# **Phase II Environmental Site Assessment**

Tini

Limited Subsurface Investigation April 9, 2001

# 00-408A

conducted at:

48 Sewell Street Hempstead, New York Nassau County Tax Map Designation: Section 35; Block 630; Lots 21-28

prepared for:

Scott Miller Landscape Maintenance, Inc. 69 Woodcock Road Westbury, NY

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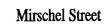
## **APPENDICES**

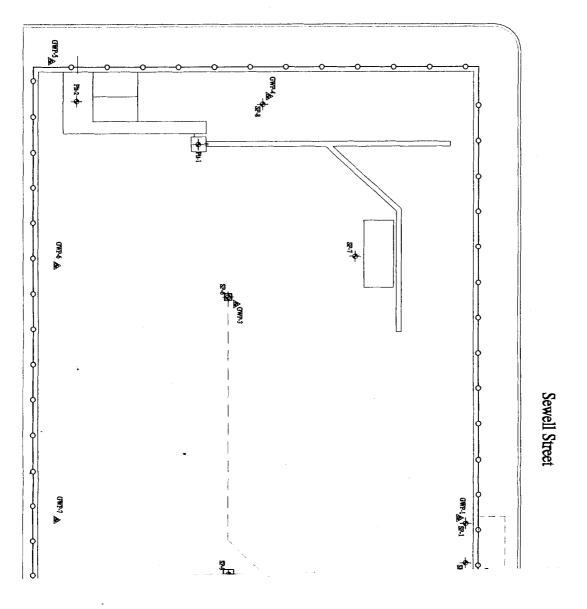
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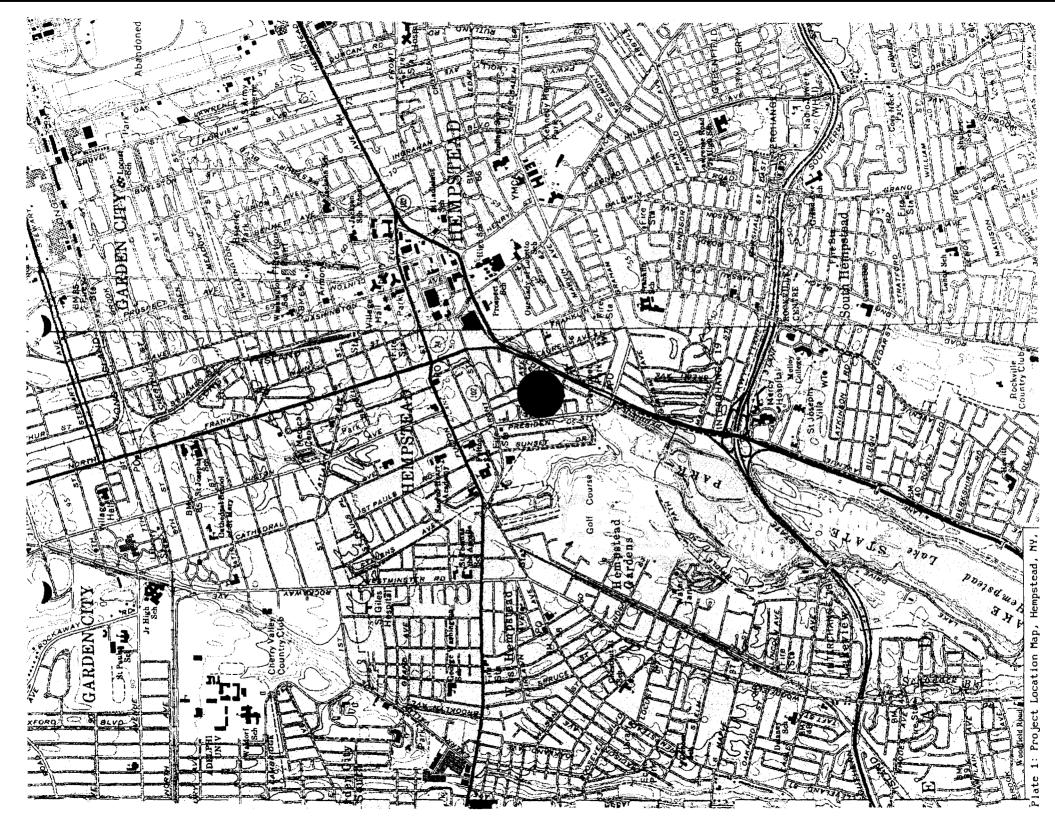
## 1.0 Purpose & Scope

This Phase II Environmental Site Assessment (ESA) was conducted to define what, if any, contaminants have impacted the environmental quality of the property located at 48 Sewell Street, Hempstead, New York, herein identified as the subject property. The scope of this investigation was based on recommendations presented in the Phase I ESA report prepared by Kosuri Engineering & Consulting, P.C., dated October 16, 2000. Said assessment identified issues requiring supplemental data to further define the environmental quality of the subject property.

The investigative protocols used for this assessment were based upon the following documents: 1) the New York State Department of Environmental Conversation Spill Technology and Remediation Series (STARS) Memo #1, Petroleum Contaminated Soil Guidance Policy; 2) the New York State Department of Environmental Conservation, Spill Prevention Operation Technology Series (SPOTS) Memo #14, Tank Assessment Procedures; 3) the New York State Department of Environmental Conservation Technical and Administrative Guidance Memorandum (TAGM) #4046 Determination of Soil Cleanup Objectives; 4) the New York State Department of Environmental Conservation Technical and Administrative Guidance Memorandum (TAGM) #4015 Policy Regarding Alteration of Groundwater Samples Collected for Metals Analysis; and 5) the New York State Department of Environmental Conservation, Technical Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Limitations. The activities performed under the scope of this investigation have been summarized in this report in the following sections.

- Site Description
- Survey, Sampling and Analysis Plan
- Quality Assurance and Control Procedures (QA/QC)
- Laboratory Analysis
- Evaluation of Results
- Conclusions

Presented herein are the results of the Phase II Environmental Site Assessment conducted by Kosuri Engineering & Consulting, P.C. on the subject property [see **Plate 1:** Project Location Map, *Hempstead, New York*].



# 2.0 Site Description

All of the information presented in this section of the report was compiled during the performance of the Phase I ESA.

## 2.1 Topography

The areal extent of the subject property was approximately 16,000 square feet. The surface area of the subject property consisted of a concrete slab (floor of a former building) that included trenching, two drain and a holding pit. In general, the subject property exhibited low topographic relief (less than three percent slopes).

## 2.2 Land Use

The subject property was developed in 1945 to be utilized as a bus garage and office. The building was to be connected with the municipal sewer system at the time of construction. The building was subsequently renovated in 1973 to operate as an electroplating facility. The electroplating facility was operational for approximately twenty-six years. The electroplating facility maintained numerous above ground holding tanks (vats) and drums for storage of plating chemicals. Three fires were reported to have occurred on the subject property. The second fire, which occurred in 1995, resulted in significant damage the electroplating equipment. The third fire, which occurred in 1999, resulted in extensive damage the building. Consequently, the building was subsequently demolished.

## 2.3 Recognized Environmental Conditions

The investigative activities performed under the scope of this Phase II ESA were based upon the following issues identified as *recognized environmental conditions*.

• The Phase I ESA identified that two underground storage tanks (USTs) were formerly maintained on the subject property. There were no records concerning the proper abandonment of any former USTs on the subject property. This absence of records represents a *recognized environmental condition*. Accordingly, it was recommended that a remote sensing survey be performed to determine if said USTs were present on the subject property, and that a limited subsurface investigation be conducted to determine if the former operation and maintenance of the USTs actuated a release of product to the subsurface soil and/or groundwater of the subject property.

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• The Phase I ESA identified that a bus garage and an electroplating facility formerly operated on the subject property. These industrial land use applications have created the potential for the subject property to have been impacted by organic and inorganic contaminants. This potential represents a *recognized environmental condition*. Accordingly, it was recommended that a limited subsurface investigation be performed to determine if these former industrial land uses have impacted the environmental quality of the property. This recommendation is further supported by the reported release of electroplating (nickel and chromium solutions) chemicals resulting from the fires that occurred on the subject property.

# 3.0 Survey, Sampling and Analysis Plan

A survey, sampling and analysis program was developed to address the recognized environmental conditions identified in the Phase I ESA. The plan included: 1) a remote sensing survey to identify any on-site USTs or any subsurface structures associated with former electroplating operations; 2) an investigation to determine what, if any, contaminants were released to the subsurface soil and/or groundwater of the subject property as a result of former on-site operations. The following work was performed to satisfy the survey, sampling and analysis plan. All structures and sampling locations can be referenced with **Plate 2:** Sample Acquisition Plan, *Hempstead, New York*.

## 3.1 Remote Sensing Survey

A survey plan was designed to identify the presence of any subsurface structures associated with former on-site operations that represented mechanisms for the release of contaminants on the subject property. Such structures included underground storage tanks (USTs), underground wastewater injection wells (UIWs), and subsurface piping. The remote sensing survey was performed utilizing a GSSI ground penetrating radar (GPR) and a void detection instrument. The remote sensing survey was performed over the planimetric surface of the subject property on a coordinate grid system. An analysis of the data collected from the remote sensing survey revealed the following.

- Two subsurface anomalies consistent with USTs. These anomalies were suspected to represent the abandoned fuel oil and gasoline USTs.
- Subsurface piping interconnecting two floor drains via separator to the main sewer trap.
- Subsurface piping exiting the holding pit.
- The remote sensing survey failed to identify the presence of any wastewater UIWs.

#### 3.11 Remote Sensing Survey Procedures

The instruments used to survey the subject property were a Geophysical Survey Systems, Inc. (GSSI) SIR <sup>®</sup> (Subsurface Interface Radar) System-2 and a Whites TM 808 locator instrument. A GPR system consists of a radar control unit, control cable and a transducer (antenna). The control unit transmits a trigger pulse at a normal repetition rate of 50 KHz. The trigger pulse is sent to the transmitter electronics in the transducer via the control cable. The transmitter electronics amplify the trigger pulses into bipolar pulses that are radiated to the subsurface. The transformed pulses vary in shape and frequency according to the transducer used. In the subsurface, variations of the signal occur at boundaries where there is a dielectric contrast (void, steel, soil type, etc.). Signal reflections travel back to the control unit represented as color graphic images for interpolation. The SIR <sup>®</sup> System-2 is capable of transmitting electromagnetic energy in the frequency range of 16MHz to 2000MHz.

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The Whites TM 808 locator instrument is commonly used to discriminate between target types, such as in confirming void spaces or a detecting a change in the subsurface material. The instrument can also be used to detect large metal objects, such as steel underground storage tanks. The Whites TM 808 consists of a front and rear loop antenna and control box. The control box emits a signal into the ground utilizing transmit and receive electronics. When in cave mode, the control box senses mineralization changes in the subsurface. Where a void space is encountered, the unit will sense a decrease in mineralization, therefore emitting a positive signal. Similarly, when the instrument is set in metal mode, a positive signal will be emitted when a metal object is encountered. The strength of the positive signal is interpreted audibly and as a percentage of strength from calibration. The Whites TM 808 generally detects large objects at a depth of four to twenty feet.

A qualified technician from Kosuri Engineering & Consulting, P.C. specified a coordinate system on the planimetric surface of the site to map any subsurface dielectric anomalies detected on the premises. The property was then surveyed by scanning the planimentric surface with the Whites TM 808 instrument and hand-towing a 400 MHz GPR antenna in a rough five-foot grid pattern. The operator used knowledge of the subsurface soil composition to calibrate the SIR <sup>®</sup> System-2 to site specific conditions. Factor settings such as range, gain, number of gain points, and scans per unit, were modified to yield the most accurate data to describe the subsurface conditions.

Upon finding a dielectric anomaly, a more spatially specific coordinate system was designed over the area to determine its size, shape and orientation. The data collected during the survey was reviewed by the operator and compared against past experience, technical judgment and prior site knowledge to classify the anomalies.

# 3.2 Subsurface Soil Sampling

Eleven (11) soil probe nodes, identified as SP-1 through SP-9, Pit-1 and Pit-2, were sited by Kosuri Engineering at strategic locations on the subject property corresponding to the remote sensing survey and information provided in the Phase I ESA. Subsurface soil samples were secured from said probe nodes at depth intervals ranging from grade to fourteen (14) feet below existing grade (BEG). These samples were secured to provide data that would determine if former on-site operations had impacted the environmental quality of the subject property. The following presents a summary of subsurface soil sampling locations on the subject property.

Probe nodes SP-1 and SP-2 were sited adjacent to the UST (suspected gasoline UST) as identified by the remote sensing survey on the northeastern portion of the subject property. Probe nodes SP-3 and SP-4 were sited adjacent to the UST (suspected fuel oil UST) as identified by the remote sensing survey on the northeastern portion of the subject property.

Probe node SP-5 was sited adjacent to the separator tank as identified by the remote sensing survey on the eastern portion of the subject property.

Probe node SP-6 was sited within the confines of the floor drain identified at grade on the western portion of the subject property. Although the remote sensing survey confirmed that the drain was connected to the municipal sewer, the structural integrity of this drain and associated piping could not be confirmed, therefore, this area was subjected to sampling activities as part of this investigation.

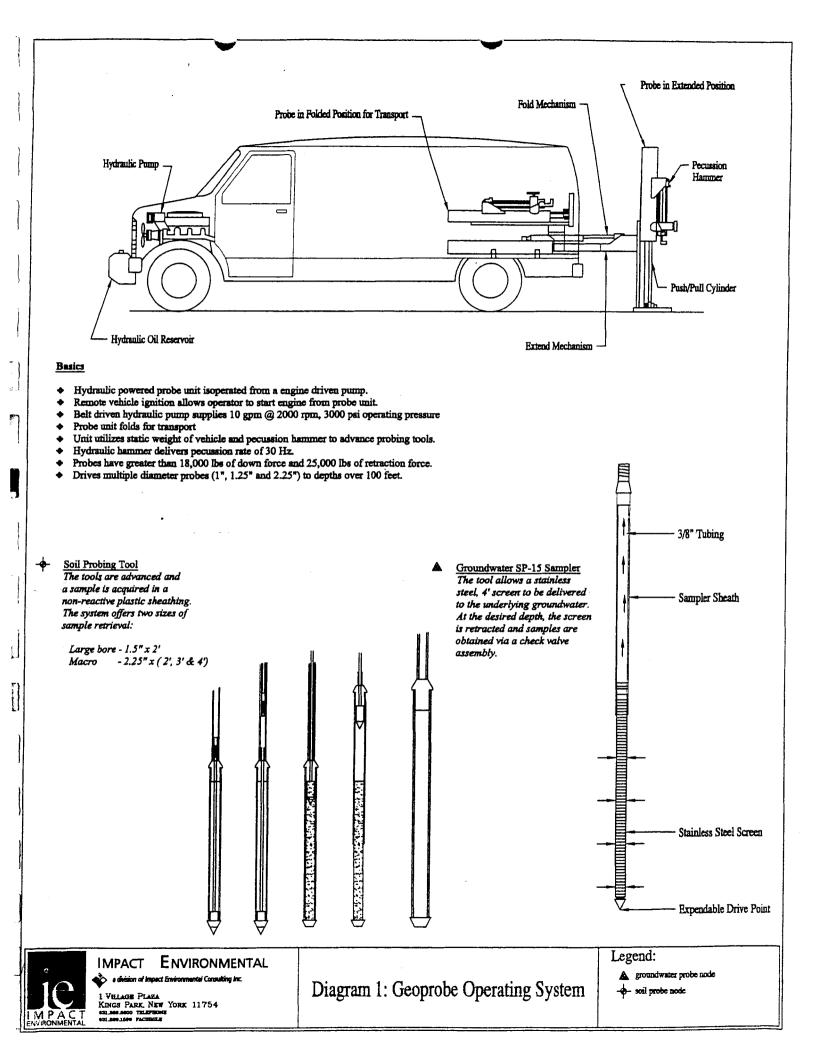
Probe node SP-7 was sited adjacent to a former structure that supported two above ground chemical (nickel solution) holding tanks.

