FORTE ITALIA LLC / MARCO HOTEL

BLOCK 414, LOT 23

41-02 /10 CRESCENT STREET

QUEENS, NEW YORK

Remedial Action Work Plan

NYC VCP Project Number: 12CVCP046Q

Prepared for:

FORTE ITALIA LLC/MARCO HOTEL

136-20 38th Avenue 12th Floor

Flushing, New York 11354

Prepared by:

ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES, LLC

100 Misty Lane, PO Box 5430, Parsippany, New Jersey 07054

JUNE 2013

CERTIFICATION

I, Richard D. Arnold, am a Professional Engineer licensed in the State of New York. I have primary direct responsibility for implementation of the remedial action for the FORTE ITALIA LLC/MARCO HOTEL (NYC VCP Project Number: **12CVCP046Q**).

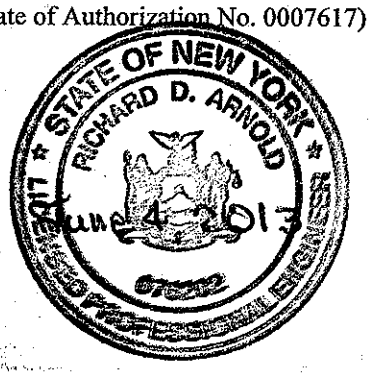
I, Daniel DiRocco, am a Qualified Environmental Professional as defined in §43-140. I have primary direct responsibility for implementation of the remedial action for the FORTE ITALIA LLC/MARCO HOTEL (NYC VCP Project Number: 12CVCP046Q).

I certify that this Remedial Action Work Plan (RAWP) has a plan for handling, transport and disposal of soil, fill, fluids and other materials removed from the property in accordance with applicable City, State and Federal laws and regulations. Importation of all soil, fill and other material from off-Site will be in accordance with all applicable City, State and Federal laws and requirements. This RAWP has provisions to control nuisances during the remediation and all invasive work, including dust and odor suppression.

Environmental Waste Management Associates, LLC Project Number 208094
By: EWMA Engineering Services LLC (NYS Certificate of Authorization No. 0007617)

P.E.

Richard D. Arnold
NYSPE License Number 076202
June 5, 2013



Note: It is a violation of Article 145 of New York State Education Law for any person, unless he is acting under the direction of a licensed professional engineer, to alter an item of this Remedial Action Work Plan in any way. If an item is altered, the altering engineer shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

Daniel DiRocco
Qualified Environmental Professional
June 5, 2013

REMEDIAL ACTION WORK PLAN
TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

LIST OF ACRONYMS

Acronym	Definition
AOC	Area of Concern
AS/SVE	Air Sparging/Soil Vapor Extraction
BOA	Brownfield Opportunity Area
CAMP	Community Air Monitoring Plan
C/D	Construction/Demolition
COC	Certificate of Completion
CQAP	Construction Quality Assurance Plan
CSOP	Contractors Site Operation Plan
DCR	Declaration of Covenants and Restrictions
ECs/ICs	Engineering and Institutional Controls
HASP	Health and Safety Plan
IRM	Interim Remedial Measure
BCA	Brownfield Cleanup Agreement
MNA	Monitored Natural Attenuation
NOC	Notice of Completion
NYC VCP	New York City Voluntary Cleanup Program
NYC DEP	New York City Department of Environmental Protection
NYC DOHMH	New York State Department of Health and Mental Hygiene
NYCRR	New York Codes Rules and Regulations
NYC OER	New York City Office of Environmental Remediation
NYS DEC	New York State Department of Environmental Conservation
NYS DEC DER	New York State Department of Environmental Conservation Division of Environmental Remediation
NYS DOH	New York State Department of Health
NYS DOT	New York State Department of Transportation
ORC	Oxygen-Release Compound
OSHA	United States Occupational Health and Safety Administration
PE	Professional Engineer
PID	Photo Ionization Detector
QEP	Qualified Environmental Professional

