PCE were detected in ground water samples underlying the western portion of the Property, both upgradient and downgradient of historical operational areas. The ground water results, coupled with the fact that no TCE or PCE was detected in any on-site soil samples, suggest that some low levels of contamination from the Roosevelt Field plume are migrating under the Property.

A small subsurface vessel was identified in the courtyard between Buildings No 1 and No. 2. This vessel is out of service and should be properly closed. Closure should include characterization and appropriate disposal of tank contents, followed by excavation and appropriate management of the vessel and any contaminated soils that may be identified. A leaching ring/dry well located south of the boiler room currently appears to receive discharge from the boiler should be evaluated for compliance with the federal Underground Injection Control (UIC) program and applicable local requirements. Based on the current information, discharge from the boiler room to the leaching ring could constitute an unpermitted discharge to an underground injection well. As such, any discharge should be discontinued or properly permitted (if possible). If the discharge is discontinued, the leaching ring/dry well should be appropriately closed, in accordance with all applicable requirements. Closure would require sampling of the soils/sediments in the leaching ring/dry well, and appropriate management of such materials.

The findings at each of the impacted AOCs is discussed below.

#### 3.1 ACTIVE 20,000 GALLON FUEL OIL UST FINDINGS

The Phase II identified petroleum in soils at the west end of the active 20,000 gallon fuel oil UST. The petroleum appears to be confined to soils from a depth of approximately 14 feet to 23 feet below the surface, and has not resulted in any impact to ground water. The fuel oil contaminated soil should be addressed in accordance with NYSDEC requirements for such contamination.

If it is determined that it is feasible for the 20,000 gallon UST to remain is service (given potential soil excavation requirements), it should be confirmed through appropriate testing that no component of the entire tank system is currently leaking. If current testing determines that the tank system is not leaking, and can remain in service, Nassau County will require that a new owner register the UST in its name, continue to conduct annual tightness testing and remove the tank within a maximum of 9 years. If the federal exemption for underground storage tanks that store fuel oil for on-site heating is repealed, substantial modifications could be required in a shorter time period.

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#### 3.2 FORMER SEPTIC SYSTEM (SOUTHERN PORTION OF THE PROPERTY)

VOCs and metals were detected in the septic system soils and sediments. These materials are confined to the unsaturated materials directly below the leaching rings and have not migrated to ground water. The concentrations of zinc and chromium exceed the guidance values presented in NYSDEC's Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels (TAGM), and should be appropriately remediated.

The current function, if any, of the two leaching rings at the former septic system location should be determined. If the rings are not used as part of the active stormwater management system, appropriate closure requirements should be determined and implemented. Removal and appropriate disposal of contaminated soils/sediments from below the leaching rings should be incorporated into closure activities, if applicable.

#### 3.3 FORMER MOTOR TESTING AREA

VOCs were detected in one of three soil samples collected from the former motor testing area. MT-3 contained 2 ug/kg benzene, 10 ug/kg toluene and 7.9 ug/kg xylenes in soil collected from the 4-8 foot depth interval. The identified compounds may be attributable to historical fuel spillage from testing of motors during Curtiss's period of operation at the Property.

The concentrations identified through Phase II activities are all well below the NYSDEC TAGM guidance values The apparent age of the potential release, coupled with the absence of significant concentrations of the identified VOCs in ground water downgradient from the motor testing area (1.3 ug/l xylenes were present in SP-1D) and the fact that the impacted soil is completely capped by a building further minimizes the potential concern associated with this finding.

#### 3.4 GROUND WATER QUALITY

Phase II ground water investigative activities identified the presence of TCE in ground water underlying the western half of the Property, both upgradient and downgradient of historical operational areas of the Property. TCE is the primary contaminant present in the ground water contamination plumes originating at the Roosevelt Field inactive hazardous waste site, and was demonstrated by USGS to have been present in ground water surrounding the Property as early as the early 1980's.

TCE was detected in only 4 of 15 ground water samples collected during the Phase II. Concentrations ranged from 2.6 ug/l to 5.7 ug/l, and averaged 3.4 ug/l in ground water samples that had TCE detections. (The site-wide average, taking into account all of the samples collected, is much lower.

TCE was identified at 2.6 ug/l in the deep upgradient sample, NGP-1D, indicating that low levels of VOCs are migrating onto the Property from the Roosevelt Field plume.

Ground water VOC contamination was only identified at two downgradient AOC locations on the Property, at the former southern septic system (ST-1, ST-1D) and at a location in the drum storage area (SP-1).

At the former septic system, the westernmost sample location along the southern property boundary, TCE was detected in both the shallow and deep ground water samples, at 2.1 ug/l in ST-1 and 3.2 ug/l at ST-1D. TCE (5.7 ug/l) and PCE (13 ug/l) were present in the shallower ground water sample collected at SP-1, at the western end of the former drum storage area. Since neither TCE nor PCE was detected in soil samples anywhere on the Property, the presence of these compounds in ground water appears to be attributable to the Roosevelt Field plume.

Xylenes were detected in the deeper ground water sample at SP-1 at 1.3 ug/l. Xylenes were detected in soils at the former motor testing area, which is directly north of the boiler room, and upgradient from SP-1. However, the xylenes concentration present in both the soil and ground water are well below NYSDEC cleanup guidance values.

No VOCs, including TCE and PCE were detected at any other ground water sample locations on the Property.

Other than lead, which was reported to be present at the laboratory detection limit of 0.10 mg/l in FS-1 (off the northeast corner of Building No. 8), no detectable concentration of metals, TPH or SVOCs were identified in ground water underlying the Property.

The lead result reported at FS-1 appears anomalous, and although it exceeds the NYSDEC Ground Water Criteria of 0.025 mg/l (for class GA ground water), this isolated exceedance would not indicate a need for additional investigation or remediation associated with metals contamination of ground water.

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Table 2-1

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							Soil R	esults										
Samula I D		1 0.8	5-3	55-1	SS-2	SS-2	MT-1	MT-1	MT-2	MT-2	MT-3	MT-3	DW-1	DW-1	GK-1	GK-2	GK-2	FS-1
Depth Below Grade 4'-8'	4	φ	4-8	2'-4'	0'-2'	2'-4'	4'-8'	12'-16'	4'-8'	8'-12'	0'-4'	4'-8'	19'-21'	23'-25'	4'-8'	4'-8'	28'-30'	14'-16
						-							. A D A CONTRACTOR OF THE OWNER					
onstituent Detected				No. of the second second second	8 2 4 1	1		and the second						A statu pe series de l'Anna que se se series est	1			
letals (ppm)	-		-		:	-												
Zinc		-		60		00							13	9.2	4	15	3.7	8.4
Cromium				79	-	3.1			And a subscription of the				4	4	8.6	11	4.6	2.1
Conner			-	2.9		12				The paper of the second se	No. of Concession, Name and Advanced Street of Concession, Name of Con Name of Concession, Name of Concess		7.8	2.8	7.9	6.8	2.1	1.9
				3.3		4	1	And a second distance of the second se		And a second			Q	2.6	3.6	4.1	1.7	2.6
Nickla	l	4	ļ	6	<u></u>	0		In the second second second second second			-		1.7	1.7	5.2	5.6	5.4	5.6
	-		1	AND A 12 YO MANAGEMENT OF	1													
olatile Ornanics (nnh)	1				:		and an or a second s	-					-					
		C	CN	Q	Q	Q	Q	QN	Q	Q	QN	2	QN	QN	QN	QN	Q	9
Chlorobenzene ND		Q	g	g	150	Q	QN	QN	Q	QN	Q	Q	Q	QN	QN	Q	QN	9
Fthvt Benzene ND	12	Ģ	Q	Q	35	9	QN	QN	QN	Q	Q	Q	QN	QN	QN	QN	QN	2
Tetrachloroethvlene	2	Q	QN	Q	Q	Q	Q	Q	Q	Q	Q	QN	QN	Q	QN	Q	QN	g
Trichloroethylene	2	þ	Q	Q	g	Q	QN	QN	g	Q	Q	g	g	Q	Q	Q	Q	₽
Toluene		Q	Q	Q	17	Q	QN	Q	Q	Q	QN	10	Q	Q	Q	QN	Q	g
Xylenes		9	Q	Q	240	Q	ND	QN	DN	Q	Q	7.9	g	Q	Q	Q	Q	₽
D≖Non-Detect																		
	:							71.1.2 A.4.1	se hudent e	oute the	ictuante r	i hatadi i	n camhai	at the Fe	sette facili	2		
lo Semi-Volatile Organics (ppb) were detected ii	In the	laborato	ory sampi	es					e laborato	ouny ouns	are includ	ad in Anr	endix B					