Probe node SP-8 was sited in the vicinity of the chemical release area (former bay doors) as identified in the Phase I ESA.

Probe nodes Pit-1 and Pit-2 were sited within the base of two holding pits. Coring activities were performed at each probe node location to access the subsurface. Although the remote sensing survey and visual observation confirmed that the holding pits were connected to the municipal sewer, the structural integrity of these holding pits and associated piping could not be confirmed, therefore, this area was subjected to sampling activities as part of this investigation.

#### 3.2.1 Subsurface Probe Installation

Subsurface probes were installed using a *Geoprobe* hydraulically powered probing tool (see **Diagram 1**: Geoprobe Operating System). Mechanized, vehicle mounted probe systems apply both static force and hydraulically powered percussion hammers for tool placement (static down forces up to 3,000 pounds combined with percussion hammers of eight horsepower continuous output). Recovery of large sample volumes was facilitated with a probe-driven sampler. The probe-driven sampler consisted of a hollow probe which opened via a remote control mechanism at the selected sampling depth in the soil profile to allow soil to enter as it was advanced. Discrete media samples were secured at the desired depths and were contained within a non-reactive transparent plastic sleeve that lined the hollow probe. The plastic sleeves were removed for subsequent inspection and sample aliquot acquisition.



# Table 1: Detected Analytes in Soil Hempstead, New York 00-408A

Sample ID	SP-5 (4'-6')	SP-6 (4'-6')	SP-7 (4'-6')	SP-8 (4'-6')	SP-9 (4'-6')	Pit-1 (24"-32")	Pit-2 (0"-6")	NYSDEC TAGM #4046 Cleanup Objectives	NYSDEC McGovern Background Levels <sup>1</sup>
/nits	µg/Kg	μg/Kg	µg/Kg	µg/Kg	µg/Kg	μg/Kg	µg/Kg	μg/Kg	mg/Kg
/olatile Organic Analytes:									
Acetone	ND	ND	ND	ND	104	ND	ND	110	NA
Benzene	ND	ND	ND	ND	14	ND	ND	60	NA
-Butanone (mek)	ND	ND	ND	ND	24	ND	ND	300	NA
Carbon Disulfide	ND	5	ND	ND	ND	ND	ND	2700	NA
Ethylbenzene	ND	ND	ND	ND	182	ND	ND	5500	NA
Methylene Chloride	ND	ND	ND	ND	ND	9	ND	100	NA
Toluene	ND	ND	ND	ND	4,519	ND	ND	1500	NA
Total Xylenes	ND	ND	ND	ND	936	ND	ND	1200	NA
Unit	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Inorganics Analytes:									l
Barium, Ba	57.4	55	3.7	43	101	12.3	50	300 or SB	15-600
Copper, Cu	16.9	58.4	6.54	25.8	19.3	26.4	322	25 or SB	1.0 - 50.0
Nickel, Ni	13.9	2,412	18.3	1,651	15.2	312	5,458	13 or SB	0.5 -25.0
Zinc, Zn	826	146	2.9	28	112	28.5	143	20 or SB	9.0 - 50.0
Iron, Fe	20,810	5,976	3,635	5,367	13,157	2,327	23,477	2,000 or SB	2,000 - 550,000
Manganese, Mn	182	58.8	14.9	46.6	99.3	10.9	190	SB	50 - 5,000
Lead, Pb	123	117	3.39	65	204	62	40.8	SB	200 - 500
Mercury, Hg	0.26	0.2	ND	ND	0.35	0.1	0.03	0.1	0.001 - 0.2
Arsenic	ND	ND	ND	ND	ND	10.9	10.4	7.5 or SB	3.0 - 12.0
Chromium, Cr	23.3	31.8	35.3	13.3	19.8	872	730	50	1.5 - 40.0

# Table 2: Detected Analytes in Groundwater Hempstead, New York 00-408A

Sample ID	GWP-1	GWP-2	GWP-3	GWP-4	GWP-5	GWP-6	GWP-7	GWP-8	NYSDEC Ambient Water Quality Standards & Guidance Values
Unit	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Volatile Organic Analytes:									
n-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	10	5
sec-Butylbenzene	ND	ND	ND	ND .	ND	ND	ND	12	5
Isopropylbenzene	ND	ND	ND	ND	ND	ND	ND	8	5
n-Propylbenzene	ND	ND	ND	ND	ND	ND	ND	26	5
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	6	5
Toluene	ND	ND	ND	ND	ND	ND	ND	6	5
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	16	5
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	7	5
Unit	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Inorganic Analytes:						I			
Copper, Cu	ND	ND	ND	300	60	ND	ND	ND	200
Nickel, Ni	ND	ND	380	121,000	32,500	460	ND	70	100
Selenium, Se	ND	ND	100	100	ND	ND	ND	50	10
Zinc, Zn	ND	ND	ND	490	100	ND	ND	ND	2000
Iron, Fe	830	5,270	960	4,330	4,570	510	1,100	48,500	300
Manganese, Mn	150	650	170	2,220	330	350	100	1,940	300
Chromium, Cr	ND	ND	ND	3,310	1,710	ND	ND	ND	50

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#### 3.3 Headspace Analysis

Headspace analysis was performed on each unsaturated soil sample acquired from probe nodes SP-1 through SP-9, Pit-1 and Pit-2 to provide precursory data regarding contamination. Results of the analysis were used to adjust the sample and analysis program to yield the most accurate and representative results. The results of the field analysis failed to detect any significant concentrations of hydrocarbons.

#### 3.3.1 Headspace Analysis Procedure

Headspace analysis was performed on each of the acquired samples utilizing a portable photo ionization detection meter to measure what, if any, hydrocarbon concentrations were present in isolated portions of the secured samples. Headspace analysis was conducted by partially filling a wide-mouth glass container with sample aliquot and sealing the top with aluminum foil, thereby creating a void. This void is referred to as the sample headspace.

To facilitate the detection of any hydrocarbons contained within the headspace, the container was agitated for a period of thirty (30) seconds. The probe of the vapor analyzer was then injected through the foil into the headspace to measure the hydrocarbon concentrations present. A Photovac Micro-Tip, photo ionization detection meter (PID) was the organic vapor analyzer selected for the head space analysis. A PID utilizes the principle of photo ionization for detection and measurement of hydrocarbon compounds. A PID does not respond to all compounds similarly; rather, each compound has its own response factor relative to its calibration. For this investigation, the PID was calibrated to isobutylene. Hydrocarbon relative response factors for a PID calibrated to isobutylene are published by the manufacturer.

## 3.4 Sample Characterization

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A visual inspection of all samples recovered during the installation of each of the soil probes was conducted to identify any gross signs of chemical contamination and to classify the sample media. Color classifications were made in accordance with the Munsell Classification System. Gradation classifications were made in accordance with the Unified Soil Classification System.

In general, the subsurface samples secured from the investigation were found to consist of a brown to light brown, medium sand with gravel. No significant odorous indications of petrochemical contamination were noted from subsurface soil samples secured from the investigation.

# 3.5 Groundwater Sampling

Eight (8) groundwater probe node, identified as GWP-1 through GWP-8, were sited by Kosuri Engineering at strategic locations on the subject property corresponding to potential sources of contamination and regional groundwater flow direction. Groundwater was encountered at approximately fourteen (14) feet BEG. Regional groundwater flow direction is predicted to be toward the south with a slight western component. One groundwater sample was secured from each probe node. The groundwater samples were field analyzed for pH, specific conductivity and turbidity. Results of the field measurements were utilized to establish steady state conditions within the groundwater aquifer. Turbidity of the groundwater samples was measured utilizing a turbidity meter in NTUs. All of the groundwater samples preserved for metals analysis yielded concentrations less than 5 NTUs, Accordingly, no groundwater samples were filtered in the field prior to analysis. The following presents a summary of groundwater sampling locations on the subject property.

Probe node GWP-1 was sited on the northern border of the subject property adjacent to the suspected gasoline UST. This location was to be representative of groundwater quality beneath the UST and hydraulically up-gradient of the former on-site electroplating operations (groundwater quality entering the subject property).

Groundwater probe node GWP-2 was sited on the eastern portion of the subject property adjacent to the suspected separator tank. This location was to be representative of groundwater quality beneath the oil separator and the eastern floor drain and hydraulically down-gradient of the suspected fuel oil UST.

Groundwater probe node GWP-3 was sited on the western portion of the subject property within the confines of the western floor drain. This location was to be representative of groundwater quality beneath the western floor drain and former above ground chemical storage area.

Groundwater probe node GWP-4 was sited on the western portion of the subject property in the vicinity of the chemical release area (former bay doors). This location was to be representative of groundwater quality beneath the release area and former above ground chemical storage area.

Groundwater probe nodes GWP-5, GWP-6, GWP-7 and GWP-8 were sited on a transect along the southern border of subject property. These locations were to be representative of groundwater quality hydraulically down-gradient of the subject property (groundwater quality exiting the subject property).

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#### 3.5.1 Temporary Well Point Sampling Procedure

The groundwater sampling system used was the *Geoprobe* Screen Point 15, which is designed to accurately collect grab samples of groundwater. The Screen Point 15 uses a screen with a standard slot size of 0.004 inches that is sealed inside a 1.5-inch ID alloy steel sheath as it is driven to depth. The screen is sealed inside the sheath with Neoprene O-rings which prevent infiltration of formation fluids until the desired depth is attained. When the screen has been driven to the depth of interest in the formation, extension rods are used to hold the screen in position as the driving rods are retracted approximately 4 feet. The 4-foot long sampler sheath forms a seal above the screen as it is retracted. A total of 41.5 inches of slotted screen is placed into contact with the formation. The Screen Point 15 groundwater sampler has a total boring diameter of 1.5 inches, the outside diameter of the screen is 1.0 inch. This provides for a maximum of 0.25 inches between the screen and the natural formation as the sampler sheath is retracted. These conditions approach the ideal for natural formation development, which can be conducted when lower turbidity samples are required.

The groundwater sample was collected from the sampler utilizing 3/8 inch diameter disposable tubing equipped with a bottom check valve. The tubing extended from the surface down to the sampler. The tubing was oscillated until the process had achieved proper development.

The development and sampling procedures conformed to NYSDEC protocol. A field log protocol was conducted to record sampling data including; date, time, location, turbidity (NTUs), specific conductivity (µmhos/cm), pH, sample identification code, depth to water, method of development, and sampling technique. The temporary wells were developed by purging utilizing a perostolic pump until achieving steady state conditions of pH and specific conductivity (minimum of three (3) static well volumes) from field measurements. Following development, one groundwater sample was acquired from each of the temporary wells utilizing dedicated tubing to prevent cross-contamination. The samples were allocated with minimal disturbance into the appropriate vessels.

#### 3.6 Laboratory Sample Location and Frequency

The subsurface soil samples selected from probe nodes SP-1 through SP-9, Pit-1 and Pit-2 for laboratory analysis were containerized and labeled for identification purposes as follows: 00-408A-SP-1 (12'-14'), 00-408A-SP-3 (12'-14'), 00-408A-SP-5 (4'-6'), 00-408A-SP-6 (4'-6'), 00-408A-SP-7 (4'-6'), 00-408A-SP-8 (4'-6'), 00-408A-SP-9 (4'-6'), 00-408A-SP-9 (4'-6'), 00-408A-Pit-1 (24"-32") and 00-408A-Pit-2 (0-6"), respectively.

The groundwater samples selected from GWP-1 through GWP-8 for laboratory analysis were containerized and labeled for identification purposes as follows: 00-408A-GWP-1, 00-408A-GWP-2, 00-408A-GWP-3, 00-408A-GWP-4, 00-408A-GWP-5, 00-408A-GWP-6, 00-408A-GWP-7 and 00-408A-GWP-8, respectively.

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The soil and groundwater samples acquired from each probe node were containerized in the appropriate vessels, preserved at 4°C in a cooler and transported under proper chain-of-custody procedures to a NYS-DOH certified commercial laboratory for analysis.

# 4.0 Quality Assurance and Quality Control Procedures (QA/QC)

The following sampling QA/QC protocol is in accordance with the United States Environmental Protection Agency's (USEPA) accepted sampling procedures for hazardous waste streams [Municipal Research Laboratory, 1980, <u>Sampling and Analysis Procedures for Hazardous Material Waste Streams</u>, Office of Emergency and Remedial Response, Cincinnati, Ohio. EPA-600/280-018] and American Society of Testing and Material's (ASTM's) Sampling Procedures.

## 4.1 Sampling Personnel

The activities associated with the survey, sampling and analysis plan were performed by or under the auspices of a USEPA Office of Emergency and Remedial Response, Certified Sampler for Hazardous Materials. The sample staff (samplers) possessed a minimum of a B.A. Degree in the Earth, Space or Biological Sciences or a B.S. Degree in Engineering. Samplers had a minimum of one (1) year experience in environmental/geological field work. Additionally, all samplers had received mandatory forty-hour Occupational Safety and Health Administration (OSHA) training on working with potentially hazardous materials and appropriate Hazard Communication Program and "Right-To-Know" training.

#### 4.2 Sampling Equipment

Separate QA/QC measures were implemented for each of the instruments used in the performance of the SAP.

#### 4.2.1 Geoprobe

Prior to arrival on the subject property and between sample locations, the probes were decontaminated by washing them with a detergent (Alconox) and potable water solution and rinsing them with distilled water.

#### 4.2.2 Sample Vessels

All sample vessels were "level A" certified decontaminated containers supplied by a New York State Certified Commercial Laboratory. Samples analyzed for hydrocarbons were placed in containers with Teflon lined caps. Groundwater samples analyzed for metals were placed in plastic containers preserved with nitric acid. All samples were preserved by cooling them to a temperature of approximately four degrees Celsius.

# 4.3 Sample Documentation

A sample represents physical evidence. An essential part of liability reduction is the proper control of gathered evidence. To establish proper control, the following sample identification and chain-of custody procedures were followed.

#### 4.3.1 Sample Identification

Sample identification was executed by use of a sample tag, log book and chain-of-custody form. Said documentation provided the following information: 1) the project code; 2) the sample laboratory number; 3) the sample preservation; 4) instrument used for source sample grabs; 5) the composite medium used for source sample grabs; 6) the date the sample was secured from the source media; 7) the time the sample was secured from the source media; and 8) the person who secured the sample from the source media.

#### 4.3.2 Chain-of-Custody Procedures

Due to the evidential nature of samples, possession was traceable from the time the samples were collected until they were received by the testing laboratory. A sample was considered under custody if it: was in a person's possession; it was in a person's view, after being in possession; if it was in a person's possession and they locked it up; or, it was in a designated secure area. When transferring custody, the individuals relinquishing and receiving the samples signed, dated and noted the time on the Chain-of-Custody Form.

#### 4.3.3 Laboratory-Custody Procedures

A designated sample custodian accepted custody of the shipped samples and verified that the information on the sample tags matched that on the Chain-of-Custody Records. Pertinent information as to shipment, pick-up, courier, etc., were entered in the "remarks" section. The custodian entered the sample tag data into a bound logbook.