QHHEA	Qualitative Human Health Exposure Assessment
RAOs	Remedial Action Objectives
RAR	Remedial Action Report
RAWP	Remedial Action Work Plan or Plan
RCA	Recycled Concrete Aggregate
RD	Remedial Design
RI	Remedial Investigation
RMZ	Residual Management Zone
SCOs	Soil Cleanup Objectives
SCG	Standards, Criteria and Guidance
SMP	Site Management Plan
SPDES	State Pollutant Discharge Elimination System
SVOC	Semi-Volatile Organic Compound
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile Organic Compound

EXECUTIVE SUMMARY

Forte Italia LLC/Marco Hotel has enrolled in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate a 30,000-square foot site located at 41-02 /10 Crescent Street in Queens, New York. A remedial investigation (RI) was performed to compile and evaluate data and information necessary to develop this Remedial Action Work Plan (RAWP). The remedial action described in this document provides for the protection of public health and the environment consistent with the intended property use, complies with applicable environmental standards, criteria and guidance, and conforms to applicable laws and regulations.

The RAWP has been prepared and provides sufficient information for establishment of remedial action objectives, evaluation of remedial action alternatives, and selection of a remedy pursuant to RCNY§ 43-1407(f).

Site Location and Current Usage

Forte Italia LLC/Marco Hotel Site (VCP ID# 12CVCP046Q) is comprised of a 30,000 sq. feet parcel of land (200' x 150') and identified as Lot 23, Block 414 on the Long Island City section of Queens County, New York Tax Map. According to a review of records on file with the New York City Department of Buildings (NYCDOB), this property has been assigned an E-designation (OER Project # 09EHAZ191Q, CEQR 00DCP055Q) for potential presence of hazardous materials due to its past use as a Gasoline dispensing station and an auto-repair garage.

The subject site is currently developed as a paved parking lot and a pre-fabricated metal garage. It is bordered to the north by 41st Avenue; to the east by Crescent Street; to the south by a newly erected multiple-story building; and to the west by 24th Street. The depth to groundwater beneath the Site ranges between 17 and 22 feet below ground surface (ft bgs) and not likely influenced by subsurface structures and impediments such as building foundations, sewer lines, utility vaults. Historically, the Subject Site contained a gasoline dispensing station and an auto repair shop located on the southeast corner of the lot.

Summary of Proposed Development Plan

The planned redevelopment of the Site entails the construction of a single-use development that consists of a 17-story hotel structure atop a one-story commercial base with

two levels of subterranean parking. The building will include retail spaces on the podium levels. The current zoning designation is manufacturing (M1-5/10-3 Special DST: UC). The proposed site use is consistent with existing zoning for the property. The subterranean level will cover the entire footprint of the site. The ground level building will cover the majority of the site, the remaining space will consist of a paved access ramp to the subterranean parking, trash dumpsters, handicap parking, and landscape areas contained in planters. Since the subterranean parking will encompass the entire site footprint, the portions at the ground level outside the building footprint will be constructed directly above the subsurface structure. To allow for the construction of the proposed structure the entire footprint of the site will be excavated to an approximate depth of 17-22 feet below ground surface. Based on the site dimensions (30,000 ft^2) and planned depth of the excavation (17 feet) approximately 510,000 ft^3 or 18,900 yd^3 of soil will be excavated. Based on an estimated conversion factor of 1.5 tons/yd^3 this is a total of 28,333 tons of soil. During the recent Phase II investigation ground water was encountered at a depth of 17-22 feet below ground surface, therefore it is expected the excavation will not extend into the ground water table.

Summary of the Remedy

The proposed remedy achieves protection of public health and the environment for the intended use of the property. The proposed remedial action alternative achieves all of the remedial action objectives established for the project and addresses applicable standards, criterion, and guidance; is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants; and is cost effective, implementable and uses standards methods that are well established in the industry.