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Norfolk Environmental

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Table 2-2

				G	Essel arden C	te Penc Sity, Lo	daflex ng Islai	nd							
				(	Ground	Water	Result	S							
Sample I.D.	ST-1	ST-1D	SP-1	SP-1D	SP-2	SP-3	NGP-1	NGP-1D	NGP-2	NGP-3	MT-1	DW-1	RB-1	RB-2	FS-1
Depth Below Grade	30'-32'	70'-72'	30'-32'	70'-72'	30'-32'	30'-32'	43'-45'	70'-72'	43'-45'	43'-45'	30'-32'	30'-32'	30'-32'	30'-32'	30'-32'
Constituent Detected															
Metals (ppm)												ND			ND
Zinc	ND							ļ							ND
Cromium	ND														ND
Copper	ND											ND			01
Lead	ND	<b></b>							i						ND
Nickle	ND	I					i								
	L	<b></b>		<u> </u>		<b> </b>			ļ		<b> </b>	1			
Volatile Organics (ppb)	<u> </u>	ļ		L							ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND					ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND								ND	ND
Ethyl Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND					ND	
Tetrachloroethylene	ND	ND	13	ND	ND	ND	ND	ND	ND	ND					
Trichloroethylene	2.1	3.2	5.7	ND	ND	ND	ND	2.6	ND	ND					
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND					
Xylenes	ND	ND	ND	1.3	ND	ND	ND	ND	ND	ND	ND	ND			
ND=Non-Detect															

No Semi-Volatrile Organics (ppb) were detected in the laboratory samples

This table includes only consistuents detected in samples at the Esselte facility. Complete laboratory results are included in Appendix B.

No Total Petroleum Hydrocarbons (ppm) were detected in the laboratory samples

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### ATTACHMENT B

FREUDENTHAL & ELKOWITZ CONSULTING GROUP, INC.



NEW YORK

DATE . 14 387. 446



Client: Freudenthal & Elkowitz	Sample ID: 71 Clinton Road Garden City, N.Y. (S-1 [32'-36'])
Date Received: 12/13/01	Laboratory ID: 0122201
Date Extracted: NA	Matrix: Liquid
Date Analyzed: 12/16/01	ELAP#: 11418

PARAMETER	CAS No.	RESULTS ug/L
Chloromethane	74-87-3	<1
Bromomethane	74-83-9	<1
View Chloride	75-01-4	<1
Chloroothane	75-00-3	<1
Motbylong Chloride	75-09-2	<1
1 1 Dichloroothane	75-34-3	<1
	75-35-4	<1
Chloroform	67-66-3	<1
	107-06-2	<1
	71-55-6	<1
Corbon Totrophorido	56-23-5	<1
	75-27-4	<1
	78-87-5	<1
	79-01-6	<1
	79-00-5	<1
1,1,2-Inchloroethane	71-43-2	<1
Benzene	75-25-2	<1
Bromotorm	79-34-5	<1
	127-18-4	<1
Tetrachloroethene	108-88-3	<1
	108-90-7	<1
Chlorobenzene	100-41-4	<1
Ethylbenzene	156-60-5	<1
trans-1,2-Dichloroethene	110-75-8	<1
2-ChloroetnyiVinyi Ether	10061-02-6	<1
trans-1,3-Dicfiloropropene	124-48-1	<1
Dibromocnioromethane	10061-01-5	<1
cis-1,3-Dichloropropene	67-64-1	<1
Acetone	75-15-0	<1
Carbon Disulfide	501-78-6	<1
2-Hexanone	108.10-1	<1
4-methyl-2-Pentanone	78 02-3	<1
2-Butanone	100 42 5	<1
Styrene	1220.20.7	<3
Xylenes (1 otal)	1624.04.4	<1
Methyl Tertiary Butyl Ether	1034-04-4	

Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: 71 Clinton Road Garden City, N.Y. (S-1 [32'-36'])
Date Received: 12/13/01	Laboratory ID: 0122201
Date Extracted: 12/18/01	Matrix: Liquid
Date Analyzed: 12/18/01	ELAP#: 11418

### METALS ANALYSIS TARGET ANALYTE LIST

PARAMETER	REPORTING LIMIT mg/L	RESULTS mg/L
Silver Ag	0.020	<0.020
	0.020	0.060
Arsenic As	0.025	<0.025
Rarium Ba	0.020	0.044
Bondlium Be	0.020	<0.020
Colcium Co	0.020	13.6
Cadmium Cd	0.010	<0.010
Cabalt Co	0.020	0.026
Coball, Co	0.020	<0.020
Chioman, Ch	0.020	<0.020
	0.020	0.139
	0.020	3.72
Magnagium Mg	0.020	3.26
Magnesium, Mg	0.020	10.5
Manganese, Mit	0.020	6.18
Sodium, ina	0.030	<0.020
NICKEI, NI	0.020	<0.015
Lead, PD	0.015	<0.025
Antimony, SD	0.025	<0.025
Selenium, Se	0.025	<0.020
Thallium, II	0.015	<0.010
Vanadium, V	0.020	0.020
Zinc, Zn	0.020	0.025
Mercury, Hg	0.002	<0.002

Analytical Methods:

SW-846 6010 (ICP) Mercury SW-846 7470 (Cold Vapor)

Laboratory Director,



Client: Freudenthal & Elkowitz	Sample ID: 71 Clinton Rd. Garden City, N.Y. (S-2 [32'-36'])
Date Received: 12/12/01	Laboratory ID: 0122190
Date Extracted: NA	Matrix: Liquid
Date Analyzed: 12/13/01	ELAP#: 11418

PARAMETER	CAS No.	RESULTS ug/L
Chloromethane	74-87-3	<1
Bromomethane	74-83-9	<1
Vinyl Chloride	75-01-4	<1
Chloroethane	75-00-3	<1
Methylene Chloride	75-09-2	<1
1.1-Dichloroethane	75-34-3	<1
1.1-Dichloroetene	75-35-4	<1
Chloroform	67-66-3	<1
1,2-Dichloroethane	107-06-2	<1
1,1,1-Trichloroethane	71-55-6	<1
Carbon Tetrachloride	56-23-5	<1
Bromodichloromethane	75-27-4	<1
1.2-Dichloropropane	78-87-5	<1
Trichloroethene	79-01-6	<1
1.1.2-Trichloroethane	79-00-5	<1
Benzene	71-43-2	<1
Bromoform	75-25-2	<1
1,1,2,2-Tetrachloroethane	79-34-5	<1
Tetrachloroethene	127-18-4	<1
Toluene	108-88-3	<1
Chlorobenzene	108-90-7	<1
Ethvibenzene	100-41-4	<1
trans-1,2-Dichloroethene	156-60-5	<1
2-Chloroethylvinyl Ether	110-75-8	<1
trans-1,3-Dichloropropene	10061-02-6	<1
Dibromochloromethane	124-48-1	<1
cis-1,3-Dichloropropene	10061-01-5	<1
Acetone	67-64-1	<1
Carbon Disulfide	75-15-0	<1
2-Hexanone	591-78-6	<1
4-Methyl-2-Pentanone	108-10-1	<1
2-Butanone	78-93-3	<1
Styrene	100-42-5	<1
Xylenes (Total)	1330-20-7	<3
Methyl Tertiary Butyl Ether	1634-04-4	<1

Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: 71 Clinton Rd. Garden City, N.Y. (S-3 [32'-36'])	
Date Received: 12/12/01	Laboratory ID: 0122191	
Date Extracted: NA	Matrix: Liquid	
Date Analyzed: 12/13/01	ELAP#: 11418	

DADAMETER	CAS No.	RESULTS ug/L
Chlaramathana	74-87-3	<1
Chloromethane	74-83-9	<1
Bromomeutane	75-01-4	<1
Chierathana	75-00-3	<1
Chloroethane Chloride	75-09-2	<1
Meinylene Chloride	75-34-3	<1
	75-35-4	<1
	67-66-3	<1
Chloroform	107-06-2	<1
	71-55-6	<1
	56-23-5	<1
	75-27-4	<1
Bromodicniorometriane	78-87-5	<1
1,2-Dichloropropane	79-01-6	<1
I fichioroethene	79-00-5	<1
	71-43-2	<1
Benzene	75-25-2	<1
Bromotorm	79-34-5	<1
1,1,2,2-Tetrachioroethane	127-18-4	<1
Tetrachioroethene	108-88-3	<1
Toluene	108-90-7	<1
Chlorobenzene	100-41-4	<1
Ethylbenzene	156-60-5	<1
trans-1,2-Dichloroethene	110-75-8	<1
2-Chloroethylvinyl Ether	10061-02-6	<1
trans-1,3-Dichloropropene	124-48-1	<1
Dibromochloromethane	10061-01-5	<1
cis-1,3-Dichloropropene	67-64-1	<1
Acetone	. 75-15-0	<1
Carbon Disulfide	501-78-6	<1
2-Hexanone	108-10-1	<1
4-Methyl-2-Pentanone	78-03-3	<1
2-Butanone	100-42-5	<1
Styrene	1330-20-7	<3
Xylenes (Total)	1634-04-4	<1
Methyl Tertiary Butyl Ether	1007-07-7	

Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: 71 Clinton Rd. Garden City, N.Y. (S-4 [32'-36'])	
Date Received: 12/12/01	Laboratory ID: 0122192	
Date Extracted: NA	Matrix: Liquid	
Date Analyzed: 12/13/01	ELAP#: 11418	

PARAMETER	CAS No.	RESULTS ug/L
Chloromethane	74-87-3	<1
Bromomethane	74-83-9	<1
Vinyl Chloride	75-01-4	<1
Chioroethane	75-00-3	<1
Methylene Chloride	75-09-2	<1
1 1-Dichloroethane	75-34-3	<1
1 1-Dichloroetene	75-35-4	<1
Chloroform	67-66-3	<1
1.2-Dichloroethane	107-06-2	<1
1 1 1-Trichloroethane	71-55-6	<1
Carbon Tetrachloride	56-23-5	<1
Bromodichloromethane	75-27-4	<1
1.2-Dichloropropane	78-87-5	<1
Trichloroethene	79-01-6	<1
1 1 2-Trichloroethane	79-00-5	<1
Benzene	71-43-2	<1
Bromoform	75-25-2	<1
1 1 2 2-Tetrachloroethane	79-34-5	<1
Tetrachloroethene	127-18-4	<1
Toluene	108-88-3	<1
Chlorobenzene	108-90-7	<1
Ethylbenzene	100-41-4	<1
trans-1.2-Dichloroethene	156-60-5	<1
2-Chloroethylvinyl Ether	110-75-8	<1
trans-1.3-Dichloropropene	10061-02-6	<1
Dibromochloromethane	124-48-1	<1
cis-1.3-Dichloropropene	10061-01-5	<1
Acetone	67-64-1	<1
Carbon Disulfide	75-15-0	<1
2-Hexanone	591-78-6	<1
4-Methyl-2-Pentanone	108-10-1	<1
2-Butanone	78-93-3	<1
Styrene	100-42-5	<1
Xylenes (Total)	1330-20-7	<3
Methyl Tertiary Butyl Ether	1634-04-4	<1

Laboratory Director



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Client: Freudenthal & Elkowitz	(S-4 [32-36])
Date Received: 12/12/01	Laboratory ID: 0122192
Date Extracted: 12/14/01	Matrix: Liquid
Date Analyzed: 12/14/01	ELAP#: 17418

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#### S ANALYSIS METAL TARGET ANALYTE LIST

PARAMETER	REPORTING LIMIT mg/L	
Silver, Ag	0.020	
Aluminum, Al	0.020	-1.03
Arsenic, As	0:025	
Barium, Ba	0.020	
Bervillium, Be	0.020	<u> </u>
Calcium, Ca	0.020	14.0
Cadmium	D.010	
Cobalt. Co	0.020	0.047
Chromium, Cr	0.020	<u.u2u< td=""></u.u2u<>
Conner, Cur	0.020	<0.020
Iron Fe	0.020	9,93
Potassium, K	0,070	3.43
Magnesium Mg	0.020	2.91
Manganese Mn	0.020	1.98
Sodium Na	0.030	14.9
Nickel Ni	0.020	<0.020
Load Ph	0.D15	< 0.015
Aptimony Sh	0.025	< 0.025
Solonium Se	0.025	<0.025
Thallium Tl	0.015	<0.015
Vanadium V	0.020	<0.020
	0.020	0.037
	0.002	<0.002
Mercury, rig		

# Analytical Methods:

SW-846 6010 (ICP) Mercury SW-846 7470 (Cold Vapor)

Laboratory Director



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Client: Freudenthal & Elkowitz	Sample ID: 71 Clinton Road Garden City, N.Y. (S-7 [32'-36'])
Date Received: 12/13/01	Laboratory ID: 0122202
Date Extracted: NA	Matrix: Liquid
Date Analyzed: 12/16/01	ELAP#: 11418

DADAMETER	CAS No.	RESULTS ug/L
Chloromothane	74-87-3	<1
Chioromethane	74-83-9	<1
Bromomethane	75-01-4	<1
	75-00-3	<1
Chloroethane	75-09-2	<1
Methylene Chloride	75-34-3	<1
1,1-Dichloroethane	75-35-4	<1
1,1-Dichloroetene	67-66-3	<1
Chloroform	107-06-2	<1
1,2-Dichloroethane	71 55-6	<1
1,1.1-Trichloroethane	7 (-50-6 FE 22 5	<1
Carbon Tetrachloride	75.07.4	<1
Bromodichloromethane	70.07 5	<1
1,2-Dichloropropane	/8-87-5	<1
Trichloroethene	79-01-6	<1
1,1,2-Trichloroethane	79-00-5	
Benzene	/1-43-2	
Bromoform	75-25-2	
1,1,2,2-Tetrachloroethane	79-34-5	
Tetrachloroethene	127-18-4	
Toluene	108-88-3	<
Chlorobenzene	108-90-7	<1
Ethylbenzene	100-41-4	
trans-1,2-Dichloroethene	156-60-5	<1
2-Chloroethylvinyl Ether	110-75-8	<1
trans-1,3-Dichloropropene	10061-02-6	<1
Dibromochloromethane	124-48-1	<1
cis-1 3-Dichloropropene	10061-01-5	<1
Acetone	67-64-1	<1
Carbon Disulfide	75-15-0	<1
2-Hexanone	591-78-6	<1
4-Methyl-2-Pentanone	108-10-1	<1
2-Butanone	78-93-3	<1
Styrene	100-42-5	<1
Xvienes (Total)	1330-20-7	<3
Methyl Tertiary Butyl Ether	1634-04-4	<1

Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: 71 Clinton Road Garden City, N.Y. (S-13 [32'-36'])
Date Received: 12/13/01	Laboratory ID: 0122206
Date Extracted: NA	Matrix: Liquid
Date Analyzed: 12/16/01	ELAP#: 11418

DADAMETER	CAS No.	RESULTS ug/L
PARAMETER	74-87-3	<1
Chloromethane	74-83-9	<1
Bromomethane	75-01-4	<1
Vinyl Chloride	75-00-3	<1
Chloroethane	75-09-2	<1
Methylene Chloride	75-34-3	<1
1,1-Dichloroethane	75-35-4	<1
1,1-Dichloroetene	67.66.3	<1
Chloroform	407.06.2	<1
1,2-Dichloroethane	71 55 6	<1
1,1,1-Trichloroethane	F6 02 5	<1
Carbon Tetrachloride	75 07 4	<1
Bromodichloromethane	75-27-4	<1
1,2-Dichloropropane	78-87-5	10
Trichloroethene	79-01-6	-1
1,1,2-Trichloroethane	79-00-5	
Benzene	71-43-2	
Bromoform	75-25-2	
1,1,2,2-Tetrachloroethane	79-34-5	
Tetrachloroethene	127-18-4	<u> </u>
Toluene	108-88-3	<1
Chlorobenzene	108-90-7	<1
Ethylbenzene	100-41-4	<1
trans-1.2-Dichloroethene	156-60-5	<1
2-Chloroethylvinyl Ether	110-75-8	<1
trans-1.3-Dichloropropene	10061-02-6	<1
Dibromochloromethane	124-48-1	<1
cis-1 3-Dichloropropene	10061-01-5	<1
Acetone	67-64-1	<1
Carbon Disulfide	75-15-0	<1
2-Hexanone	591-78-6	<1
4-Methyl-2-Pentanone	108-10-1	<1
2-Butanone	78-93-3	<1
Styrene	100-42-5	<1
Xylenes (Total)	1330-20-7	<3
Methyl Tertiary Butyl Ether	1634-04-4	<1
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Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: Nassau County BOCES – 71 Clinton Road
	(S-14 [32'-36'])
Date Received: 12/14/01	Laboratory ID: 0122201
Date Extracted: NA	Matrix: Liquid
Date Analyzed: 12/16/01	

	CAS No.	RESULTS ug/L
PAKAIVIETER	74-87-3	<1
Chloromethane	74-83-9	<1
Bromomethane	75-01-4	<1
Vinyl Chloride	75-00-3	<1
Chloroethane	75-09-2	<1
Methylene Chloride	75-34-3	<1
1,1-Dichloroethane	75-35-4	<1
1,1-Dichloroetene	67-66-3	<1
Chloroform	107-06-2	<1
1,2-Dichloroethane	71-55-6	<1
1,1,1-Trichloroethane	56-23-5	<1
Carbon Tetrachlonde	75-27-4	<1
Bromodichloromethane	78-87-5	<1
1,2-Dichloropropane	70-01-6	14
Trichloroethene	79-01-0	<1
1,1,2-Trichloroethane	75-00-5	<1
Benzene	75.25.2	<1
Bromoform	70.34.5	<1
1,1,2,2-Tetrachloroethane	127-18-4	4
Tetrachloroethene	109.98.3	<1
Toluene	108-00-7	<1
Chlorobenzene	100-41-4	<1
Ethylbenzene	100-41-4	<1
trans-1,2-Dichloroethene	100-00-0	<1
2-Chloroethylvinyl Ether	10061.02.6	<1
trans-1,3-Dichloropropene	10001-02-0	<1
Dibromochloromethane	124-40-1	<1
cis-1,3-Dichloropropene	10061-01-5	<1
Acetone		<1
Carbon Disulfide	/5-15-0	<1
2-Hexanone	591-78-0	
4-Methyl-2-Pentanone		
2-Butanone	/8-93-3	
Styrene	100-42-5	
Xylenes (Total)	1330-20-7	
Methyl Tertiary Butyl Ether	1634-04-4	