The laboratory custodian used the sample tag number, or assigned a unique laboratory number to each sample tag, and assured that all samples were transferred to the proper analyst or stored in the appropriate source area. The laboratory custodian distributed samples to the appropriate analysts. Laboratory personnel were responsible for the care and custody of samples, from the time they were received, until the sample was exhausted or returned to the sample custodian. All identifying data sheets and laboratory records were retained as part of the permanent documentation. Samples received by the laboratory were retained until after analysis and quality assurance checks were completed.

## **5.0 Laboratory Analysis**

#### 5.1 Analytical Test Methods

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The samples were transported to a New York State Certified Commercial Laboratory for analysis. Selection of the analytical test methods was based on the New York State Department of Environmental Conversation Spill Technology and Remediation Series (STARS) Memo #1, Petroleum Contaminated Soil Guidance Policy, the New York State Department of Environmental Conservation Technical and Administrative Guidance Memorandum (TAGM) #4046 Determination of Soil Cleanup Objectives, the New York State Department of Environmental Conservation, Technical Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Limitations and the New York State Department of Environmental Conservation, Sampling Guidelines and Protocols, Technical Background and Quality Control Assurance for the New York State Department of Environmental Conservation Spill Response Program, dated September 1992.

The laboratory analysis performed on the subsurface soil samples secured from probe nodes SP-1 and SP-3 consisted of United States Environmental Protection Agency (USEPA) Test Method 8021 (STARS) for target volatile organic analytes and USEPA Test Method 8270 (STARS) for target semi-volatile organic analytes.

The laboratory analysis performed on the subsurface soil samples secured from probe nodes SP-5 through SP-9, Pit-1 and Pit-2 consisted of USEPA Test Method 8260 for target volatile organic analytes and USEPA Test Method 6010 for target inorganic analytes (13 priority pollutant metals).

The laboratory analysis performed on the groundwater sample secured from probe node GWP-1 consisted of USEPA Test Method 8260 for target volatile organic analytes, USEPA Test Method 8270 (STARS) for target semi-volatile organic analytes and USEPA Test Method 6010 for target inorganic analytes (13 priority pollutant metals).

The laboratory analysis performed on the groundwater sample secured from probe node GWP-2 through GWP-8 consisted of USEPA Test Method 8260 for target volatile organic analytes and USEPA Test Method 6010 for target inorganic analytes (13 priority pollutant metals).

# Table 1: Detected Analytes in Soil Hempstead, New York 00-408A

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Sample ID	SP-5 (4'-6')	SP-6 (4'-6')	SP-7 (4'-6')	SP-8 (4'-6')	SP-9 (4'-6')	Pit-1 (24"-32")	Pit-2 (0"-6")	NYSDEC TAGM #4046 Cleanup Objectives	NYSDEC McGovern Background Levels <sup>1</sup>
Units	μg/Kg	µg/Kg	µg/Kg	µg/Kg	μg/Kg	μg/Kg	μg/Kg	μg/Kg	mg/Kg
Volatile Organic Analytes:									
Acetone	ND	ND	ND	ND	104	ND	ND	110	NA
Benzene	ND	ND	ND	ND	14	ND	ND	60	NA
2-Butanone (mek)	ND	ND	ND	ND	24	ND	ND	300	NA
Carbon Disulfide	ND	5	ND	ND	ND	ND	ND	2700	NA
Ethylbenzene	ND	ND	ND	ND	182	ND	ND	5500	NA
Methylene Chloride	ND	ND	ND	ND	ND	9	ND	100	NA
Toluene	ND	ND	ND	ND	4,519	ND	ND	1500	NA
Total Xylenes	ND	ND	ND	ND	936	ND	ND	1200	NA
Unit	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Inorganics Analytes:									
Barium, Ba	57.4	55	3.7	43	101	12.3	50	300 or SB	15-600
Copper, Cu	16.9	58.4	6.54	25.8	19.3	26.4	322	25 or SB	1.0 - 50.0
Nickel, Ni	13.9	2,412	18.3	1,651	15.2	312	5,458	13 or SB	0.5 -25.0
Zinc, Zn	826	146	2.9	28	112	28.5	143	20 or SB	9.0 - 50.0
Iron, Fe	20,810	5,976	3,635	5,367	13,157	2,327	23,477	2,000 or SB	2,000 - 550,000
Manganese, Mn	182	58.8	14.9	46.6	99.3	10.9	190	SB	50 - 5,000
Lead, Pb	123	117	3.39	65	204	62	40.8	SB	200 - 500
Mercury, Hg	0.26	0.2	ND	ND	0.35	0.1	0.03	0.1	0.001 - 0.2
Arsenic	ND	ND	ND	ND	ND	10.9	10.4	7.5 or SB	3.0 - 12.0
Chromium, Cr	23.3	31.8	35.3	13.3	19.8	872	730	50	1.5 - 40.0

# Table 2: Detected Analytes in GroundwaterHempstead, New York00-408A

Sample ID	GWP-1	GWP-2	GWP-3	GWP-4	GWP-5	GWP-6	GWP-7	GWP-8	NYSDEC Ambient Water Quality Standards & Guidance Values
Unit	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Volatile Organic Analytes:									
n-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	10	5
sec-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	12	5
sopropylbenzene	ND	ND	ND	ND	ND	ND	ND	8	5
n-Propylbenzene	ND	ND	ND	ND	ND	ND	ND	26	5
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	6	5
Toluene	ND	ND	ND	ND	ND	ND	ND	6	5
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	16	5
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	7	5
Unit	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Inorganic Analytes:									
Copper, Cu	ND	ND	ND	300	60	ND	ND	ND	200
Nickel, Ni	ND	ND	380	121,000	32,500	460	ND	70	100
Selenium, Se	ND	ND	100	100	ND	ND	ND	50	10
Zinc, Zn	ND	ND	ND	490	100	ND	ND	ND	2000
Iron, Fe	830	5,270	960	4,330	4,570	510	1,100	48,500	300
Manganese, Mn	150	650	170	2,220	330	350	100	1,940	300
Chromium, Cr	ND	ND	ND	3,310	1,710	ND	ND	ND	50

Bold values represent concentrations above guidance values. ND: Not Detected NA: Not Available

April 9, 2001 Page 17

## 5.2 Analytical Results

The laboratory analysis of the soil samples selected from probe nodes SP-1 and SP-3 failed to detect any concentrations of target volatile or semi-volatile organic analytes.

The laboratory analysis of the soil samples selected from probe nodes SP-6, SP-9 and Pit-1 detected concentrations of target volatile organic analytes. The laboratory analysis of the soil samples selected from probe nodes SP-5, SP-7, SP-8 and Pit-2 failed to detect any concentrations of target volatile organic analytes.

The laboratory analysis of the soil samples selected from probe nodes SP-5 through SP-8, Pit-1 and Pit-2 detected concentrations of target inorganic analytes.

The laboratory analysis of the groundwater sample secured from probe node GWP-1 failed to detect any concentrations of target volatile or semi-volatile organic analytes. However, the laboratory analysis of the groundwater sample secured from probe node GWP-1 detected concentrations of inorganic analytes.

The laboratory analysis of the groundwater samples secured from probe node GWP-2 through GWP-7 failed to detect any concentrations of target volatile organic analytes. However, the laboratory analysis of the groundwater sample secured from probe node GWP-8 detected concentrations of target volatile organic analytes.

The laboratory analysis of the groundwater samples secured from probe node GWP-2 through GWP-7 detected concentrations of target inorganic analytes.

 Table 1: Detected Analytes in Soil and Table 2: Detected Analytes in Groundwater, Hempstead, New York present

 a summary of the detected concentrations versus the relevant guidance values. The original laboratory analysis

 report as prepared by Long Island Analytical Laboratories, Inc. is presented in Appendix A of this document.

# **6.0 Evaluation of Results**

A survey plan was designed to identify the presence of any subsurface structures associated with former on-site operations that represented mechanisms for the release of contaminants on the subject property. Such structures included underground storage tanks (USTs), underground wastewater injection wells (UIWs), and subsurface piping. An analysis of the data collected from the remote sensing survey revealed the following.

- Two subsurface anomalies consistent with USTs. These anomalies were suspected to represent the abandoned fuel oil and gasoline USTs.
- Subsurface piping interconnecting two floor drains via separator to the main sewer trap.
- Subsurface piping exiting the holding pit.
- The remote sensing survey failed to identify the presence of any wastewater UIWs.

Headspace analysis was performed on each unsaturated soil sample acquired from probe nodes SP-1 through SP-9, Pit-1 and Pit-2 to provide precursory data regarding contamination. The results of the field analysis failed to detect any significant concentrations of hydrocarbons.

The laboratory analysis of the soil samples selected from probe nodes SP-1 and SP-3 failed to detect any concentrations of target volatile or semi-volatile organic analytes.

The laboratory analysis of the soil samples selected from probe nodes SP-6, SP-9 and Pit-1 detected concentrations of target volatile organic analytes. One detected analyte concentration (toluene) from probe node SP-9 was above the applicable guidance criteria.<sup>1</sup> The laboratory analysis of the soil samples selected from probe nodes SP-5, SP-7, SP-8 and Pit-2 failed to detect any concentrations of target volatile organic analytes.

The laboratory analysis of the soil samples selected from probe nodes SP-5 through SP-8, Pit-1 and Pit-2 detected concentrations of target inorganic analytes. Several of the detected anlayte concentrations from SP-5, SP-6, SP-8, SP-9, Pit-1 and Pit-2 were above the applicable guidance criteria.<sup>2</sup>

The laboratory analysis of the groundwater sample secured from probe node GWP-1 failed to detect any concentrations of target volatile or semi-volatile organic analytes. However, the laboratory analysis of the groundwater sample secured from probe node GWP-1 detected concentrations of inorganic analytes. One detected analyte concentration (iron) was above the applicable guidance criteria.<sup>3</sup>

<sup>&</sup>lt;sup>1</sup> NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046, Determination of Soil Cleanup Objectives.

<sup>&</sup>lt;sup>2</sup> Ibid.

<sup>&</sup>lt;sup>3</sup> NYSDEC, Technical Operational Guidance Series (TOGS) I.1.1, Ambient Water Quality Standards and Limitations.

April 9, 2001 Page 19

The laboratory analysis of the groundwater samples secured from probe node GWP-2 through GWP-7 failed to detect any concentrations of target volatile organic analytes.

The laboratory analysis of the groundwater sample secured from probe node GWP-8 detected concentrations of target volatile organic analytes. The detected concentrations were marginally above the applicable guidance criteria.<sup>4</sup>

The laboratory analysis of the groundwater samples secured from probe node GWP-2 through GWP-7 detected concentrations of target inorganic analytes. Several of the detected analyte concentrations were above the applicable guidance criteria. <sup>5</sup>

<sup>&</sup>lt;sup>4</sup> NYSDEC, Technical Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Limitations.

<sup>&</sup>lt;sup>5</sup> Ibid.

April 9, 2001 Page 20

# 7.0 Conclusions

No.

Kosuri Engineering & Consulting, P.C. has performed a Phase II Environmental Site Assessment, Limited Subsurface Investigation on the subject property in accordance with good commercial and customary practice and generally accepted protocols within the consulting industry. The investigation consisted of the sampling and analysis of subsurface soil and groundwater to further define the environmental quality of the subject property with respect to the recognized environmental condition outlined in Section 2.3 of this document.

Based upon this assessment, dated April 9, 2001, Kosuri Engineering & Consulting, P.C. concludes that former onsite electroplating operations have significantly impacted the environmental quality of the subject property. Accordingly, additional activities are recommended to further define and/or enhance the environmental quality of the subject property. Further, the on-site USTs should be properly abandoned in accordance with all applicable regulations.

KOSURI ENGEREING & CONSULTING, P.C. 6 Eshwar Kosuri Project Manage

Kevin Kleaka Environmental Scientist

## **DISCLAIMER FOR PHASE II**

#### **ENVIRONMENTAL SITE ASSESSMENT**

The observations described in this report were made under the conditions stated therein. The conclusions presented in the report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by the Client.

In preparing this report, Kosuri Engineering & Consulting, P.C. and Impact Environmental Consulting, Inc. may have relied on certain information provided by state and local officials and other parties referenced therein, and on information contained in the files of state and/or local agencies available to Impact Environmental Consulting, Inc. at the time of the subject property assessment. Although there may have been some degree of overlap in the information provided by these various sources, Impact Environmental Consulting, Inc. did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this subject property assessment.

Observations were made of the subject property and of structures on the subject property as indicated within the report. Where access to portions of the subject property or to structures on the subject property was unavailable or limited, Impact Environmental Consulting, Inc. renders no opinion as to the presence of non-hazardous or hazardous materials, or to the presence of indirect evidence relating to non-hazardous or hazardous materials, in that portion of the subject property or structure. In addition, Kosuri Engineering & Consulting, P.C. and Impact Environmental Consulting, Inc. renders no opinion as to the presence of hazardous materials, or the presence of indirect evidence relating to hazardous materials, where direct observation of the interior walls, floor, or ceiling of a structure on a subject property was obstructed by objects or coverings on or over these surfaces.

Kosuri Engineering & Consulting, P.C. and Impact Environmental Consulting, Inc. did not perform testing or analyses to determine the presence or concentration of asbestos at the subject property or in the environment of the subject property under the scope of the services performed.

The conclusions and recommendations contained in this report are based in part, where noted, upon the data obtained from a limited number of soil samples obtained from widely spaced subsurface explorations. The nature and extent of variations between these explorations may not become evident until further exploration. If variations or other latent conditions then appear evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

Any water level readings made in test pits, borings, and/or observation wells were made at the times and under the conditions stated in the report. However, it must be noted that fluctuations in the level of groundwater may occur due to variations in rainfall and other factors different from those prevailing at the time measurements were made.

Except as noted within the text of the report, no qualitative laboratory testing was performed as part of the subject property assessment. Where such analyses have been conducted by an outside laboratory, Impact Environmental Consulting, Inc. has relied upon the data provided, and has not conducted an independent evaluation of the reliability of the data.

The conclusions and recommendations contained in this report are based in part, where noted, upon various types of chemical data and are contingent upon their validity. The data have been reviewed and interpretations were made in the report. As indicated within the report, some of the data may be preliminary "screening" level data, and should be confirmed with quantitative analyses if more specific information is necessary. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should additional chemical data become available in the future, the data should be reviewed, and the conclusions and recommendations presented herein modified accordingly.

Chemical analyses have been performed for specific constituents during the course of this subject property assessment, as described in the text. However, it should be noted that additional chemical constituents not searched for during the current study may be present in soil and/or groundwater at the subject property.

# **APPENDIX A:**

Laboratory Report, Long Island Analytical Laboratories, Inc. Hempstead, New York 00-408A

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# Laboratory Analytical Results

48 Sewell Street, Hempstead, New York 00-408A

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3 of 45 pages

Client: Impact	Client ID: 00-408, Hempstead
	<u>(SP-1 {12-14'})</u>
Date received: 3/27/01	Laboratory ID: 0112549
Date extracted: 3/31/01	Matrix: Soil
Date analyzed: 3/31/01	ELAP #: 11693

# EPA METHOD 8270 (STARS)

Parameter	CAS No.	Results ug/kg
Naphthalene	91-20-3	<40
Anthracene	120-12-7	<40
Fluorene	86-73-7	<40
Phenanthrene	85-01-8	<40
Pyrene	129-00-0	<40
Acenaphthene	83-32-9	<40
Benzo(a)Anthracene	56-55-3	<40
Fluoranthene	206-44-0	<40
Benzo(b)Fluoranthene	205-99-2	<40
Benzo(k)fluoranthene	207-08-9	<40
Chrysene	218-01-9	<40
Benzo(a)Pyrene	50-32-8	<40
Benzo(g,h,i)Perylene	191-24-2	<40
Indeno(1,2,3-cd)Pyrene	193-39-5	<40
Dibenzo(a,h)Anthracene	53-70-3	<40

Michael Venald:

Laboratory Director



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# 2 of 45 pages

Client: Impact	Client ID: 00-408, Hempstead (SP-1 {12-14'})	
Date received: 3/27/01	Laboratory ID: 0112549	
Date extracted: 3/28/01	Matrix: Soil	
Date analyzed: 3/28/01	ELAP #: 11693	

# EPA METHOD 8021 (STARS)

Parameter	CAS No.	Results ug/kg
MTBE	1634-04-4	<5
Benzene	71-43-2	<5
n-Butylbenzene	104-51-8	<5
sec-Butylbenzene	135-98-7	<5
tert-Butylbenzene	98-06-8	<5
Isopropylbezene	98-82-8	<5
p-isopropyltoluene	<u>99-87-6</u>	<5
n-Propylbenzene	103-65-1	<5
Ethylbenzene	100-41-4	· <5
Naphthalene	91-20-3	<5
Toluene	108-88-3	<5
1,2,4-Trimethylbenzene	95-63-6	<5
1,3,5-Trimethylbenzene	108-67-8	<5
p & m-Xylene	1330-20-7	<10
o-Xylene	1330-20-7	<5

"Michael Venald:

Laboratory Director



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	(Sr (12-14'})
Date received: 3/27/01	Laboratory ID: 0112550
Date extracted: 3/28/01	Matrix: Soil
Date analyzed: 3/28/01	ELAP #: 11693

# **EPA METHOD 8021 (STARS)**

Parameter	CAS No.	Results ug/kg
MTBE	1634-04-4	<5
Benzene	71-43-2	<5
n-Butylbenzene	104-51-8	<5
sec-Butylbenzene	135-98-7	<5
tert-Butylbenzene	98-06-8	<5
Isopropylbezene	98-82-8	<5
p-isopropyltoluene	99-87-6	<5
n-Propylbenzene	103-65-1	<5
Ethylbenzene	100-41-4	<5
Naphthalene	91-20-3	<5
Toluene	108-88-3	<5
1,2,4-Trimethylbenzene	95-63-6	<5
1,3,5-Trimethylbenzene	108-67-8	<5
p & m-Xylene	1330-20-7	<10
o-Xylene	1330-20-7	<5

Michael Venald:

Laboratory Director



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# 5 of 45 pages

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Client: Impact	Client ID: 00-408, Hempstead (SP-3 {12-14'})	
Date received: 3/27/01	Laboratory ID: 0112550	
Date extracted: 3/31/01	Matrix: Soil	
Date analyzed: 3/31/01	ELAP #: 11693	

# EPA METHOD 8270 (STARS)

Parameter	CAS No.	Results ug/kg
Naphthalene	91-20-3	<40
Anthracene	120-12-7	<40
Fluorene	86-73-7	<40
Phenanthrene	85-01-8	<40
Pyrene	129-00-0	<40
Acenaphthene	83-32-9	<40
Benzo(a)Anthracene	56-55-3	<40
Fluoranthene	206-44-0	<40
Benzo(b)Fluoranthene	205-99-2	<40
Benzo(k)fluoranthene	207-08-9	<40
Chrysene	218-01-9	<40
Benzo(a)Pyrene	50-32-8	<40
Benzo(g,h,i)Perylene	191-24-2	<40
Indeno(1,2,3-cd)Pyrene	193-39-5	<40
Dibenzo(a,h)Anthracene	53-70-3	<40

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Laboratory Director



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Contra - A

Client: Impact	Client ID: 00-408, Hempstead (SP-5 {4-6'})	
Date received: 3/27/01	Laboratory ID: 0112551	
Date extracted: 3/28/01	Matrix: Soil	
Date analyzed: 3/28/01	ELAP #: 11693	

# **EPA METHOD 8260**

Parameter	CAS No.	Results ug/kg
MTBE	1634-04-4	<5
BENZENE	71-43-2	<b>&lt;5</b> :
BROMOBENZENE	108-86-1	<5
BROMOCHLOROMETHANE	74-97-5	<5
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
n-BUTYLBENZENE	104-51-8	<5
sec-BUTYLBENZENE	135-98-8	<5
tert-BUTYLBENZENE	98-06-6	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLORODIBROMOMETHANE	124-48-1	<5
CHLOROETHANE	75-00-3	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
2-CHLOROTOLUENE	95-49-8	<5
4-CHLOROTOLUENE	106-43-4	<5
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	<5
1,2-DIBROMOETHANE	106-93-4	<5
DIBROMOMETHANE	74-95-3	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
DICHLORODIFLUOROMETHANE	75-71-8	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
cis-1,2-DICHLOROETHENE	156-59-2	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5



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# 7 of 45 pages

Client: Impact	Client ID: 00-408, Hempstead (SP-5 {4-6'})	
Date received: 3/27/01	Laboratory ID: 0112551	
Date extracted: 3/28/01	Matrix: Soil	
Date analyzed: 3/28/01	ELAP #: 11693	

# **EPA METHOD 8260**

Parameter	CAS No.	Results_ug/kg
1,2-DICHLOROPROPANE	78-87-5	<5
1,3-DICHLOROPROPANE	142-28-9	<5
2,2-DICHLOROPROPANE	594-20-7	<5
1,1-DICHLOROPROPENE	563-58-6	<5
ETHYLBENZENE	100-41-4	<5
HEXACHLOROBUTADIENE	87-68-3	<5
ISOPROPYLBENZENE	98-82-8	<5
p-ISOPROPYLTOLUENE	99-87-6	<5
METHYLENE CHLORIDE	75-09-2	<5
NAPHTHALENE	91-20-3	<5
n-PROPYLBENZENE	103-65-1	<5
STYRENE	100-42-5	<5
1,1,1,2-TETRACHLOROETHANE	630-20-6	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	<5
TOLUENE	108-88-3	<5
1,2,3-TRICHLOROBENZENE	87-61-6	<5
1,2,4-TRICHLOROBENZENE	120-82-1	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	<5
TRICHLOROFLUOROMETHANE	75-69-4	<5
1,2,3-TRICHLOROPROPANE	96-18-4	<5
1,3,5-TRIMETHYLBENZENE	108-67-8	<5
1,2,4-TRIMETHYLBENZENE	95-63-6	<5
VINYL CHLORIDE	75-01-4	<5
ACETONE	62-64-1	<50
CARBON DISULFIDE	75-15-0	<5
2-BUTANONE (MEK)	78-93-3	<5
VINYL ACETATE	108-05-4	<5
2-HEXANONE	591-78-6	<5
p & m-XYLENE	1330-20-7	<10
o-XYLENE	1330-20-7	<5

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Laboratory Director

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Client: Impact	Client ID: 00-408, Hempstead (SP-5 {4-6'})
Date received: 3/27/01	Laboratory ID: 0112551
Date extracted: 4/2/01	Matrix: Soil
Date analyzed: 4/2/01	ELAP #: 11693

## **METALS ANALYSIS**

PARAMETER	MDL	<b>RESULTS</b> mg/kg
SILVER, Ag	1.65 mg/kg	<1.65
BARIUM, Ba	3.33 mg/kg	57.4
CADMIUM, Cd	1.65 mg/kg	<1.65
COPPER, Cu	1.65 mg/kg	16.9
NICKEL, NI	1.65 mg/kg	13.9
SELENIUM, Se	1.65 mg/kg	<1.65
ZINC, Zn	1.65 mg/kg	826
IRON, Fe	1.65 mg/kg	20,810
MANGANESE, Mn	1.65 mg/kg	182
LEAD, Pb	1.65 mg/kg	123
MERCURY, Hg	0.020 mg/kg	0.26
ARSENIC, As	6.60 mg/kg	<6.60
CHROMIUM, Cr	1.65 mg/kg	23.3

Preformed by SW-846 Method 6010

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Client: Impact	Client ID: 00-408, Hempstead (SP-6 {4-6'})	
Date received: 3/27/01	Laboratory ID: 0112552	
Date extracted: 3/28/01	Matrix: Soil	
Date analyzed: 3/28/01	ELAP #: 11693	

# **EPA METHOD 8260**

Parameter	CAS No.	Results ug/kg
MTBE	1634-04-4	<5
BENZENE	71-43-2	<5 /
BROMOBENZENE	108-86-1	<5
BROMOCHLOROMETHANE	74-97-5	<5
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
n-BUTYLBENZENE	104-51-8	<5
sec-BUTYLBENZENE	135-98-8	<5
tert-BUTYLBENZENE	98-06-6	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLORODIBROMOMETHANE	124-48-1	<5
CHLOROETHANE	75-00-3	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
2-CHLOROTOLUENE	95-49-8	<5
4-CHLOROTOLUENE	106-43-4	<5
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	<5
1,2-DIBROMOETHANE	106-93-4	<5
DIBROMOMETHANE	74-95-3	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
DICHLORODIFLUOROMETHANE	75-71-8	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
cis-1,2-DICHLOROETHENE	156-59-2	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5



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 "TOMORROWS ANALYTICAL SOLUTIONS TODAY"
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Client: Impact	Client ID: 00-408, Hempstead (SP-6 {4-6'})
Date received: 3/27/01	Laboratory ID: 0112552
Date extracted: 3/28/01	Matrix: Soil
Date analyzed: 3/28/01	ELAP #: 11693

# **EPA METHOD 8260**

Parameter	CAS No.	Results ug/kg
1,2-DICHLOROPROPANE	78-87-5	<5
1,3-DICHLOROPROPANE	142-28-9	<5
2,2-DICHLOROPROPANE	594-20-7	<5
1,1-DICHLOROPROPENE	563-58-6	<5
ETHYLBENZENE	100-41-4	<5
HEXACHLOROBUTADIENE	87-68-3	<5
ISOPROPYLBENZENE	98-82-8	<5
p-ISOPROPYLTOLUENE	99-87-6	<5
METHYLENE CHLORIDE	75-09-2	<5
NAPHTHALENE	91-20-3	<5
n-PROPYLBENZENE	103-65-1	<5
STYRENE	100-42-5	<5
1,1,1,2-TETRACHLOROETHANE	630-20-6	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	<5
TOLUENE	108-88-3	<5
1,2,3-TRICHLOROBENZENE	87-61-6	<5
1,2,4-TRICHLOROBENZENE	120-82-1	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	<5
TRICHLOROFLUOROMETHANE	75-69-4	<5
1,2,3-TRICHLOROPROPANE	96-18-4	<5
1,3,5-TRIMETHYLBENZENE	108-67-8	<5
1,2,4-TRIMETHYLBENZENE	95-63-6	<5
VINYL CHLORIDE	75-01-4	<5
ACETONE	62-64-1	<50
CARBON DISULFIDE	75-15-0	5
2-BUTANONE (MEK)	78-93-3	<5
VINYL ACETATE	108-05-4	<5
2-HEXANONE	591-78-6	<5
p & m-XYLENE	1330-20-7	<10
o-XYLENE	1330-20-7	<5

Michael Venald

Laboratory Director



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Client: Impact	Client ID: 00-408, Hempstead (SP-6 {4-6'})
Date received: 3/27/01	Laboratory ID: 0112552
Date extracted: 4/2/01	Matrix: Soil
Date analyzed: 4/2/01	ELAP #: 11693

### **METALS ANALYSIS**

PARAMETER	MDL	RESULTS mg/kg
SILVER, Ag	1.65 mg/kg	<1.65
BARIUM, Ba	3.33 mg/kg	55.0
CADMIUM, Cd	1.65 mg/kg	<1.65
COPPER, Cu	1.65 mg/kg	58.4
NICKEL, Ni	1.65 mg/kg	2,412
SELENIUM, Se	1.65 mg/kg	<1.65
ZINC, Zn	1.65 mg/kg	146
IRON, Fe	1.65 mg/kg	5,976
MANGANESE, Mn	1.65 mg/kg	58.8
LEAD, Pb	1.65 mg/kg	117
MERCURY, Hg	0.020 mg/kg	0.20
ARSENIC, As	6.60 mg/kg	<6.60
CHROMIUM, Cr	1.65 mg/kg	31,8

Preformed by SW-846 Method 6010

Michael Venald: Laboratory Director



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Client: Impact	Client ID: 00-408, Hempstead (SP-7 {4-6'})
Date received: 3/27/01	Laboratory ID: 0112553
Date extracted: 3/28/01	Matrix: Soil
Date analyzed: 3/28/01	ELAP #: 11693

### **EPA METHOD 8260**

Parameter	CAS No.	Results ug/kg
MTBE	1634-04-4	<5
BENZENE	71-43-2	<b>&lt;5</b> (
BROMOBENZENE	108-86-1	<5
BROMOCHLOROMETHANE	74-97-5	<5
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
n-BUTYLBENZENE	104-51-8	<5
sec-BUTYLBENZENE	135-98-8	<5
tert-BUTYLBENZENE	98-06-6	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLORODIBROMOMETHANE	124-48-1	<5
CHLOROETHANE	75-00-3	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
2-CHLOROTOLUENE	95-49-8	<5
4-CHLOROTOLUENE	106-43-4	<5
1,2-DIBROMO-3-CHLOROPROPANE	96-12-B	<5
1,2-DIBROMOETHANE	106-93-4	<5
DIBROMOMETHANE	74-95-3	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
DICHLORODIFLUOROMETHANE	75-71-8	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
cis-1,2-DICHLOROETHENE	156-59-2	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5



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Client: Impact	Client ID: 00-408, Hempstead (SP-7 {4-6'})
Date received: 3/27/01	Laboratory ID: 0112553
Date extracted: 3/28/01	Matrix: Soil
Date analyzed: 3/28/01	ELAP #: 11693

### **EPA METHOD 8260**

Parameter	CAS No.	Results ug/kg
1,2-DICHLOROPROPANE	78-87-5	<5
1,3-DICHLOROPROPANE	142-28-9	<5
2,2-DICHLOROPROPANE	594-20-7	<5
1,1-DICHLOROPROPENE	563-58-6	<5
ETHYLBENZENE	100-41-4	<5
HEXACHLOROBUTADIENE	87-68-3	<5
ISOPROPYLBENZENE	98-82-8	<5
p-ISOPROPYLTOLUENE	99-87-6	<5
METHYLENE CHLORIDE	75-09-2	<5
NAPHTHALENE	91-20-3	<5
n-PROPYLBENZENE	103-65-1	<5
STYRENE	100-42-5	<5
1,1,1,2-TETRACHLOROETHANE	630-20-6	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	<5
TOLUENE	108-88-3	<5
1,2,3-TRICHLOROBENZENE	87-61-6	<5
1,2,4-TRICHLOROBENZENE	120-82-1	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	<5
TRICHLOROFLUOROMETHANE	75-69-4	<5
1,2,3-TRICHLOROPROPANE	96-18-4	<5
1,3,5-TRIMETHYLBENZENE	108-67-8	<5
1,2,4-TRIMETHYLBENZENE	95-63-6	<5
VINYL CHLORIDE	75-01-4	<5
ACETONE	62-64-1	<50
CARBON DISULFIDE	75-15-0	<5
2-BUTANONE (MEK)	78-93-3	<5
VINYL ACETATE	108-05-4	<5
2-HEXANONE	591-78-6	<5
p & m-XYLENE	1330-20-7	<10
o-XYLENE	1330-20-7	<5