Laboratory Director



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Client: Freudenthal & Elkowitz	Sample ID: Nassau County BOCES – 71 Clinton Road (S-14 [32'-36'])	
Date Received: 12/14/01	Laboratory ID: 0122261	
Date Extracted: 12/18/01	Matrix: Liquid	
Date Analyzed: 12/18/01	ELAP#: 11418	

### SEMIVOLATILE ORGANICS SW-846 METHOD 8270 (STARS)

PARAMETER	CAS No.	RESULTS ug/L
Acenaphthene	83-32-9	<5
Fluorene	86-73-7	<5
Phenanthrene	85-01-8	<5
Anthracene	120-12-7	<5
Fluoranthene	206-44-0	<5
Pyrene	129-00-0	<5
Benzo(a)anthracene	56-55-3	<5
Chrysene	218-01-9	<5
Benzo(b)fluoranthene	205-99-2	<5
Benzo(k)fluoranthene	207-08-9	<5
Benzo(a)pyrene	50-32-8	<5
Indeno(1,2,3-c,d)pyrene	193-39-5	<5
Dibenzo(a,h)anthracene	53-70-3	<5
Benzo(g,h,i)perylene	191-24-2	<5

Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: Nassau County BOCES – 71 Clinton Road (S-14 [32'-36'])
Date Received: 12/14/01	Laboratory ID: 0122261
Date Extracted: 12/18/01	Matrix: Liquid
Date Analyzed: 12/18/01	ELAP#: 11418

### METALS ANALYSIS TARGET ANALYTE LIST

DADAMETER	REPORTING LIMIT mg/L	RESULTS mg/L
PARAMETER	0.020	<0.020
Silver, Ag	0.020	0.074
Aluminum, Al	0.020	< 0.025
Arsenic, As	0.020	0.101
Barium, Ba	0.020	<0.020
Beryllium, Be	0.020	26.5
Calcium, Ca	0.020	<0.010
Cadmium, Cd	0.010	<0.010
Cobalt, Co	0.020	<0.020
Chromium, Cr	0.020	0.020
Copper, Cu	0.020	<0.020
Iron Fe	0.020	0.552
Potassium K	0.070	8.20
Magnesium Mg	0.020	3.83
Manganese Mn	0.020	5.08
Sodium Na	0.030	23.3
Niekol Ni	0.020	<0.020
NICKEI, NI	0.015	< 0.015
Lead, PD	0.025	< 0.025
Antimony, SD	0.025	< 0.025
Selenium, Se	0.025	< 0.015
Thallium, 11	0.013	<0.020
Vanadium, V	0.020	0.023
Zinc, Zn	0.020	<0.020
Mercury, Hg	0.002	-0.002

Analytical Methods:

SW-846 6010 (ICP) Mercury SW-846 7470 (Cold Vapor)

Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: 71 Clinton Road Garden City, N.Y. (S-15 [32'-36'])
Date Received: 12/13/01	Laboratory ID: 0122207
Date Extracted: NA	Matrix: Liquid
Date Analyzed: 12/16/01	ELAP#: 11418

	CAS No.	RESULTS ug/L
PARAMETER	74-87-3	<1
Chloromethane	74-83-9	<1
Bromomethane	75-01-4	<1
Vinyl Chloride	75-01-4	<1
Chloroethane	75-00-3	<1
Methylene Chloride	75-09-2	<1
1,1-Dichloroethane	75-34-3	<1
1,1-Dichloroetene	75-33-4	<1
Chloroform	67-68-3	<1
1.2-Dichloroethane	107-06-2	<1
1,1,1-Trichloroethane	(1-55-6	<1
Carbon Tetrachloride	56-23-5	<1
Bromodichloromethane	75-27-4	<1
1.2-Dichloropropane	78-87-5	5
Trichloroethene	79-01-6	
1.1.2-Trichloroethane	79-00-5	
Benzene	71-43-2	
Bromoform	75-25-2	<1
1 1 2 2-Tetrachloroethane	79-34-5	<1
Tetrachloroethene	127-18-4	1
Toluene	108-88-3	<1
Chlorobenzene	108-90-7	<1
Ethylbenzene	100-41-4	<1
trans_1_2-Dichloroethene	156-60-5	<1
2 Chloroethylyinyl Ether	110-75-8	<1
trans_1.3-Dichloropropene	10061-02-6	<1
Dibromobioromethane	124-48-1	<1
Dibiomocnorometre	10061-01-5	<1
CIS-1,3-DICINOIOPIOPERC	67-64-1	<1
Acetone Digulfido		<1
Carbon Disunde	591-78-6	<1
	108-10-1	<1
4-Methyl-2-Pentanone	78-93-3	<1
2-Butanone	100-42-5	<1
Styrene	1330-20-7	<3
Xylenes (10tal)	1634-04-4	<1
Methyl Lertlary Butyl Ether		

Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: 71 Clinton Road Garden City, N.Y. (S-15 [32'-36'])
Date Received: 12/13/01	Laboratory ID: 0122207
Date Extracted: 12/18/01	Matrix: Liquid
Date Analyzed: 12/18/01	ELAP#: 11418

### METALS ANALYSIS TARGET ANALYTE LIST

	DEDORTING LIMIT ma/L	RESULTS mg/L
PARAMETER	0.020	<0.020
Silver, Ag	0.020	0.028
Aluminum, Al	0.025	<0.025
Arsenic, As	0.025	0.059
Barium, Ba	0,020	<0.020
Beryllium, Be	0.020	20.1
Calcium, Ca	0.020	<0.010
Cadmium, Cd	0.010	<0.020
Cobalt, Co	0.020	<0.020
Chromium, Cr	0.020	<0.020
Copper, Cu	0.020	2.40
Iron, Fe	0.020	3.04
Potassium, K	0.070	2.22
Magnesium, Mg	0.020	5.16
Manganese, Mn	0.020	12.3
Sodium, Na	0.030	0.044
Nickel, Ni	0.020	< 0.015
Lead, Pb	0.015	<0,025
Antimony, Sb	0.025	<0.025
Selenium, Se	0.025	< 0.015
Thallium, Tl	0.015	<0.020
Vanadium, V	0.020	0.039
Zinc, Zn	0.020	<0.002
Mercury, Hg	0.002	

Analytical Methods:

SW-846 6010 (ICP) Mercury SW-846 7470 (Cold Vapor)

Laboratory Director



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Client: Freudenthal & Elkowitz	Sample ID: Nassau County BOCES – 71 Clinton Road (S-17 [32'-36'])	
Date Received: 12/14/01	Laboratory ID: 0122262	
Date Extracted: NA	Matrix: Liquid	
Date Analyzed: 12/16/01	ELAP#: 11418	

DADAMETED	CAS No.	RESULTS ug/L
PARAMEIEN	74-87-3	<1
Chloromethane	74-83-9	<1
Bromomethane	75-01-4	<1
Vinyl Chloride	75-00-3	<1
Chloroethane	75-09-2	<1
Methylene Chloride	75-34-3	<1
1,1-Dichloroethane	75-35-4	<1
1,1-Dichloroetene	67.66-3	<1
Chloroform	107.06-2	<1
1,2-Dichloroethane	71 55 6	<1
1,1,1-Trichloroethane	71-00-0	<1
Carbon Tetrachloride	30-23-3	<1
Bromodichloromethane	75-27-4	<1
1,2-Dichloropropane	/8-87-5	<1
Trichloroethene	79-01-0	<1
1,1,2-Trichloroethane	79-00-5	<u> </u>
Benzene	/1-43-2	
Bromoform	75-25-2	
1,1,2,2-Tetrachloroethane	/9-34-5	
Tetrachloroethene	127-18-4	
Toluene	108-88-3	
Chlorobenzene	108-90-7	
Ethylbenzene	100-41-4	
trans-1,2-Dichloroethene	156-60-5	
2-Chloroethylvinyl Ether	110-75-8	
trans-1,3-Dichloropropene	10061-02-6	
Dibromochloromethane	124-48-1	<1
cis-1.3-Dichloropropene	10061-01-5	<1
Acetone	67-64-1	<1
Carbon Disulfide	75-15-0	<1
2-Hexanone	591-78-6	<1
4-Methyl-2-Pentanone	108-10-1	<1
2-Butanone	78-93-3	<1
Styrene	100-42-5	<1
Xvienes (Total)	1330-20-7	<3
Methyl Tertiary Butyl Ether	1634-04-4	

Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: Nassau County BOCES – 71 Clinton Road (S-18 [32'-36'])	
Date Received: 12/14/01	Laboratory ID: 0122263	
Date Extracted: NA	Matrix: Liquid	
Date Analyzed: 12/16/01	ELAP#: 11418	

PARAMETER	CAS No.	RESULTS ug/L
Chloromethane	74-87-3	<1
Bromomethane	74-83-9	<1
Vinyl Chloride	75-01-4	<1
Chloroethane	75-00-3	<1
Methylene Chloride	75-09-2	<1
1.1-Dichloroethane	75-34-3	<1
1,1-Dichloroetene	75-35-4	<1
Chloroform	67-66-3	<1
1,2-Dichloroethane	107-06-2	<1
1,1,1-Trichloroethane	71-55-6	<1
Carbon Tetrachloride	56-23-5	<1
Bromodichloromethane	75-27-4	<1
1,2-Dichloropropane	78-87-5	<1
Trichloroethene	79-01-6	<1
1,1,2-Trichloroethane	79-00-5	<1
Benzene	71-43-2	<1
Bromoform	75-25-2	<1
1,1,2,2-Tetrachloroethane	79-34-5	<1
Tetrachloroethene	127-18-4	1
Toluene	108-88-3	<1
Chlorobenzene	108-90-7	<1
Ethylbenzene	100-41-4	<1
trans-1,2-Dichloroethene	156-60-5	<1
2-Chloroethylvinyl Ether	110-75-8	<1
trans-1,3-Dichloropropene	10061-02-6	<1
Dibromochloromethane	124-48-1	<1
cis-1,3-Dichloropropene	10061-01-5	<1
Acetone	67-64-1	<1
Carbon Disulfide	75-15-0	<1
2-Hexanone	591-78-6	<1
4-Methyl-2-Pentanone	108-10-1	<1
2-Butanone	78-93-3	<1
Styrene	100-42-5	<1
Xylenes (Total)	1330-20-7	<3
Methyl Tertiary Butyl Ether	1634-04-4	<1

Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: Nassau County BOCES – 71 Clinton Road (S-20 [32'-36'])
Date Received: 12/14/01	Laboratory ID: 0122266
Date Extracted: NA	Matrix: Liquid
Date Analyzed: 12/16/01	ELAP#: 11418

PARAMETER	CAS No.	RESULTS ug/L
Chloromethane	74-87-3	<1
Bromomethane	74-83-9	<1
Vinyl Chloride	75-01-4	<1
Chloroethane	75-00-3	<1
Methylene Chloride	75-09-2	<1
1 1-Dichloroethane	75-34-3	<1
1 1-Dichloroetene	75-35-4	<1
Chloroform	67-66-3	<1
1.2-Dichloroethane	107-06-2	<1
1 1 1-Trichloroethane	71-55-6	<1
Carbon Tetrachloride	56-23-5	<1
Bromodichloromethane	75-27-4	<1
1.2-Dichloropropane	78-87-5	<1
Trichloroethene	79-01-6	2
1.1.2-Trichloroethane	79-00-5	<1
Benzene	71-43-2	<1
Bromoform	75-25-2	<1
1 1 2 2-Tetrachloroethane	79-34-5	<1
Tetrachloroethene	127-18-4	<1
Toluene	108-88-3	3
Chlorobenzene	108-90-7	<1
Ethvibenzene	100-41-4	2
trans-1,2-Dichloroethene	156-60-5	<1
2-Chloroethylvinyl Ether	110-75-8	<1
trans-1.3-Dichloropropene	10061-02-6	<1
Dibromochloromethane	124-48-1	<1
cis-1.3-Dichloropropene	10061-01-5	<1
Acetone	* 67-64-1	<1
Carbon Disulfide	75-15-0	<1
2-Hexanone	591-78-6	<1
4-Methyl-2-Pentanone	108-10-1	<1
2-Butanone	78-93-3	<1
Styrene	100-42-5	<1
Xylenes (Total)	1330-20-7	11
Methyl Tertiary Butyl Ether	1634-04-4	<1

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Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: Nassau County BOCES – 71 Clinton Road (S-20 [32'-36'])	
Date Received: 12/14/01	Laboratory ID: 0122266	
Date Extracted: 12/18/01	Matrix: Liquid	
Date Analyzed: 12/18/01	ELAP#: 11418	

### **METALS ANALYSIS** TARGET ANALYTE LIST

PARAMETER	REPORTING LIMIT mg/L	RESULTS mg/L
Silver, Ag	0.020	<0.020
Aluminum, Al	0.020	0.111
Arsenic, As	0.025	<0.025
Barium, Ba	0.020	0.060
Beryllium, Be	0.020	<0.020
Calcium, Ca	0.020	27.6
Cadmium, Cd	0.010	<0.010
Cobalt, Co	0.020	<0.020
Chromium, Cr	0.020	<0.020
Copper, Cu	0.020	<0.020
Iron, Fe	0.020	0.533
Potassium, K	0.070	4.81
Magnesium, Mg	0.020	3.18
Manganese, Mn	0.020	0.819
Sodium, Na	0.030	15.2
Nickel, Ni	0.020	<0.020
Lead, Pb	0.015	<0.015
Antimony, Sb	0.025	<0.025
Selenium, Se	0.025	<0.025
Thallium, Tl	0.015	<0.015
Vanadium, V	0.020	<0.020
Zinc, Zn	0.020	0.021
Mercury, Hg	0.002	<0.002

Analytical Methods:

SW-846 6010 (ICP) Mercury SW-846 7470 (Cold Vapor)

Laboratory Director



56 TOLEDO STREET + FARMINGDALE, NEW YORK 11735 + (631) 454 6100 - FAX: (631) 454-8027

Client: Freudenthal & Elkowitz	Sample ID: Nassau County BOCES – 71 Clinton Road (S-21 [32'-36'])
Date Received: 12/14/01	Laboratory ID: 0122267
Date Extracted: NA	Matrix: Liquid
Date Analyzed: 12/16/01	ELAP#: 11418

PARAMETER	CAS No.	RESULTS ug/L
Chioromethane	74-87-3	<1
Bromomethane	74-83-9	<1
Vinvl Chloride	75-01-4	<1
Chloroethane	75-00-3	<1
Methylene Chloride	75-09-2	<1
1 1-Dichloroethane	75-34-3	<1
1 1-Dichloroetene	75-35-4	<1
Chloroform	67-66-3	<1
1 2-Dichloroethane	107-06-2	<1
1 1 1-Trichloroethane	71-55-6	<1
Carbon Tetrachloride	56-23-5	<1
Bromodichloromethane	75-27-4	<1
1 2-Dichloropropane	78-87-5	<1
Trichloroethene	79-01-6	1
1 1 2-Trichloroethane	79-00-5	<1
Renzene	71-43-2	<1
Bromoform	75-25-2	<1
1 1 2 2-Tetrachloroethane	79-34-5	<1
Tetrachloroethene	127-18-4	<1
Toluene	108-88-3	<1
Chlorobenzene	108-90-7	<1
Ethylbenzene	100-41-4	<1
trans-1 2-Dichloroethene	156-60-5	<1
2-Chloroethylyinyl Ether	110-75-8	<1
trans-1 3-Dichloropropene	10061-02-6	<1
Dibromochloromethane	124-48-1	<1
cis-1 3-Dichloropropene	10061-01-5	<1
Acetone	67-64-1	<1
Carbon Disulfide	75-15-0	<1
2-Hevanone	591-78-6	<1
4-Methyl-2-Pentanone	108-10-1	<1
2-Butanone	78-93-3	<1
Styrene	100-42-5	<1
Xylenes (Total)	1330-20-7	<3
Methyl Tertiary Butyl Ether	1634-04-4	<1

Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: Nassau County BOCES – 71 Clinton Road
	(S-24 [32'-36'])
Date Received: 12/14/01	Laboratory ID: 0122264
Date Extracted: NA	Matrix: Liquid
Date Analyzed: 12/16/01	ELAP#: 11418