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Laboratory Director

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1042400

Client: Impact	Client ID: 00-408, Hempstead (SP-7 {4-6'})
Date received: 3/27/01	Laboratory ID: 0112553
Date extracted: 4/2/01	Matrix: Soil
Date analyzed: 4/2/01	ELAP #: 11693

## **METALS ANALYSIS**

PARAMETER	MDL	RESULTS mg/kg
SILVER, Ag	1.65 mg/kg	<1.65
BARIUM, Ba	3.33 mg/kg	3.70
CADMIUM, Cd	1.65 mg/kg	<1.65
COPPER, Cu	1.65 mg/kg	6.54
NICKEL, NI	1.65 mg/kg	18.3
SELENIUM, Se	1.65 mg/kg	<1.65
ZINC, Zn	1.65 mg/kg	2.90
IRON, Fe	1.65 mg/kg	3,635
MANGANESE, Mn	1.65 mg/kg	14.9
LEAD, Pb	1.65 mg/kg	3.39
MERCURY, Hg	0.020 mg/kg	<0.020
ARSENIC, As	6.60 mg/kg	<6.60
CHROMIUM, Cr	1.65 mg/kg	35.3

Preformed by SW-846 Method 6010

Michael Venald:

Laboratory Director



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Client: Impact	Client ID: 00-408, Hempstead
	(SP-8 {4-6'})
Date received: 3/27/01	Laboratory ID: 0112554
Date extracted: 3/28/01	Matrix: Soil
Date analyzed: 3/28/01	ELAP #: 11693

## **EPA METHOD 8260**

Parameter	CAS No.	Results ug/kg
MTBE	1634-04-4	<5
BENZENE	71-43-2	<5 /
BROMOBENZENE	108-86-1	<5
BROMOCHLOROMETHANE	74-97-5	<5
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
n-BUTYLBENZENE	104-51-8	<5
sec-BUTYLBENZENE	135-98-8	<5
tert-BUTYLBENZENE	98-06-6	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLORODIBROMOMETHANE	124-48-1	<5
CHLOROETHANE	75-00-3	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
2-CHLOROTOLUENE	95-49-8	<5
4-CHLOROTOLUENE	108-43-4	<5
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	<5
1,2-DIBROMOETHANE	106-93-4	<5
DIBROMOMETHANE	74-95-3	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
DICHLORODIFLUOROMETHANE	75-71-8	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
cis-1,2-DICHLOROETHENE	156-59-2	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5



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Client: Impact	Client ID: 00-408, Hempstead (SP-8 (4-6'))	
Date received: 3/27/01	Laboratory ID: 0112554	
Date extracted: 3/28/01	Matrix: Soil	
Date analyzed: 3/28/01	ELAP #: 11693	

### **EPA METHOD 8260**

1,2-DICHLOROPROPANE 1,3-DICHLOROPROPANE 2,2-DICHLOROPROPANE 1,1-DICHLOROPROPENE ETHYLBENZENE HEXACHLOROBUTADIENE ISOPROPYLBENZENE p-ISOPROPYLTOLUENE METHYLENE CHLORIDE	78-87-5 142-28-9 594-20-7 563-58-6 100-41-4 87-68-3 98-82-8 99-87-6	<5 <5 <5 <5 <5 <5 <5 <5 <5 <5
2,2-DICHLOROPROPANE 1,1-DICHLOROPROPENE ETHYLBENZENE HEXACHLOROBUTADIENE ISOPROPYLBENZENE p-ISOPROPYLTOLUENE METHYLENE CHLORIDE	594-20-7 563-58-6 100-41-4 87-68-3 98-82-8 99-87-6	<5 <5 <5 <5 <5
1,1-DICHLOROPROPENE ETHYLBENZENE HEXACHLOROBUTADIENE ISOPROPYLBENZENE p-ISOPROPYLTOLUENE METHYLENE CHLORIDE	563-58-6 100-41-4 87-68-3 98-82-8 99-87-6	<5 <5 <5
ETHYLBENZENE HEXACHLOROBUTADIENE ISOPROPYLBENZENE p-ISOPROPYLTOLUENE METHYLENE CHLORIDE	100-41-4 87-68-3 98-82-8 99-87-6	<5 <5
HEXACHLOROBUTADIENE ISOPROPYLBENZENE p-ISOPROPYLTÓLUENE METHYLENE CHLORIDE	87-68-3 98-82-8 99-87-6	<5
ISOPROPYLBENZENE p-ISOPROPYLTOLUENE METHYLENE CHLORIDE	98-82-8 99-87-6	
p-ISOPROPYLTOLUENE METHYLENE CHLORIDE	<u>99-87-6</u>	<5
METHYLENE CHLORIDE		
		<5
	75-09-2	<5
NAPHTHALENE	91-20-3	<5
n-PROPYLBENZENE	103-65-1	<5
STYRENE	100-42-5	<5
1,1,1,2-TETRACHLOROETHANE	630-20-6	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	<5
TOLUENE	108-88-3	<5
1,2,3-TRICHLOROBENZENE	87-61-6	<5
1,2,4-TRICHLOROBENZENE	120-82-1	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	<5
TRICHLOROFLUOROMETHANE	75-69-4	<5
1,2,3-TRICHLOROPROPANE	96-18-4	<5
1,3,5-TRIMETHYLBENZENE	108-67-8	<5
1,2,4-TRIMETHYLBENZENE	95-63-6	<5
VINYL CHLORIDE	75-01-4	<5
ACETONE	62-64-1	<50
CARBON DISULFIDE	75-15-0	<5
2-BUTANONE (MEK)	78-93-3	<5
VINYL ACETATE	108-05-4	<5
2-HEXANONE	591-78-6	<5
p & m-XYLENE		1
o-XYLENE	1330-20-7	<10



Michael Venald:

Laboratory Director

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 Phone (631) 472-3400 • Fax (631) 472-8505 ••Email: LIAL@lialinc.com

Client: Impact	Client ID: 00-408, Hempstead (SP-8 {4-6'})
Date received: 3/27/01	Laboratory ID: 0112554
Date extracted: 4/2/01	Matrix: Soil
Date analyzed: 4/2/01	ELAP #: 11693

### **METALS ANALYSIS**

PARAMETER	MDL	<b>RESULTS</b> mg/kg
SILVER, Ag	1.65 mg/kg	<1.65
BARIUM, Ba	3.33 mg/kg	43.0
CADMIUM, Cd	1.65 mg/kg	<1.65
COPPER, Cu	1.65 mg/kg	25.8
NICKEL, NI	1.65 mg/kg	1,651
SELENIUM, Se	1.65 mg/kg	<1.65
ZINC, Zn	1.65 mg/kg	28.0
IRON, Fe	1.65 mg/kg	5,367
MANGANESE, Mn	1.65 mg/kg	46.6
LEAD, Pb	1.65 mg/kg	65.0
MERCURY, Hg	0.020 mg/kg	<0.020
ARSENIC, As	6.60 mg/kg	<6.60
CHROMIUM, Cr	1.65 mg/kg	13.3

Preformed by SW-846 Method 6010

Michael Venald

Laboratory Director



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1.1643

Client: Impact	Client ID: 00-408, Hempstead (SP-9 {4-6'})
Date received: 3/27/01	Laboratory ID: 0112555
Date extracted: 3/28/01	Matrix: Soil
Date analyzed: 3/28/01	ELAP #: 11693

## **EPA METHOD 8260**

Parameter	CAS No.	Results ug/kg
MTBE	1634-04-4	<5
BENZENE	71-43-2	14
BROMOBENZENE	108-86-1	<5
BROMOCHLOROMETHANE	74-97-5	<5
BROMODICHLOROMETHANE	75-27-4	<5
BROMÓFÓRM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
n-BUTYLBENZENE	104-51-8	<5
sec-BUTYLBENZENE	135-98-8	<5
tert-BUTYLBENZENE	98-06-6	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLORODIBROMOMETHANE	124-48-1	<5
CHLOROETHANE	75-00-3	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
2-CHLOROTOLUENE	95-49-8	<5
4-CHLOROTOLUENE	106-43-4	<5
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	<5
1,2-DIBROMOETHANE	106-93-4	<5
DIBROMOMETHANE	74-95-3	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	- <5
DICHLORODIFLUOROMETHANE	75-71-8	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
cis-1,2-DICHLOROETHENE	156-59-2	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5



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Client: Impact	Client ID: 00-408, Hempstead (SP-9 {4-6'})	
Date received: 3/27/01	Laboratory ID: 0112555	
Date extracted: 3/28/01	Matrix: Soil	
Date analyzed: 3/28/01	ELAP #: 11693	

## **EPA METHOD 8260**

Parameter	CAS No.	Results ug/kg
1,2-DICHLOROPROPANE	78-87-5	<5
1,3-DICHLOROPROPANE	142-28-9	<5
2,2-DICHLOROPROPANE	594-20-7	<5
1,1-DICHLOROPROPENE	563-58-6	<5
ETHYLBENZENE	100-41-4	182
HEXACHLOROBUTADIENE	87-68-3	<5
ISOPROPYLBENZENE	98-82-8	<5
p-ISOPROPYLTOLUENE	99-87-6	<5
METHYLENE CHLORIDE	75-09-2	<5
NAPHTHALENE	91-20-3	<5
n-PROPYLBENZENE	103-65-1	<5
STYRENE	100-42-5	<5
1,1,1,2-TETRACHLOROETHANE	630-20-6	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	<5
TOLUENE	108-88-3	4,519
1,2,3-TRICHLOROBENZENE	87-61-6	<5
1,2,4-TRICHLOROBENZENE	120-82-1	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	<5
TRICHLOROFLUOROMETHANE	75-69-4	<5
1,2,3-TRICHLOROPROPANE	96-18-4	<5
1,3,5-TRIMETHYLBENZENE	108-67-8	<5
1,2,4-TRIMETHYLBENZENE	95-63-6	<5
VINYL CHLORIDE	75-01-4	<5
ACETONE	62-64-1	104
CARBON DISULFIDE	75-15-0	<5
2-BUTANONE (MEK)	78-93-3	24
VINYL ACETATE	108-05-4	<5
2-HEXANONE	591-78-6	<5
p & m-XYLENE	1330-20-7	511
o-XYLENE	1330-20-7	425



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Client: Impact	Client ID: 00-408, Hempstead (SP-9 {4-6'})
Date received: 3/27/01	Laboratory ID: 0112555
Date extracted: 4/2/01	Matrix: Soil
Date analyzed: 4/2/01	ELAP #: 11693

## **METALS ANALYSIS**

PARAMETER	MDL	RESULTS mg/kg
SILVER, Ag	1.65 mg/kg	<1.65
BARIUM, Ba	3.33 mg/kg	101
CADMIUM, Cd	1.65 mg/kg	<1.65
COPPER, Cu	1.65 mg/kg	19.3
NICKEL, Ni	1.65 mg/kg	15.2
SELENIUM, Se	1.65 mg/kg	<1.65
ZINC, Zn	1.65 mg/kg	112
IRON, Fe	1.65 mg/kg	13,157
MANGANESE, Mn	1.65 mg/kg	99.3
LEAD, Pb	1.65 mg/kg	204
MERCURY, Hg	0.020 mg/kg	0.35
ARSENIC, As	6.60 mg/kg	<6.60
CHROMIUM, Cr	1.65 mg/kg	19.8

Preformed by SW-846 Method 6010

Michael Venald

Laboratory Director



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Client: Impact	Client ID: 00-408, Hempstead (GWP-1)
Date received: 3/27/01	Laboratory ID: 0112556
Date extracted: 4/3/01	Matrix: Liquid
Date analyzed: 4/3/01	ELAP #: 11693

# EPA METHOD 8270 (STARS)

Parameter	CAS No.	Results ug/L
Naphthalene	91-20-3	<5
Anthracene	120-12-7	<5
Fluorene	86-73-7	<5
Phenanthrene	85-01-8	<5
Pyrene	129-00-0	<5
Acenaphthene	83-32-9	<5
Benzo(a)Anthracene	56-55-3	<5
Fluoranthene	206-44-0	<5
Benzo(b)Fluoranthene	205-99-2	<5
Benzo(k)fluoranthene	207-08-9	<5
Chrysene	218-01-9	<5
Benzo(a)Pyrene	50-32-8	<5
Benzo(g,h,i)Perylene	191-24-2	<5
Indeno(1,2,3-cd)Pyrene	193-39-5	<5
Dibenzo(a,h)Anthracene	53-70-3	<5

Michael Venald:

Laboratory Director



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Client: Impact	Client ID: 00-408, Hempstead (GWP-1)	
Date received: 3/27/01	Laboratory ID: 0112556	
Date extracted: 3/28/01	Matrix: Liquid	
Date analyzed: 3/28/01	ELAP #: 11693	

## **EPA METHOD 8260**

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<5 /
BROMOBENZENE	108-86-1	<5
BROMOCHLOROMETHANE	74-97-5	<5
BROMODICHLOROMETHANE	75-27-4	<5
BRÓMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
n-BUTYLBENZENE	104-51-8	<5
sec-BUTYLBENZENE	135-98-8	<5
tert-BUTYLBENZENE	98-06-6	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLORODIBROMOMETHANE	124-48-1	<5
CHLOROETHANE	75-00-3	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
2-CHLOROTOLUENE	95-49-8	<5
4-CHLOROTOLUENE	106-43-4	<5
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	<5
1,2-DIBROMOETHANE	106-93-4	<5
DIBROMOMETHANE	74-95-3	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
DICHLORODIFLUOROMETHANE	75-71-8	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
cis-1,2-DICHLOROETHENE	156-59-2	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5



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Client: Impact	Client ID: 00-408, Hempstead (GWP-1)
Date received: 3/27/01	Laboratory ID: 0112556
Date extracted: 3/28/01	Matrix: Liquid
Date analyzed: 3/28/01	ELAP #; 11693

## **EPA METHOD 8260**

Parameter	CAS No.	Results ug/L
1,2-DICHLOROPROPANE	78-87-5	<5
1,3-DICHLOROPROPANE	142-28-9	<5
2,2-DICHLOROPROPANE	594-20-7	<5
1,1-DICHLOROPROPENE	563-58-6	<5
ETHYLBENZENE	100-41-4	<5
HEXACHLOROBUTADIENE	87-68-3	<5
ISOPROPYLBENZENE	98-82-8	<5
p-ISOPROPYLTOLUENE	99-87-6	<5
METHYLENE CHLORIDE	75-09-2	<5
NAPHTHALENE	91-20-3	<5
n-PROPYLBENZENE	103-65-1	<5
STYRENE	100-42-5	<5
1,1,1,2-TETRACHLOROETHANE	630-20-6	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	<5
TOLUENE	108-88-3	<5
1,2,3-TRICHLOROBENZENE	87-61-6	<5
1,2,4-TRICHLOROBENZENE	120-82-1	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	<5
TRICHLOROFLUOROMETHANE	75-69-4	<5
1,2,3-TRICHLOROPROPANE	96-18-4	<5
1,3,5-TRIMETHYLBENZENE	108-67-8	<5
1,2,4-TRIMETHYLBENZENE	95-63-6	<5
VINYL CHLORIDE	75-01-4	<5
ACETONE	62-64-1	<50
CARBON DISULFIDE	75-15-0	<5
2-BUTANONE (MEK)	78-93-3	<5
VINYL ACETATE	108-05-4	<5
2-HEXANONE	591-78-6	<5
p & m-XYLENE	1330-20-7	<10

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Laboratory Director



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Client: Impact	Client ID: 00-408, Hempstead (GWP-1)	
Date received: 3/27/01	Laboratory ID: 0112556	
Date extracted: 3/29/01	Matrix: Liquid	
Date analyzed: 3/29/01	ELAP #: 11693	

# METALS ANALYSIS

PARAMETER	MDL	RESULTS mg/L
SILVER, Ag	0.05 mg/L	<0.05
BARIUM, Ba	1.0 mg/L	<1.00
CADMIUM, Cd	0.05 mg/L	<0.05
COPPER, Cu	0.05 mg/L	<0.05
NICKEL, NI	0.05 mg/L	<0.05
SELENIUM, Se	0.05 mg/L	<0.05
IRON, Fe	0.05 mg/L	0.83
MANGANESE, Mn	0.05 mg/L	0.15
LEAD, Pb	0.05 mg/L	<0.05
MERCURY, Hg	0.002 mg/L	<0.002
ARSENIC, As	0.05 mg/L	<0.05
CHROMIUM, Cr	0.05 mg/L	<0.05
ŻINĆ, Zn	0.05 mg/L	<0.05

Method: SW846, 7000 series analysis

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Client: Impact	Client ID: 00-408, Hempstead (GWP-2)
Date received: 3/27/01	Laboratory ID: 0112557
Date extracted: 3/28/01	Matrix: Liquid
Date analyzed: 3/28/01	ELAP #: 11693

### **EPA METHOD 8260**

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<5 /
BROMOBENZENE	108-86-1	<5
BROMOCHLOROMETHANE	74-97-5	<5
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
n-BUTYLBENZENE	104-51-8	<5
sec-BUTYLBENZENE	135-98-8	<5
tert-BUTYLBENZENE	98-06-6	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLORODIBROMOMETHANE	124-48-1	<5
CHLOROETHANE	75-00-3	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
2-CHLOROTOLUENE	95-49-8	<5
4-CHLOROTOLUENE	106-43-4	<5
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	<5
1,2-DIBROMOETHANE	106-93-4	<5
DIBROMOMETHANE	74-95-3	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
DICHLORODIFLUOROMETHANE	75-71-8	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
cis-1,2-DICHLOROETHENE	156-59-2	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5



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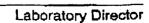
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Client: Impact	Client ID: 00-408, Hempstead (GWP-2)	
Date received: 3/27/01	Laboratory ID: 0112557	
Date extracted: 3/28/01	Matrix: Liquid	
Date analyzed: 3/28/01	ELAP #: 11693	

### **EPA METHOD 8260**

Parameter	CAS No.	Results ug/L
1,2-DICHLOROPROPANE	78-87-5	<5
1,3-DICHLOROPROPANE	142-28-9	<5 :
2,2-DICHLOROPROPANE	594-20-7	<5
1,1-DICHLOROPROPENE	563-58-6	<5
ETHYLBENZENE	100-41-4	<5
HEXACHLOROBUTADIENE	87-68-3	<5
ISOPROPYLBENZENE	98-82-8	<5
p-ISOPROPYLTOLUENE	99-87-6	<5
METHYLENE CHLORIDE	75-09-2	<5
NAPHTHALENE	91-20-3	<5
n-PROPYLBENZENE	103-65-1	<5
STYRENE	100-42-5	<5
1,1,1,2-TETRACHLOROETHANE	630-20-6	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	<5
TOLUENE	108-88-3	<5
1,2,3-TRICHLOROBENZENE	87-61-6	<5
1,2,4-TRICHLOROBENZENE	120-82-1	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	<5
TRICHLOROFLUOROMETHANE	75-69-4	<5
1,2,3-TRICHLOROPROPANE	96-18-4	<5
1,3,5-TRIMETHYLBENZENE	108-67-8	<5
1,2,4-TRIMETHYLBENZENE	95-63-6	<5
VINYL CHLORIDE	75-01-4	<5
ACETONE	62-64-1	<50
CARBON DISULFIDE	75-15-0	<5
2-BUTANONE (MEK)	78-93-3	<5
VINYL ACETATE	108-05-4	<5
2-HEXANONE	<b>591-78-6</b>	<5
p & m-XYLENE	1330-20-7	<10
o-XYLENE	1330-20-7	<5

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Client: Impact	Client ID: 00-408, Hempstead (GWP-2)
Date received: 3/27/01	Laboratory ID: 0112557
Date extracted: 3/29/01	Matrix: Liquid
Date analyzed: 3/29/01	ELAP #: 11693

## **METALS ANALYSIS**

PARAMETER	MDL	RESULTS mg/L
SILVER, Ag	0.05 mg/L	<0.05
BARIUM, Ba	1.0 mg/L	<1.00
CADMIUM, Cd	0.05 mg/L	<0.05
COPPER, Cu	0.05 mg/L	<0.05
NICKEL, Ni	0.05 mg/L	<0.05
SELENIUM, Se	0.05 mg/L	<0.05
IRON, Fe	0.05 mg/L	5.27
MANGANESE, Mn	0.05 mg/L	0.65
LEAD, Pb	0.05 mg/L	<0.05
MERCURY, Hg	0.002 mg/L	<0.002
ARSENIC, As	0.05 mg/L	<0.05
CHROMIUM, Cr	0.05 mg/L	<0.05
ZINC, Zn	0.05 mg/L	<0.05

Method: SW846, 7000 series analysis

Michael Venald:

Laboratory Director

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Client: Impact	Client ID: 00-408, Hempstead (GWP-3)
Date received: 3/27/01	Laboratory ID: 0112558
Date extracted: 3/28/01	Matrix: Liquid
Date analyzed: 3/28/01	ELAP #: 11693

### **EPA METHOD 8260**

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<5 /
BROMOBENZENE	108-86-1	<5
BROMOCHLOROMETHANE	74-97-5	<5
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
n-BUTYLBENZENE	104-51-8	<5
sec-BUTYLBENZENE	135-98-8	<5
tert-BUTYLBENZENE	98-06-6	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLORODIBROMOMETHANE	124-48-1	<5
CHLOROETHANE	75-00-3	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
2-CHLOROTOLUENE	95-49-8	<5
4-CHLOROTOLUENE	106-43-4	<5
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	<5
1,2-DIBROMOETHANE	106-93-4	<5
DIBROMOMETHANE	74-95-3	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
DICHLORODIFLUOROMETHANE	75-71-8	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
cis-1,2-DICHLOROETHENE	156-59-2	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5



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Client: Impact	Client ID: 00-408, Hempstead	
	(GWP-3)	
Date received: 3/27/01	Laboratory ID: 0112558	
Date extracted: 3/28/01	Matrix: Liquid	
Date analyzed: 3/28/01	ELAP #: 11693	

### **EPA METHOD 8260**

Parameter	CAS No.	Results ug/L
1,2-DICHLOROPROPANE	78-87-5	<5
1,3-DICHLOROPROPANE	142-28-9	<5 ,
2,2-DICHLOROPROPANE	594-20-7	<5
1,1-DICHLOROPROPENE	563-58-6	<5
ETHYLBENZENE	100-41-4	<5
HEXACHLOROBUTADIENE	87-68-3	<5
ISOPROPYLBENZENE	98-82-8	<5
p-JSOPROPYLTOLUENE	99-87-6	<5
METHYLENE CHLORIDE	75-09-2	<5
NAPHTHALENE	91-20-3	<5
n-PROPYLBENZENE	103-65-1	<5
STYRENE	100-42-5	<5
1,1,1,2-TETRACHLOROETHANE	630-20-6	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	<5
TOLUENE	108-88-3	<5
1,2,3-TRICHLOROBENZENE	87-61-6	<5
1,2,4-TRICHLOROBENZENE	120-82-1	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	<5
TRICHLOROFLUOROMETHANE	75-69-4	<5
1,2,3-TRICHLOROPROPANE	96-18-4	<5
1,3,5-TRIMETHYLBENZENE	108-67-8	<5
1,2,4-TRIMETHYLBENZENE	95-63-6	<5
VINYL CHLORIDE	75-01-4	<5
ACETONE	62-64-1	<50
CARBON DISULFIDE	75-15-0	<5
2-BUTANONE (MEK)	78-93-3	<5
VINYL ACETATE	108-05-4	<5
2-HEXANONE	591-78-6	<5
p & m-XYLENE	1330-20-7	<10
o-XYLENE	1330-20-7	<5

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Laboratory Director

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Client: Impact	Client ID: 00-408, Hempstead (GWP-3)	
Date received: 3/27/01	Laboratory ID: 0112558	
Date extracted: 3/29/01	Matrix: Liquid	
Date analyzed: 3/29/01	ELAP #: 11693	

# METALS ANALYSIS

PARAMETER	MDL	RESULTS mg/L
SILVER, Ag	0.05 mg/L	<0.05
BARIUM, Ba	1.0 mg/L	<1.00
CADMIUM, Cd	0.05 mg/L	<0.05
COPPER, Cu	0.05 mg/L	<0.05
NICKEL, NI	0.05 mg/L	0.38
SELENIUM, Se	0.05 mg/L	0.10
IRON, Fe	0.05 mg/L	0.96
MANGANESE, Mn	0.05 mg/L	0.17
LEAD, Pb	0.05 mg/L	<0.05
MERCURY, Hg	0.002 mg/L	<0.002
ARSENIC, As	0.05 mg/L	<0.05
CHROMIUM, Cr	0.05 mg/L	<0.05
ZINC, Zn	0.05 mg/L	<0.05

Method: SW846, 7000 series analysis

Michael Venald

Laboratory Director



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Client: Impact	Client ID: 00-408, Hempstead (GWP-4)
Date received: 3/27/01	Laboratory ID: 0112559
Date extracted: 3/28/01	Matrix: Liquid
Date analyzed: 3/28/01	ELAP #: 11693

## **EPA METHOD 8260**

Parameter	CAS No.	Results ug/L
МТВЕ	1634-04-4	<5
BENZENE	71-43-2	<b>&lt;5</b> (
BROMOBENZENE	108-86-1	<5
BROMOCHLOROMETHANE	74-97-5	<5
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
n-BUTYLBENZENE	104-51-8	<5
sec-BUTYLBENZENE	135-98-8	<5
tert-BUTYLBENZENE	98-06-6	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLORODIBROMOMETHANE	124-48-1	<5
CHLOROETHANE	75-00-3	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
2-CHLOROTOLUENE	95-49-8	<5
4-CHLOROTOLUENE	106-43-4	<5
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	<5
1,2-DIBROMOETHANE	106-93-4	<5
DIBROMOMETHANE	74-95-3	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
DICHLORODIFLUOROMETHANE	75-71-8	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
cis-1,2-DICHLOROETHENE	156-59-2	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5



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LABORATORIES INC.

Client: Impact	Client ID: 00-408, Hempstead
	(GWP-4)
Date received: 3/27/01	Laboratory ID: 0112559
Date extracted: 3/28/01	Matrix: Liquid
Date analyzed: 3/28/01	ELAP #: 11693

## **EPA METHOD 8260**

Parameter	CAS No.	Results ug/L
1,2-DICHLOROPROPANE	78-87-5	<5
1,3-DICHLOROPROPANE	142-28-9	<5
2,2-DICHLOROPROPANE	594-20-7	<5
1,1-DICHLOROPROPENE	563-58-6	<5
ETHYLBENZENE	100-41-4	<5
HEXACHLOROBUTADIENE	87-68-3	<5
ISOPROPYLBENZENE	98-82-8	<5
p-ISOPROPYLTOLUENE	99-87-6	<5
METHYLENE CHLORIDE	75-09-2	<5
NAPHTHALENE	91-20-3	<5
n-PROPYLBENZENE	103-65-1	<5
STYRENE	100-42-5	<5
1,1,1,2-TETRACHLOROETHANE	630-20-6	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	<5
TOLUENE	108-88-3	<5
1,2,3-TRICHLOROBENZENE	87-61-6	<5
1,2,4-TRICHLOROBENZENE	120-82-1	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	<5
TRICHLOROFLUOROMETHANE	75-69-4	<5
1,2,3-TRICHLOROPROPANE	96-18-4	<5
1,3,5-TRIMETHYLBENZENE	108-67-8	<5
1,2,4-TRIMETHYLBENZENE	95-63-6	<5
VINYL CHLORIDE	75-01-4	<5
ACETONE	62-64-1	<50
CARBON DISULFIDE	75-15-0	<5
2-BUTANONE (MEK)	78-93-3	<5
VINYL ACETATE	108-05-4	<5
2-HEXANONE	591-78-6	<5
p & m-XYLENE	1330-20-7	<10
o-XYLENE	1330-20-7	<5

Michael Venald:

Laboratory Director

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-	<b>•</b>
Client: Impact	Client ID: 00-408, Hempstead (GWP-4)
Date received: 3/27/01	Laboratory ID: 0112559
Date extracted: 3/29/01	Matrix: Liquid
Date analyzed: 3/29/01	ELAP #: 11693

# **METALS ANALYSIS**

PARAMETER	MDL	RESULTS mg/L
SILVER, Ag	0.05 mg/L	<0.05
BARIUM, Ba	1.0 mg/L	<1.00
CADMIUM, Cd	0.05 mg/L	<0.05
COPPER, Cu	0.05 mg/L	0.30
NICKEL, NI	0.05 mg/L	121
SELENIUM, Se	0.05 mg/L	0.10
IRON, Fe	0.05 mg/L	4.33
MANGANESE, Mn	0.05 mg/L	2.22
LEAD, Pb	0.05 mg/L	<0.005
MERCURY, Hg	0.002 mg/L	<0.002
ARSENIC, As	0.05 mg/L	<0.05
CHROMIUM, Cr	0.05 mg/L	3.31
ZINC, Zn	0.05 mg/L	0.49

Method: SW846, 7000 series analysis

Michael Venald

Laboratory Director



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•	
Client ID: 00-408, Hempstead	
(GWP-5)	
Laboratory ID: 0112560	
Matrix: Liquid	
ELAP #: 11693	
	(GWP-5) Laboratory ID: 0112560 Matrix: Liquid

### **EPA METHOD 8260**

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<5 /
BROMOBENZENE	108-86-1	<5
BROMOCHLOROMETHANE	74-97-5	<5
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
n-BUTYLBENZENE	104-51-8	<5
Sec-BUTYLBENZENE	135-98-8	<5
tert-BUTYLBENZENE	98-06-6	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLORODIBROMOMETHANE	124-48-1	<5
CHLOROETHANE	75-00-3	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
2-CHLOROTOLUENE	95-49-8	<5
4-CHLOROTOLUENE	106-43-4	<5
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	<5
1,2-DIBROMOETHANE	106-93-4	<5
DIBROMOMETHANE	74-95-3	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	. <5
DICHLORODIFLUOROMETHANE	75-71-8	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
cis-1,2-DICHLOROETHENE	156-59-2	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5



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	•
Client: Impact	Client ID: 00-408, Hempstead
	(GWP-5)
Date received: 3/27/01	Laboratory ID: 0112560
Date extracted: 3/28/01	Matrix: Liquid
Date analyzed: 3/28/01	ELAP #: 11693