	CAS No.	RESULTS ug/L
PARAMETER	74-87-3	<1
Chloromethane	74-83-9	<1
Bromomethane	75-01-4	<1
Vinyl Chloride	75-00-3	<1
Chloroethane	75-09-2	<1
Methylene Chloride	75-34-3	<1
1,1-Dichloroethane	75-35-4	<1
1,1-Dichloroetene	67.68-3	<1
Chloroform	107.06-2	<1
1,2-Dichloroethane	74 55 6	<1
1,1,1-Trichloroethane	71-00-0	<1
Carbon Tetrachloride	75.07.4	<1
Bromodichloromethane	75-21-4	<1
1,2-Dichloropropane	/8-87-5	e1
Trichloroethene	79-01-6	
1,1,2-Trichloroethane	79-00-5	
Benzene	71-43-2	
Bromoform	75-25-2	
1.1.2.2-Tetrachloroethane	79-34-5	
Tetrachloroethene	127-18-4	
Toluene	108-88-3	<
Chlorobenzene	108-90-7	<1
Ethylbenzene	100-41-4	<1
trans-1.2-Dichloroethene	156-60-5	<1
2-Chloroethylvinyl Ether	110-75-8	<1
trans-1.3-Dichloropropene	10061-02-6	<1
Dibromochloromethane	124-48-1	<1
cis-1 3-Dichloropropene	, 10061-01-5	<1
Acetone	67-64-1	<1
Carbon Disulfide	75-15-0	<1
2 Hexanone	591-78-6	<1
4. Methyd-2-Pentanone	108-10-1	<1
2-Butanone	78-93-3	<1
Sturene	100-42-5	<1
Xylenes (Total)	1330-20-7	<3
Methyl Tertiany Butyl Ether	1634-04-4	<10
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Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: Nassau County BOCES – 71 Clinton Road
	(S-25 [32'-36'])
Data Received: 12/14/01	Laboratory ID: 0122265
Date Extracted: NA	Matrix: Liquid
Date Analyzed: 12/16/01	ELAP#: 11418

DADAMETER	CAS No.	RESULTS ug/L
PARAMETER	74-87-3	<1
Chloromethane	74-83-9	<1
Bromomethane	75-01-4	<1
Vinyl Chloride	75-00-3	<1
Chloroethane	75-09-2	<1
Methylene Chloride	75-34-3	<1
1,1-Dichloroethane	75-35-4	<1
1,1-Dichloroetene	67-66-3	<1
Chloroform	107-06-2	<1
1,2-Dichloroethane	71-55-6	<1
1,1,1-Trichloroethane	56-23-5	<1
Carbon Tetrachloride	75-27-4	<1
Bromodichloromethane	79.97.5	<1
1,2-Dichloropropane	70-01-5	<1
Trichloroethene	79-01-0	<1
1,1,2-Trichloroethane	79-00-5	2
Benzene	75 25 2	<1
Bromoform	75-25-2	<1
1,1,2,2-Tetrachloroethane	79-34-5	<
Tetrachloroethene	127-18-4	53
Toluene	108-88-3	55
Chlorobenzene	108-90-7	
Ethylbenzene	100-41-4	4
trans-1,2-Dichloroethene	156-60-5	
2-Chloroethylvinyl Ether	110-75-8	
trans-1,3-Dichloropropene	10061-02-6	
Dibromochloromethane	124-48-1	
cis-1,3-Dichloropropene	10061-01-5	
Acetone	67-64-1	
Carbon Disulfide	75-15-0	
2-Hexanone	591-78-6	
4-Methyl-2-Pentanone	108-10-1	
2-Butanone	78-93-3	
Styrene	100-42-5	<1
Xylenes (Total)	1330-20-7	20
Methyl Tertiary Butyl Ether	1634-04-4	

Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: Nassau County BOCES – 71 Clinton Road (S-25 [32'-36'])
Date Received: 12/14/01	Laboratory ID: 0122265
Date Extracted: 12/18/01	Matrix: Liquid
Date Analyzed: 12/18/01	ELAP#: 11418

### METALS ANALYSIS TARGET ANALYTE LIST

DADAMETED	REPORTING LIMIT mg/L	RESULTS mg/L
PARAMETER	0.020	<0.020
Silver, Ag	0.020	0.123
Aluminum, Al	0.025	<0.025
Arsenic, As	0.020	0.199
Barium, Ba	0.020	<0.020
Beryllium, Be	0.020	33.6
Calcium, Ca	0.020	<0.010
Cadmium, Cd	0.010	0.040
Cobalt, Co	0.020	<0.020
Chromium, Cr	0.020	<0.020
Copper, Cu	0.020	0.020
Iron, Fe	0.020	0.900
Potassium, K	0.070	0.95
Magnesium, Mg	0.020	3.34
Manganese, Mn	0.020	2.12
Sodium Na	0.030	85.0
Nickel Ni	0.020	<0.020
Lead Ph	0.015	<0.015
Antimony Sh	0.025	<0.025
Antimony, 60	0.025	<0.025
	0.015	<0.015
	0.020	<0.020
	0.020	0.021
Zinc, Zn	0.002	< 0.002
Mercury, Hg	0.002	

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Analytical Methods:

SW-846 6010 (ICP) Mercury SW-846 7470 (Cold Vapor)

Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: 71 Clinton Rd. Garden City, N.Y. (S-26 [32'-36'])
Date Received: 12/12/01	Laboratory ID: 0122189
Date Extracted: NA	Matrix: Liquid
Date Analyzed: 12/13/01	ELAP#: 11418

PARAMETER	CAS No.	RESULTS ug/L
Chloromethane	74-87-3	<1
Bromomethane	74-83-9	<1
Vinyl Chloride	75-01-4	<1
Chloroethane	75-00-3	<1
Methylene Chloride	75-09-2	<1
1,1-Dichloroethane	75-34-3	<1
1,1-Dichloroetene	75-35-4	<1
Chloroform	67-66-3	<1
1,2-Dichloroethane	107-06-2	<1
1,1,1-Trichloroethane	71-55-6	<1
Carbon Tetrachloride	56-23-5	<1
Bromodichloromethane	75-27-4	<1
1,2-Dichloropropane	78-87-5	<1
Trichloroethene	79-01-6	<1
1,1,2-Trichloroethane	79-00-5	<1
Benzene	71-43-2	<1
Bromoform	75-25-2	<1
1,1,2,2-Tetrachloroethane	79-34-5	<1
Tetrachloroethene	127-18-4	<1
Toluene	108-88-3	<1
Chlorobenzene	108-90-7	<1
Ethylbenzene	100-41-4	<1
trans-1,2-Dichloroethene	156-60-5	<1
2-Chloroethylvinyl Ether	110-75-8	<1
trans-1,3-Dichloropropene	10061-02-6	<1
Dibromochloromethane	124-48-1	<1
cis-1,3-Dichloropropene	10061-01-5	<1
Acetone	67-64-1	<1
Carbon Disulfide	75-15-0	<1
2-Hexanone	591-78-6	<1
4-Methyl-2-Pentanone	108-10-1	<1
2-Butanone	78-93-3	<1
Styrene	100-42-5	<1
Xylenes (Total)	1330-20-7	<3
Methyl Tertiary Butyl Ether	1634-04-4	<1

Laboratory Director



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~ Clior	at Freudenthal & Elkowitz	Sample ID: 71 Clinton Rd. Garden City, N.Y.
		(S-26 [32'-36'])
Date	Received: 12/12/01	Laboratory ID: 0122189
Date	Extracted: 12/14/01	Matrix: Liquid
Date	Analyzed: 12/14/01	ELAP#: 11418

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### METALS ANALYSIS TARGET ANALYTE LIST

	and the second se	
DARAMETER	REPORTING LIMIT mg/L	RESULTS mg/L
Silver An	0.020	<0.020
	0.020	0.782
	D.025	<0.025
Arsenic As	0.020	0.085
Bandlium Re	0.020	<0.020
Beryllum, Be	0.020	40.6
	0.010	<0.010
	0.020	0.022
Cobalt, Co	0.020	<0.020
Chromium, Cr	0.020	<0.020
Copper; Cu star	0.020	1.02
Iron, Fe	0.020	3.92
Potassium, K	0,070	
Magnesium, Mg	0.020	4.04
Manganese, Mn	0.020	1.75
Sodium, Na	0.030	19.7
Nickel, Ni	0.020	<0.020
Lead, Pb	0.015	<0.015
Antimony, Sb	0.025	<0.025
Selenium Se	0.025	<0.025
Thallium Tl	0.015	<0.015
	0,020	<0.020
Zinc Zn	0.020	0.021
Mercury, Ha	0.002	<0.002

Analytical Methods:

SW-846 6010 (ICP) Mercury SW-846 7470 (Cold Vapor)

Laboratory Director

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Client: Freudenthal & Elkowitz	Sample ID: 71 Clinton Rd. Garden City, N.Y. (S-27 [32'-36'])
Date Received: 12/12/01	Laboratory ID: 0122188
Date Extracted: NA	Matrix: Liquid
Date Analyzed: 12/13/01	ELAP#: 11418