### **EPA METHOD 8260**

Parameter	CAS No.	Results ug/L
1,2-DICHLOROPROPANE	78-87-5	<5
1,3-DICHLOROPROPANE	142-28-9	<5
2,2-DICHLOROPROPANE	594-20-7	<5
1,1-DICHLOROPROPENE	563-58-6	<5
ETHYLBENZENE	100-41-4	<5
HEXACHLOROBUTADIENE	87-68-3	<5
ISOPROPYLBENZENE	98-82-8	<5
p-ISOPROPYLTOLUENE	99-87-6	<5
METHYLENE CHLORIDE	75-09-2	<5
NAPHTHALENE	91-20-3	<5
n-PROPYLBENZENE	103-65-1	<5
STYRENE	100-42-5	<5
1,1,1,2-TETRACHLOROETHANE	630-20-6	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	<5
TOLUENE	108-88-3	<5
1,2,3-TRICHLOROBENZENE	87-61-6	<5
1,2,4-TRICHLOROBENZENE	120-82-1	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	<5
TRICHLOROFLUOROMETHANE	75-69-4	<5
1,2,3-TRICHLOROPROPANE	96-18-4	<5
1,3,5-TRIMETHYLBENZENE	108-67-8	<5
1,2,4-TRIMETHYLBENZENE	95-63-6	<5
VINYL CHLORIDE	75-01-4	<5
ACETONE	62-64-1	<50
CARBON DISULFIDE	75-15-0	<5
2-BUTANONE (MEK)	78-93-3	<5
VINYL ACETATE	108-05-4	<5
2-HEXANONE	591-78-6	<5
p & m-XYLENE	1330-20-7	<10
o-XYLENE	1330-20-7	<5

Michael Venald:

Laboratory Director



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Client: Impact	Client ID: 00-408, Hempstead (GWP-5)
Date received: 3/27/01	Laboratory ID: 0112560
Date extracted: 3/28/01	Matrix: Liquid
Date analyzed: 3/28/01	ELAP #: 11693

# **METALS ANALYSIS**

PARAMETER	MDL	RESULTS mg/L
SILVER, Ag	0.05 mg/L	<0.05
BARIUM, Ba	1.0 mg/L	<1.00
CADMIUM, Cd	0.05 mg/L	<0.05
COPPER, Cu	0.05 mg/L	0.06
NICKEL, NI	0.05 mg/L	32.5
SELENIUM, Se	0.05 mg/L	<0.05
IRON, Fe	0.05 mg/L	4.57
MANGANESE, Mn	0.05 mg/L	0.33
LEAD, Pb	0.05 mg/L	<0.05
MERCURY, Hg	0.002 mg/L	<0.002
ARSENIC, As	0.05 mg/L	<0.05
CHROMIUM, Cr	0.05 mg/L	1.71
ZINC, Zn	0.05 mg/L	0.10

Method: SW846, 7000 series analysis

Michael Venald

Laboratory Director



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Client: Impact	Client ID: 00-408, Hempstead (GWP-6)
Date received: 3/27/01	Laboratory ID: 0112561
Date extracted: 3/28/01	Matrix: Liquid
Date analyzed: 3/28/01	ELAP #: 11693

## **EPA METHOD 8260**

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<5 <
BROMOBENZENE	108-86-1	<5
BROMOCHLOROMETHANE	74-97-5	<5
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
n-BUTYLBENZENE	104-51-8	<5
sec-BUTYLBENZENE	135-98-8	<5
tert-BUTYLBENZENE	98-06-6	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLORODIBROMOMETHANE	124-48-1	<5
CHLOROETHANE	75-00-3	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
2-CHLOROTOLUENE	95-49-8	<5
4-CHLOROTOLUENE	106-43-4	<5
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	<5
1,2-DIBROMOETHANE	106-93-4	<5
DIBROMOMETHANE	74-95-3	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
DICHLORODIFLUOROMETHANE	75-71-8	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
cis-1,2-DICHLOROETHENE	156-59-2	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5



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Client: Impact	Client ID: 00-408, Hempstead
	(GWP-6)
Date received: 3/27/01	Laboratory ID: 0112561
Date extracted: 3/28/01	Matrix: Liguid
Date analyzed: 3/28/01	ELAP #: 11693

### **EPA METHOD 8260**

Parameter	CAS No.	Results ug/L
1,2-DICHLOROPROPANE	78-87-5	<5
1,3-DICHLOROPROPANE	142-28-9	<5
2,2-DICHLOROPROPANE	594-20-7	<5
1,1-DICHLOROPROPENE	563-58-6	<5
ETHYLBENZENE	100-41-4	<5
HEXACHLOROBUTADIENE	87-68-3	<5
ISOPROPYLBENZENE	98-82-8	<5
p-ISOPROPYLTOLUENE	99-87-6	<5
METHYLENE CHLORIDE	75-09-2	<5
NAPHTHALENE	91-20-3	<5
n-PROPYLBENZENE	103-65-1	<5
STYRENE	100-42-5	<5
1,1,1,2-TETRACHLOROETHANE	630-20-6	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	<5
TOLUENE	108-88-3	<5
1,2,3-TRICHLOROBENZENE	87-61-6	<5
1,2,4-TRICHLOROBENZENE	120-82-1	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	<5
TRICHLOROFLUOROMETHANE	75-69-4	<5
1,2,3-TRICHLOROPROPANE	96-18-4	<5
1,3,5-TRIMETHYLBENZENE	108-67-8	<5
1,2,4-TRIMETHYLBENZENE	95-63-6	<5
VINYL CHLORIDE	75-01-4	<5
ACETONE	62-64-1	<50
CARBON DISULFIDE	75-15-0	<5
2-BUTANONE (MEK)	78-93-3	<5
VINYL ACETATE	108-05-4	<5
2-HEXANONE	591-78-6	<5
p & m-XYLENE	1330-20-7	<10
o-XYLENE	1330-20-7	<5

Michael Venald:

Laboratory Director



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Client: Impact	Client ID: 00-408, Hempstead (GWP-6)	
Date received: 3/27/01	Laboratory ID: 0112561	
Date extracted: 3/29/01	Matrix: Liquid	
Date analyzed: 3/29/01	ELAP #: 11693	

## METALS ANALYSIS

PARAMETER	MDL	RESULTS mg/L
SILVER, Ag	0.05 mg/L	<0.05
BARIUM, Ba	1.0 mg/L	<1.00
CADMIUM, Cd	0.05 mg/L	<0.05
COPPER, Cu	0.05 mg/L	<0.05
NICKEL, Ni	0.05 mg/L	0.46
SELENIUM, Se	0.05 mg/L	<0.05
IRON, Fe	0.05 mg/L	0.51
MANGANESE, Mn	0.05 mg/L	0.35
LEAD, Pb	0.05 mg/L	<0.05
MERCURY, Hg	0.002 mg/L	<0.002
ARSENIC, As	0.05 mg/L	<0.05
CHROMIUM, Cr	0.05 mg/L	<0.05
ZINC, Zn	0.05 mg/L	<0.05

Method: SW846, 7000 series analysis

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Laboratory Director



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•	
Client: Impact	Client ID: 00-408, Hempstead (GWP-7)
Date received: 3/27/01	Laboratory ID: 0112562
Date extracted: 3/28/01	Matrix: Liquid
Date analyzed: 3/28/01	ELAP #: 11693

## **EPA METHOD 8260**

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<5
BROMOBENZENE	108-86-1	<5
BROMOCHLOROMETHANE	74-97-5	<5
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
n-BUTYLBENZENE	104-51-8	<5
sec-BUTYLBENZENE	135-98-8	<5
tert-BUTYLBENZENE	98-06-6	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLORODIBROMOMETHANE	124-48-1	<5
CHLOROETHANE	75-00-3	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
2-CHLOROTOLUENE	95-49-8	<5
4-CHLOROTOLUENE	106-43-4	<5
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	<5
1,2-DIBROMOETHANE	106-93-4	<5
DIBROMOMETHANE	74-95-3	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
DICHLORODIFLUOROMETHANE	75-71-8	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
cis-1,2-DICHLOROETHENE	156-59-2	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5



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Client: Impact	Client ID: 00-408, Hempstead	
	(GWP-7)	
Date received: 3/27/01	Laboratory ID: 0112562	
Date extracted: 3/28/01	Matrix: Liquid	
Date analyzed: 3/28/01	ELAP #: 11693	

## **EPA METHOD 8260**

Parameter	CAS No.	Results ug/L
1,2-DICHLOROPROPANE	78-87-5	<5
1,3-DICHLOROPROPANE	142-28-9	<5 /
2,2-DICHLOROPROPANE	594-20-7	<5
1,1-DICHLOROPROPENE	563-58-6	<5
ETHYLBENZENE	100-41-4	<5
HEXACHLOROBUTADIENE	87-68-3	<5
ISOPROPYLBENZENE	98-82-8	<5
p-ISOPROPYLTOLUENE	99-87-6	<5
METHYLENE CHLORIDE	75-09-2	<5
NAPHTHALENE	91-20-3	<5
n-PROPYLBENZENE	103-65-1	<5
STYRENE	100-42-5	<5
1,1,1,2-TETRACHLOROETHANE	630-20-6	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	<5
TOLUENE	108-88-3	<5
1,2,3-TRICHLOROBENZENE	87-61-6	<5
1,2,4-TRICHLOROBENZENE	120-82-1	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	<5
TRICHLOROFLUOROMETHANE	75-69-4	<5
1,2,3-TRICHLOROPROPANE	96-18-4	<5
1,3,5-TRIMETHYLBENZENE	108-67-8	<5
1,2,4-TRIMETHYLBENZENE	95-63-6	<5
VINYL CHLORIDE	75-01-4	<5
ACETONE	62-64-1	<50
CARBON DISULFIDE	75-15-0	<5
2-BUTANONE (MEK)	78-93-3	<5
VINYL ACETATE	108-05-4	<5
2-HEXANONE	591-78-6	<5
p & m-XYLENE	1330-20-7	<10
o-XYLENE	1330-20-7	<5

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Michael Venald

Laboratory Director

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Client: Impact	Client ID: 00-408, Hempstead
	(GWP-7)
Date received: 3/27/01	Laboratory ID: 0112562
Date extracted: 3/29/01	Matrix: Liquid
Date analyzed: 3/29/01	ELAP #: 11693

# **METALS ANALYSIS**

PARAMETER	MDL	RESULTS mg/L
SILVER, Ag	0.05 mg/L	<0.05
BARIUM, Ba	1.0 mg/L	<1.00
CADMIUM, Cd	0.05 mg/L	<0.05
COPPER, Cu	0.05 mg/L	<0.05
NICKEL, Ni	0.05 mg/L	<0.05
SELENIUM, Se	0.05 mg/L	<0.05
IRON, Fe	0.05 mg/L	1.10
MANGANESE, Mn	0.05 mg/L	0.10
LEAD, Pb	0.05 mg/L	<0.05
MERCURY, Hg	0.002 mg/L	<0.002
ARSENIC, As	0.05 mg/L	<0.05
CHROMIUM, Cr	0.05 mg/L	<0.05
ZINC, Zn	0.05 mg/L	<0.05

Method: SW846, 7000 series analysis

Michael Venald:

Laboratory Director



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Client: Impact	Client ID: 00-408, Hempstead (GWP-8)
Date received: 3/27/01	Laboratory ID: 0112563
Date extracted: 3/28/01	Matrix: Liquid
Date analyzed: 3/28/01	ELAP #; 11693

# EPA METHOD 8260

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<5
BROMOBENZENE	108-86-1	<5
BROMOCHLOROMETHANE	74-97-5	<5
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
n-BUTYLBENZENE	104-51-8	10
sec-BUTYLBENZENE	135-98-8	12
tert-BUTYLBENZENE	98-06-6	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLORODIBROMOMETHANE	124-48-1	<5
CHLOROETHANE	75-00-3	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
2-CHLOROTOLUENE	95-49-8	<5
4-CHLOROTOLUENE	106-43-4	<5
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	<5
1,2-DIBROMOETHANE	106-93-4	<5
DIBROMOMETHANE	74-95-3	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
DICHLORODIFLUOROMETHANE	75-71-8	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
cis-1,2-DICHLOROETHENE	156-59-2	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5



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Client: Impact	Client ID: 00-408, Hempstead (GWP-8)
Date received: 3/27/01	Laboratory ID: 0112563
Date extracted: 3/28/01	Matrix: Liquid
Date analyzed: 3/28/01	ELAP #: 11693

### **EPA METHOD 8260**

Parameter	CAS No.	Results ug/L
1,2-DICHLOROPROPANE	78-87-5	<5
1,3-DICHLOROPROPANE	142-28-9	<5
2,2-DICHLOROPROPANE	594-20-7	<5
1,1-DICHLOROPROPENE	563-58-6	<5
ETHYLBENZENE	100-41-4	6
HEXACHLOROBUTADIENE	87-68-3	<5
ISOPROPYLBENZENE	98-82-8	8
p-ISOPROPYLTOLUENE	99-87-6	<5
METHYLENE CHLORIDE	75-09-2	<5
NAPHTHALENE	91-20-3	<5
n-PROPYLBENZENE	103-65-1	26
STYRENE	100-42-5	<5
1,1,1,2-TETRACHLOROETHANE	630-20-6	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	<5
TOLUENE	108-88-3	6
1,2,3-TRICHLOROBENZENE	87-61-6	<5
1,2,4-TRICHLOROBENZENE	120-82-1	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	<5
TRICHLOROFLUOROMETHANE	75-69-4	<5
1,2,3-TRICHLOROPROPANE	96-18-4	<5
1,3,5-TRIMETHYLBENZENE	108-67-8	7
1,2,4-TRIMETHYLBENZENE	95-63-6	16
VINYL CHLORIDE	75-01-4	<5
ACETONE	62-64-1	<50
CARBON DISULFIDE	75-15-0	<5
2-BUTANONE (MEK)	78-93-3	<5
VINYL ACETATE	108-05-4	<5
2-HEXANONE	591-78-6	<5
p & m-XYLENE	1330-20-7	<10
o-XYLENE	1330-20-7	<5

Michael Venald

Laboratory Director

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#### 45 of 45 pages

Client: Impact	Client ID: 00-408, Hempstead	
	(GWP-8)	
Date received: 3/27/01	Laboratory ID: 0112563	
Date extracted: 3/29/01	Matrix: Liquid	
Date analyzed: 3/29/01	ELAP #: 11693	

## **METALS ANALYSIS**

PARAMETER	MDL	RESULTS mg/L
SILVER, Ag	0.05 mg/L	<0.05
BARIUM, Ba	1.0 mg/L	<1.00
CADMIUM, Cd	0.05 mg/L	<0.05
COPPER, Cu	0.05 mg/L	<0.05
NICKEL, Ni	0.05 mg/L	0.07
SELENIUM, Se	0.05 mg/L	0.05
IRON, Fe	0.05 mg/L	48.5
MANGANESE, Mn	0.05 mg/L	1.94
LEAD, Pb	0.05 mg/L	<0.05
MERCURY, Hg	0.002 mg/L	<0.002
ARSENIC, As	0.05 mg/L	<0.05
CHROMIUM, Cr	0.05 mg/L	<0.05
ZINC, Zn	0.05 mg/L	<0.05

Method: SW846, 7000 series analysis

Michael Venald

Laboratory Director



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Client: Impact	Client ID: 00-408, Hempstead (Pit-1 {24"-32"})	
Date received: 3/30/01	Laboratory ID: 0112749	
Date extracted: 4/2/01	Matrix: Soil	
Date analyzed: 4/2/01	ELAP #: 11693	

### **EPA METHOD 8260**

Parameter	CAS No.	Results ug/kg
BENZENE	71-43-2	<5
BROMOBENZENE	108-86-1	<5
BROMOCHLOROMETHANE	74-97-5	<5
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
n-BUTYLBENZENE	104-51-8	<5
sec-BUTYLBENZENE	135-98-8	<5
tert-BUTYLBENZENE	98-06-6	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLORODIBROMOMETHANE	124-48-1	<5
CHLOROETHANE	75-00-3	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
2-CHLOROTOLUENE	95-49-8	<5
4-CHLOROTOLUENE	106-43-4	<5
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	<5
1,2-DIBROMOETHANE	106-93-4	<5
DIBROMOMETHANE	74-95-3	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
DICHLORODIFLUOROMETHANE	75-71-8	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
cis-1,2-DICHLOROETHENE	156-59-2	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5



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Client: Impact	Client ID: 00-408, Hempstead
	(Pit-1 {24"-32"})
Date received: 3/30/01	Laboratory ID: 0112749
Date extracted: 4/2/01	Matrix: Soil
Date analyzed: 4/2/01	ELAP #: 11693

## **EPA METHOD 8260**

Parameter	CAS No.	Results ug/kg
1,2-DICHLOROPROPANE	78-87-5	<5
1,3-DICHLOROPROPANE	142-28-9	<5
2,2-DICHLOROPROPANE	594-20-7	<5
1,1-DICHLOROPROPENE	563-58-6	<5
ETHYLBENZENE	100-41-4	<5
HEXACHLOROBUTADIENE	87-68-3	<5
ISOPROPYLBENZENE	98-82-8	<5
p-ISOPROPYLTOLUENE	99-87-6	<5
METHYLENE CHLORIDE	75-09-2	9
NAPHTHALENE	91-20-3	<5
n-PROPYLBENZENE	103-65-1	<5
STYRENE	100-42-5	<5
1,1,1,2-TETRACHLOROETHANE	630-20-6	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	<5
TOLUENE	108-88-3	<5
1,2,3-TRICHLOROBENZENE	87-61-6	<5
1,2,4-TRICHLOROBENZENE	120-82-1	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79 <b>-</b> 01-6	<5
TRICHLOROFLUOROMETHANE	75-69-4	<5
1,2,3-TRICHLOROPROPANE	96-18-4	<5
1,3,5-TRIMETHYLBENZENE	108-67-8	<5
1,2,4-TRIMETHYLBENZENE	95-63-6	<5
VINYL CHLORIDE	75-01-4	<5
ACETONE	62-64-1	<50
CARBON DISULFIDE	75-15-0	<5
2-BUTANONE (MEK)	78-93-3	<5
VINYL ACETATE	108-05-4	<5
2-HEXANONE	591-78-6	<5
p & m-XYLENE	1330-20-7	<10
o-XYLENE	1330-20-7	<5



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Laboratory Director

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Client: Impact	Client ID: 00-408, Hempstead (Pit-1 {24"-32"})	
Date received; 3/30/01	Laboratory ID: 0112749	
Date extracted: 4/4/01	Matrix: Soil	
Date analyzed: 4/4/01	ELAP #: 11693	

## **METALS ANALYSIS**

PARAMETER	MDL	RESULTS mg/kg
SILVER, Ag	1.65 mg/kg	<1.65
BARIUM, Ba	3.33 mg/kg	12.3
CADMIUM, Cd	1.65 mg/kg	<1.65
COPPER, Cu	1.65 mg/kg	26.4
NICKEL, NI	1,65 mg/kg	312
SELENIUM, Se	1.65 mg/kg	<1.65
ZINC, Zn	1.65 mg/kg	28.5
IRON, Fe	1.65 mg/kg	2,327
MANGANESE, Mn	1.65 mg/kg	10.9
LEAD, Pb	1.65 mg/kg	62.0
MERCURY, Hg	0.020 mg/kg	0.10
ARSENIC, As	6.60 mg/kg	10.9
CHROMIUM, Cr	1.65 mg/kg	872

Preformed by SW-846 Method 6010

Michael Venald

Laboratory Director



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Client: Impact	Client ID: 00-408, Hempstead
	(Pit-2 {0-6"})
Date received: 3/30/01	Laboratory ID: 0112750
Date extracted: 4/2/01	Matrix: Soil
Date analyzed: 4/2/01	ELAP #: 11693

## **EPA METHOD 8260**

Parameter	CAS No.	Results ug/kg
BENZENE	71-43-2	<5
BROMOBENZENE	108-86-1	<5
BROMOCHLOROMETHANE	74-97-5	<5
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
n-BUTYLBENZENE	104-51-8	<5
sec-BUTYLBENZENE	135-98-8	<5
tert-BUTYLBENZENE	98-06-6	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLORODIBROMOMETHANE	124-48-1	<5
CHLOROETHANE	75-00-3	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
2-CHLOROTOLUENE	95-49-8	<5
4-CHLOROTOLUENE	106-43-4	<5
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	<5
1,2-DIBROMOETHANE	106-93-4	<5
DIBROMOMETHANE	74-95-3	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	<u>541-73</u> -1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
DICHLORODIFLUOROMETHANE	75-71-8	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
cis-1,2-DICHLOROETHENE	156-59-2	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5



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Client: Impact	Client ID: 00-408, Hempstead	
	(Pit-2 {0-6"})	
Date received: 3/30/01	Laboratory ID: 0112750	
Date extracted: 4/2/01	Matrix: Soil	
Date analyzed: 4/2/01	ELAP #: 11693	

### **EPA METHOD 8260**

Parameter	CAS No.	Results ug/kg
1,2-DICHLOROPROPANE	78-87-5	<5
1,3-DICHLOROPROPANE	142-28-9	<5
2,2-DICHLOROPROPANE	594-20-7	<5
1,1-DICHLOROPROPENE	563-58-6	<5
ETHYLBENZENE	100-41-4	14
HEXACHLOROBUTADIENE	87-68-3	<5
ISOPROPYLBENZENE	98-82-8	<5
p-ISOPROPYLTOLUENE	99-87-6	<5
METHYLENE CHLORIDE	75-09-2	26
NAPHTHALENE	91-20-3	<5
n-PROPYLBENZENE	103-65-1	<5
STYRENE	100-42-5	<5
1,1,1,2-TETRACHLOROETHANE	630-20-6	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	<5
TOLUENE	108-88-3	8
1,2,3-TRICHLOROBENZENE	87-61-6	<5
1,2,4-TRICHLOROBENZENE	120-82-1	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01 <i>-</i> 6	<5
TRICHLOROFLUOROMETHANE	75-69-4	<5
1,2,3-TRICHLOROPROPANE	96-18-4	<5
1,3,5-TRIMETHYLBENZENE	108-67-8	<5
1,2,4-TRIMETHYLBENZENE	95-63-6	<5
VINYL CHLORIDE	75-01-4	<5
ACETONE	62-64-1	<50
CARBON DISULFIDE	75-15-0	<5
2-BUTANONE (MEK)	78-93-3	<5
VINYL ACETATE	108-05-4	<5
2-HEXANONE	591-78-6	<5
p & m-XYLENE	1330-20-7	64
0-XYLENE	1330-20-7	19

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TOTAL P.05

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Client: Impact	Client ID: 00-408, Hempstead	
	(Pit-2 {0-6"})	
Date received: 3/30/01	Laboratory ID: 0112750	
Date extracted: 4/4/01	Matrix: Soil	
Date analyzed: 4/4/01	ELAP #: 11693	

### **METALS ANALYSIS**

PARAMETER	MDL	RESULTS mg/kg
SILVER, Ag	1.65 mg/kg	<1.65
BARIUM, Ba	3.33 mg/kg	50.0
CADMIUM, Cd	1.65 mg/kg	<1.65
COPPER, Cu	1.65 mg/kg	322
NICKEL, NI	1.65 mg/kg	5,458
SELENIUM, Se	1.65 mg/kg	<1.65
ZINC, Zn	1.65 mg/kg	143
IRON, Fe	1.65 mg/kg	23,477
MANGANESE, Mn	1.65 mg/kg	190
LEAD, Pb	1.65 mg/kg	40.8
MERCURY, Hg	0.020 mg/kg	0.03
ARSENIC, As	6.60 mg/kg	10.4
CHROMIUM, Cr	1.65 mg/kg	730

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TOTAL P.03

APPENDIX B: Photo Log Hempstead, New York 00-408A

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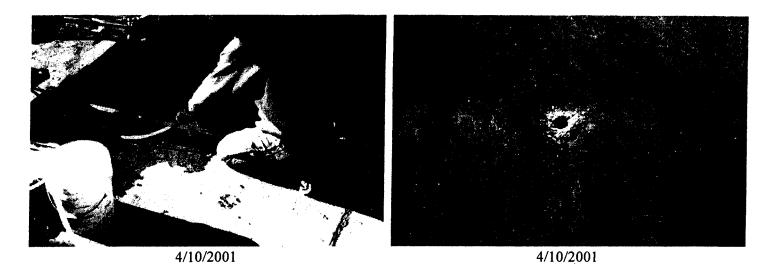
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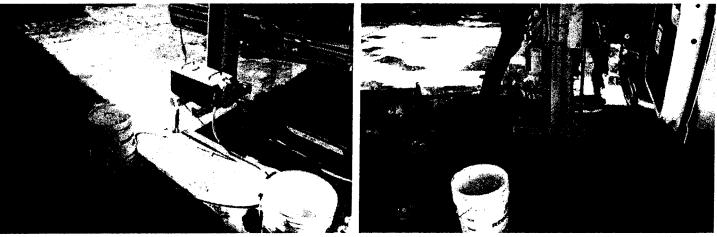
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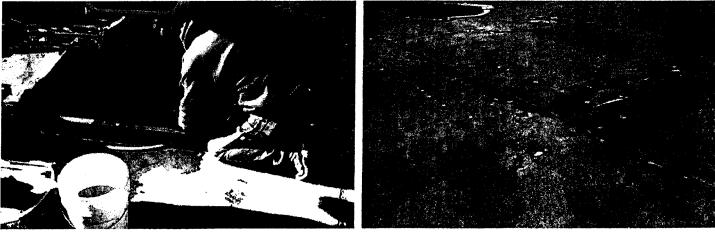
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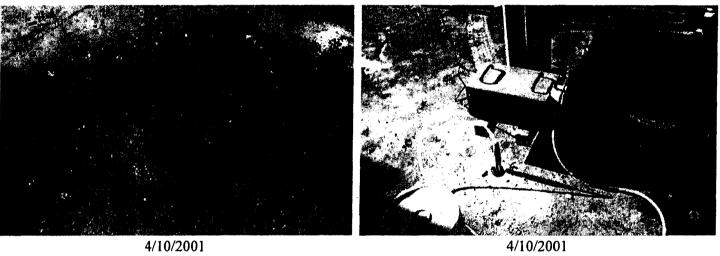
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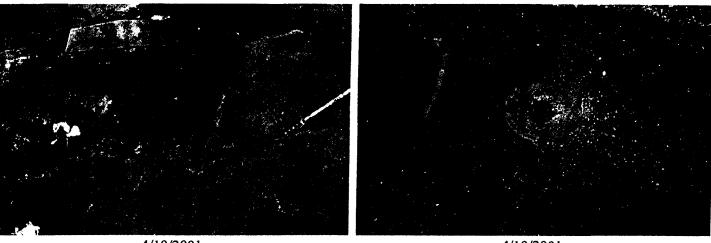
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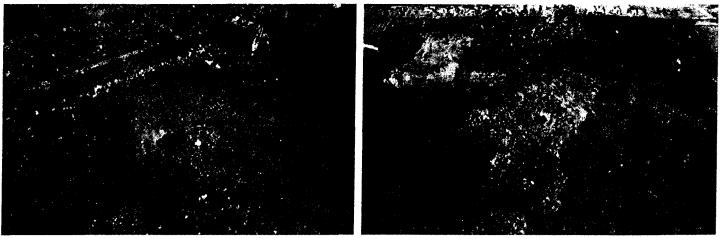


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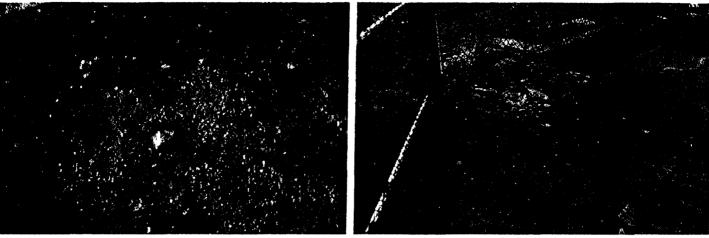
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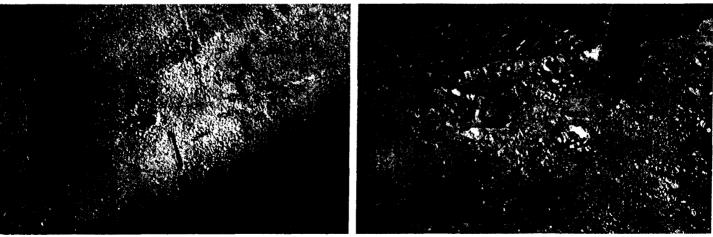
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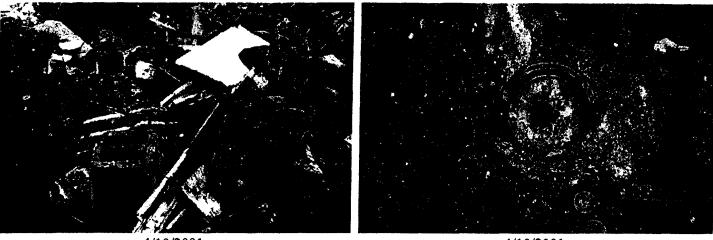


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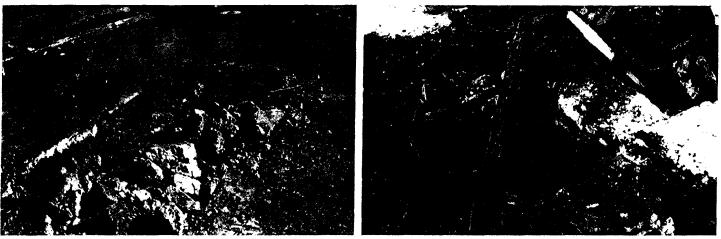
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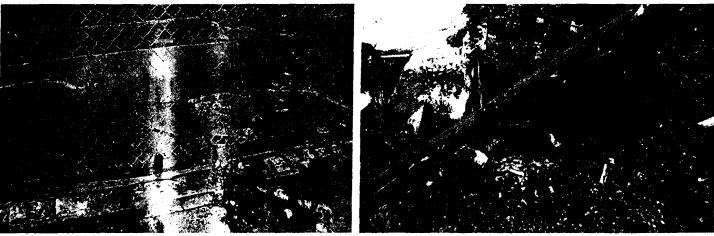
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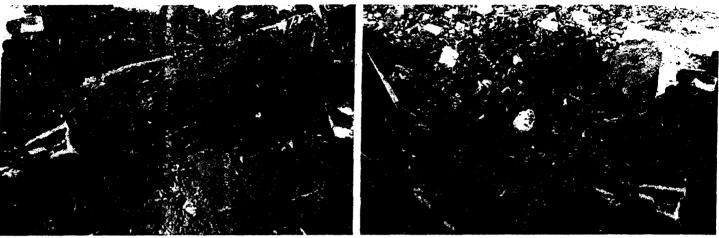


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