PARAMETER	CAS No.	RESULTS ug/L
Chloromethane	74-87-3	<1
Bromomethane	74-83-9	<1
Vinyl Chloride	75-01-4	<1
Chloroethane	75-00-3	<1
Methylene Chloride	75-09-2	<1
1,1-Dichloroethane	75-34-3	<1
1,1-Dichloroetene	75-35-4	<1
Chloroform	67-66-3	<1
1,2-Dichloroethane	107-06-2	<1
1,1,1-Trichloroethane	71-55-6	<1
Carbon Tetrachloride	56-23-5	<1
Bromodichloromethane	75-27-4	<1
1,2-Dichloropropane	78-87-5	<1
Trichloroethene	79-01-6	<1
1,1,2-Trichloroethane	79-00-5	<1
Benzene	71-43-2	<1
Bromoform	75-25-2	<1
1,1,2,2-Tetrachloroethane	79-34-5	<1
Tetrachloroethene	127-18-4	<1
Toluene	108-88-3	<1
Chlorobenzene	108-90-7	<1
Ethylbenzene	100-41-4	<1
trans-1,2-Dichloroethene	156-60-5	<1
2-Chloroethylvinyl Ether	110-75-8	<1
trans-1,3-Dichloropropene	10061-02-6	<1
Dibromochloromethane	124-48-1	<1
cis-1,3-Dichloropropene	10061-01-5	<1
Acetone	67-64-1	<1
Carbon Disulfide	75-15-0	<1
2-Hexanone	591-78-6	<1
4-Methyl-2-Pentanone	108-10-1	<1
2-Butanone	78-93-3	<1
Styrene	100-42-5	<1
Xylenes (Total)	1330-20-7	<3
Methyl Tertiary Butyl Ether	1634-04-4	<1

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Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: 71 Clinton Rd. Garden City, N. (S-28 [32'-36'])	
Date Received: 12/12/01	Laboratory ID: 0122187	
Date Extracted: NA	Matrix: Liquid	
Date Analyzed: 12/13/01	ELAP#: 11418	

PARAMETER	CAS No.	RESULTS ug/L
Chloromethane	74-87-3	<1
Bromomethane	74-83-9	<1
Vinvl Chloride	75-01-4	<1
Chloroethane	75-00-3	<1
Methylene Chloride	75-09-2	<1
1.1-Dichloroethane	75-34-3	<1
1.1-Dichlorgetene	75-35-4	<1
Chloroform	67-66-3	<1
1.2-Dichloroethane	107-06-2	<1
1.1.1-Trichloroethane	71-55-6	<1
Carbon Tetrachloride	56-23-5	<1
Bromodichloromethane	75-27-4	<1
1 2-Dichloropropane	78-87-5	<1
Trichloroethene	79-01-6	<1
1 1 2-Trichloroethane	79-00-5	<1
Benzene	71-43-2	<1
Bromoform	75-25-2	<1
1.1.2.2-Tetrachloroethane	79-34-5	<1
Tetrachloroethene	127-18-4	<1
Toluene	108-88-3	<1
Chlorobenzene	108-90-7	<1
Ethylbenzene	100-41-4	<1
trans-1.2-Dichloroethene	156-60-5	<1
2-Chloroethylvinyl Ether	110-75-8	<1
trans-1.3-Dichloropropene	10061-02-6	<1
Dibromochloromethane	124-48-1	<1
cis-1.3-Dichloropropene	10061-01-5	<1
Acetone	67-64-1	<1
Carbon Disulfide	75-15-0	<1
2-Hexanone	591-78-6	<1
4-Methyl-2-Pentanone	108-10-1	<1
2-Butanone	78-93-3	<1
Styrene	100-42-5	<1
Xvienes (Total)	1330-20-7	<3
Methyl Tertiary Butyl Ether	1634-04-4	<1

Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: 71 Clinton Rd. Garden City, N.Y. (S-29 [32'-36'])
Date Received: 12/12/01	Laboratory ID: 0122186
Date Extracted: NA	Matrix: Liquid
Date Analyzed: 12/13/01	ELAP#: 11418

DADAMETER	CAS No.	RESULTS ug/L
Chloromathane	74-87-3	<1
	74-83-9	<1
Bromomethane	75-01-4	<1
	75-00-3	<1
Chloroethane	75-09-2	<1
Methylene Chloride	75-34-3	<1
1,1-Dichloroethane	75-35-4	<1
1,1-Dichloroetene	67-66-3	<1
Chloroform	107-06-2	<1
1,2-Dichloroethane	71_55_6	<1
1,1,1-Trichloroethane	56.23-5	<1
Carbon Tetrachloride	75.07-4	<1
Bromodichloromethane	70 07 5	<1
1,2-Dichloropropane	70-01-0	<1
Trichloroethene	79-01-0	<1
1,1,2-Trichloroethane	79-00-5	<1
Benzene	/1-43-2	<1
Bromoform	/5-25-2	<1
1,1,2,2-Tetrachloroethane	/9-34-5	<1
Tetrachloroethene	12/-18-4	<1
Toluene	108-88-3	-1
Chlorobenzene	108-90-7	
Ethylbenzene	100-41-4	
trans-1,2-Dichloroethene	156-60-5	
2-Chloroethylvinyl Ether	110-75-8	
trans-1.3-Dichloropropene	10061-02-6	
Dibromochloromethane	124-48-1	< ]
cis-1 3-Dichloropropene	10061-01-5	<1
Acetone	67-64-1	<1
Carbon Disulfide	75-15-0	<1
2-Hexanone	591-78-6	<1
4 Methyl-2-Pentanone	108-10-1	<1
2 Butanone	78-93-3	<1
2-Dutanone	100-42-5	<1
	1330-20-7	<3
Mothyl Tertiany Butyl Ether	1634-04-4	<1
Meury renary Dutyr Enter	1	20

Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: 71 Clinton Rd. Garden City, N.Y. (S-30 [32'-36'])
Date Received: 12/12/01	Laboratory ID: 0122185
Date Extracted: NA	Matrix: Liquid
Date Analyzed: 12/13/01	ELAP#: 11418

PARAMETER	CAS No.	RESULTS ug/L
Chloromethane	74-87-3	<1
Bromomethane	74-83-9	<1
Vinyl Chloride	75-01-4	<1
Chloroethane	75-00-3	<1
Methylene Chloride	75-09-2	<1
1.1-Dichloroethane	75-34-3	<1
1.1-Dichloroetene	75-35-4	<1
Chloroform	67-66-3	<1
1.2-Dichloroethane	107-06-2	<1
1.1.1-Trichloroethane	71-55-6	<1
Carbon Tetrachloride	56-23-5	<1
Bromodichloromethane	75-27-4	<1
1.2-Dichloropropane	78-87-5	<1
Trichloroethene	79-01-6	<1
1.1.2-Trichloroethane	79-00-5	<1
Benzene	71-43-2	<1
Bromoform	75-25-2	<1
1.1.2.2-Tetrachloroethane	79-34-5	<1
Tetrachloroethene	127-18-4	<1
Toluene	108-88-3	<1
Chlorobenzene	108-90-7	<1
Ethylbenzene	100-41-4	<1
trans-1,2-Dichloroethene	156-60-5	<1
2-Chloroethylvinyl Ether	110-75-8	<1
trans-1,3-Dichloropropene	10061-02-6	<1
Dibromochloromethane	124-48-1	<1
cis-1,3-Dichloropropene	10061-01-5	<1
Acetone	67-64-1	<1
Carbon Disulfide	75-15-0	<1
2-Hexanone	591-78-6	<1
4-Methyl-2-Pentanone	108-10-1	<1
2-Butanone	78-93-3	<1
Styrene	100-42-5	<1
Xylenes (Total)	1330-20-7	<3
Methyl Tertiary Butyl Ether	1634-04-4	<1

Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: 71 Clinton Rd. Garden' City, N.Y. (S-30 [32'-36'])
Date Received: 12/12/01	Laboratory ID: 0122185
Date Extracted: 12/14/01	Matrix: Liquid
Date Analyzed: 12/14/01	ELAP#: 11418

# METALS ANALYSIS TARGET ANALYTE LIST

PARAMETER	REPORTING LIMIT mg/L	RESULTS mg/L
Silver Ag	0.020	<0.020
Aluminum, Al	0.020	0.709
Arsenic, As	0.025	<0.025
Barium Ba	0.020	0.220
Bervilium Be	0.020	<0.020
Calcium Ga	0.020	22.1
Cadmium Cd	0.010	<0.010
Cobalt Co	0.020	<0.020
Chromium Cr	0.020	<0.020
Copper Cu	0.020	<0.020
Iron Fe	0.020	0.322
Potassium K	0.070	3.74
Magnesium Mg	0.020	5.12
Manappasa Mu	0.020	2.12
Sodium Na	0.030	52.2
Niekol Ni	0 120	<0.020
Nicket, Ni	0.015	<0.015
Leau, FD	0.025	<0.025
Anumony, 30	0.025	<0.025
Theiling T	0.015	<0.015
	0.010	<0.020
	0.020	0.049
	0.020	<0.002
Mercury, Hg	U.UUZ	

Analytical Methods:

SW-846 6010 (ICP) Mercury SW-846 7470 (Cold Vapor)

Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: 71 Clinton Road Garden City, N.Y. (S-31 [32'-36'])
Date Received: 12/13/01	Laboratory ID: 0122208
Date Extracted: NA	Matrix: Liquid
Date Analyzed: 12/16/01	ELAP#: 11418

	CAS No.	RESULTS ug/L
PARAMETER	74-87-3	<1
Chloromethane	74-83-9	<1
Bromomethane	75-01-4	<1
Vinyl Chloride	75-00-3	<1
Chloroethane	75-09-2	<1
Methylene Chloride	75-34-3	<1
1,1-Dichloroethane	75-35-4	<1
1,1-Dichloroetene	67 66.3	<1
Chloroform	107.06-2	<1
1,2-Dichloroethane	71 55 6	<1
1,1,1-Trichloroethane	/1-55-0	<1
Carbon Tetrachloride	50-23-5	<1
Bromodichloromethane		<1
1.2-Dichloropropane	78-87-5	<1
Trichloroethene	/9-01-6	<1
1.1.2-Trichloroethane	/9-00-5	<1
Benzene	71-43-2	<1
Bromoform	75-25-2	<1
1122-Tetrachloroethane	79-34-5	
Tetrachloroethene	127-18-4	
Toluene	108-88-3	
Chlorobenzene	108-90-7	
Ethylbenzene	100-41-4	
trans_1_2-Dichloroethene	156-60-5	<
2 Chlomethylvinyl Ether	110-75-8	
trans 1.3-Dichloropropene	10061-02-6	<1
Dibromochloromethane	124-48-1	<1
biblomochloropropene	10061-01-5	<1
Asstand	67-64-1	<1
Acetone Disulfide	75-15-0	<1
	591-78-6	<1
2-FIEXANUNE	108-10-1	<1
4-Meury-2-remanone	78-93-3	<1
2-Butanone	100-42-5	<1
Styrene	1330-20-7	<3
Xylenes (10tal)	1634-04-4	<1
Methyl Tertiary Butyl Ether		

Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: 71 Clinton Road Garden City, N.Y. (S-34 [19'-20'])
Date Received: 12/13/01	Laboratory ID: 0122203
Date Extracted: 12/16/01	Matrix: Soil Level: High
Date Analyzed: 12/16/01	ELAP#: 11418

### **VOLATILE ORGANICS** SW-846 METHOD 8021 (STARS)

PAPAMETER	CAS No.	RESULTS ug/kg
Mathud Todion, Butyl Ether	1634-04-4	<125
	71-43-2	<125
Benzene	108-88-3	<125
loluene	100-00-0	<125
Ethylbenzene	100-41-4	<250
m+p -Xylene	108-38-3/106-42-3	<125
o -Xylene	95-47-6	-125
4-Isopropyltoluene	99-87-6	360
n-Propylbenzene	103-65-1	210
1 3 5-Trimethylbenzene	108-67-8	<125
1.2.4-Trimethylbenzene	95-63-6	930
Isopropylhenzene	98-82-8	160
tort Butylbonzene	98-06-8	<125
	135-98-8	440
sec-Butylbenzene	104-51-8	<125
n-Butyibenzene	01 20 3	200
Naphthalene	91-20-3	

Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: 71 Clinton Road Garden City, N.Y. (S-34 [19'-20'])
Date Received: 12/13/01	Laboratory ID: 0122203
Date Extracted: 12/18/01	Matrix: Soll
Date Analyzed: 12/18/01	ELAF#. 11410

# SEMIVOLATILE ORGANICS SW846 METHOD 8270 (STARS)

DADAMETED	CAS No.	RESULTS ug/kg
PARAMETER	02.22.0	800
Acenaphthene	00-02-9	1 300
Fluorene	86-73-7	2 500
Phenanthrene	85-01-8	3,500
Anthrocone	120-12-7	890
Anunacene	206-44-0	<400
Fluorantnene	120 00-0	1,200
Pyrene	129-00-0	<400
Benzo(a)anthracene	56-55-3	<100
Chrysene	218-01-9	<400
Benzo(b)fluoranthene	205-99-2	<400
Benzo(k)fluoranthene	207-08-9	<400
Benzu(K)nuorantinono	50-32-8	<400
Benzo(a)pyrene	102 30 5	<400
Indeno(1,2,3-c,d)pyrene	193-39-3	<400
Dibenzo(a,h)anthracene	53-70-3	<400
Benzo(g,h,i)perylene	191-24-2	~400

Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: 71 Clinton Road Garden City, N.Y. (S-34 [32'-36'])
Date Received: 12/13/01	Laboratory ID: 0122204
Date Extracted: NA	Matrix: Liquid
Date Analyzed: 12/16/01	ELAP#: 11418

### **VOLATILE ORGANICS** SW-846 METHOD 8021 (STARS)

PARAMETER	CAS No.	RESULTS ug/L
Mothyl Tartian/ Butyl Ether	1634-04-4	<1
Rearing Party Euror	71-43-2	<1
Delizelle	108-88-3	<1
	100-41-4	<1
Ethylbenzene	108-38-3/106-42-3	<2
m+p-Xylene	95-47-6	<1
o-Xylene	00-87-6	<1
4-lsopropyltoluene	103 65-1	<1
n-Propylbenzene	109.67.9	<1
1,3,5-Trimethylbenzene	05.62.6	<1
1,2,4-Trimethylbenzene	95-63-6	<1
Isopropylbenzene	98-82-8	
tert-Butylbenzene	98-06-8	-1
sec-Butylbenzene	135-98-8	
n-Butylbenzene	104-51-8	~1
Naphthalene	91-20-3	<u> </u>

Laboratory Director



### SEMIVOLATILE ORGANICS SW-846 METHOD 8270 (STARS)

DADAMETER	CAS No.	RESULTS ug/L
	83-32-9	<5
Acenaphinene	96.73.7	<5
Fluorene		<5
Phenanthrene	85-01-8	
Anthracene	120-12-7	<0
Fluoranthene	206-44-0	<5
Pyrene	129-00-0	<5
Benzo(a)anthracene	56-55-3	<5
Chrysene	218-01-9	<5
Benzo(b)fluoranthene	205-99-2	<5
Benzo(k)fluoranthene	207-08-9	<5
Benzo(a)pyrene	50-32-8	<5
Indeno(1,2,3-c,d)pyrene	193-39-5	<5
Dibenzo(a,h)anthracene	53-70-3	<5
Benzo(g,h,i)perylene	191-24-2	<5

Laboratory Director



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Client: Freudenthal & Elkowitz	Sample ID: 71 Clinton Road Garden City, N.Y. (S-35 [14'-16'])
Date Received: 12/13/01	Laboratory ID: 0122205
Date Extracted: NA	Matrix: Soil Level: Low
Date Analyzed: 12/16/01	ELAP#: 11418

### VOLATILE ORGANICS SW-846 METHOD 8021 (STARS)

DARAMETER	CAS No.	RESULTS ug/kg
PARAIVIEICR	1634 04-4	<5
Methyl Tertiary Butyl Ether	74 40 0	<5
Benzene	/1-43-2	
Toluene	108-88-3	<0
Cibylbonzone	100-41-4	<5
EuryiDenzene	108-38-3/106-42-3	<10
m+p -Xylene	95-47-8	<5
o -Xylene	00.97.6	<5
4-Isopropyltoluene	99-87-0	
n-Propylbenzene	103-65-1	
1 3 5 Trimethylbenzene	108-67-8	<0
4.0.4 Trimothylbenzene	95-63-6	<5
1,2,4-Initieuryibenzene	98-82-8	<5
Isopropyibenzene	08.06.8	<5
tert-Butylbenzene	<u> </u>	<5
sec-Butvibenzene	135-98-8	
n-Butylbenzene	104-51-8	< 5
Nachtholono	91-20-3	<5
Naphthalene		

Laboratory Director



Client: Freudenthal & Elkowitz	Sample ID: 71 Clinton Road Garden City, N.Y. (S-35 [14'-16'])	
Date Received: 12/13/01	Laboratory ID: 0122205	
Date Extracted: 12/18/01	Matrix: Soil	
Date Analyzed: 12/18/01	ELAP#: 11418	

### SEMIVOLATILE ORGANICS SW846 METHOD 8270 (STARS)

PARAMETER	CAS No.	RESULTS ug/kg
Acenaphthene	83-32-9	<200
Fluorene	86-73-7	<200
Phenanthrene	85-01-8	<200
Anthracene	120-12-7	<200
Fluoranthene	206-44-0	<200
Pyrene	129-00-0	<200
Benzo(a)anthracene	56-55-3	<200
Chrysene	218-01-9	<200
Benzo(b)fluoranthene	205-99-2	<200
Benzo(k)fluoranthene	207-08-9	<200
Benzo(a)pyrene	50-32-8	320
Indeno(1,2,3-c,d)pyrene	193-39-5	<200
Dibenzo(a,h)anthracene	53-70-3	<200
Benzo(g,h,i)perylene	191-24-2	350

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Laboratory Director