The elements of this remedial action are:

1. Preparation of a Community Protection Statement and implementation of all required NYC VCP Citizen Participation activities according to an approved Citizen Participation Plan.
2. Performance of a Community Air Monitoring Program for particulates and volatile organic carbon compounds.
3. Selection of Track 1 Unrestricted Use Soil Cleanup Objectives (SCOs).

4. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.

5. Excavation and removal of soil exceeding Track 1 SCOs. The entire footprint of the property will be excavated to approximate depth of 18 feet below grade for development purposes.

6. Screening of excavated soil/fill during intrusive work for indications of contamination (by visual means, odor, and monitoring with a photo ionization detector (PID)) of excavated soil/fill during all intrusive work.

7. Appropriate segregation of excavated media on-Site. Sampling and analysis of excavated media as required by disposal facilities.

8. Removal of underground storage tanks and closure of petroleum spills in compliance with applicable local, State and Federal laws and regulations.

9. Transportation and off-Site disposal of all soil material to permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan. Sampling and analysis of excavated media as required by disposal facilities. Appropriate segregation of excavated media onsite.

10. Collection and analysis of end-point samples to evaluate the performance of the remedy with respect to attainment of Track 1SCOs.

11. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.

12. The development architectural and engineering design to be provided by the building design team and not provided herein is to include a continuous waterproofing barrier system beneath the building slab and on the exterior of the below grade vertical foundation walls. The barrier is to consist of W.R. Grace Preprufe 160R on the exterior of the below grade foundation walls and W.R. Grace Preprufe 300R directly under the ground floor slab, or alternate waterproofing barrier system as determined by the building design team. This barrier system is to provide vapor intrusion control for the building. Preprufe 160R is a concrete adhering 16-mil high density polyethylene liner material that is commonly used in the industry for waterproofing and vapor intrusion control on the exteriors of vertical, below grade building walls. Preprufe 300R is a concrete adhering 30-mil high density polyethylene liner material that

is commonly used in the industry for waterproofing and vapor intrusion control on the underside of on-grade concrete slabs.

13. As part of development, a two level underground parking garage will be built below grade and will be ventilated in conformance with the NYC building code.

14. As part of development, construction and maintenance of an engineered composite cover over all soils materials that are left in place after the building excavation is complete. The composite cover may consist of the concrete building structure with waterproofing barrier system, or a combined minimum two-foot thickness of clean paving or walkway materials and certified clean fill. Construction and maintenance of the engineered composite cover is necessary to prevent human exposure to residual subsurface soil materials that remain in place after the building excavation is complete;

15. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.

16. Performance of all activities associated with the remedial action, including permitting requirements and pretreatment requirements, in compliance with all applicable Federal, State and City laws and regulations.

17. Submission of an RAR that describes the remedial activities certifies that the remedial requirements have been achieved, defines the Site boundaries, lists any changes from this RAWP, and if Track 1 SCOs are not achieved, describes all Engineering and Institutional Controls to be implemented at the Site.

18. If Track 1 SCOs are not achieved, submission of an approved Site Management Plan (SMP) in the RAR for long-term management of residual contamination, including plans for operation, maintenance, monitoring, inspection and certification of Engineering and Institutional Controls and reporting at a specified frequency.

19. If Track 1 SCOs are not achieved, the property will continue to be registered with an E-Designation by the NYC Buildings Department. Establishment of Engineering Controls and Institutional Controls in this RAWP and a requirement that management of these controls must be in compliance with an approved SMP. Institutional Controls will include prohibition of the following: (1) vegetable gardening and farming; (2) use of groundwater without treatment rendering it safe for the intended use; (3) disturbance of residual

contaminated material unless it is conducted in accordance with the SMP; and (4) higher level of land usage without OER-approval.

COMMUNITY PROTECTION STATEMENT

The Office of Environmental Remediation created the New York City Voluntary Cleanup Program (NYC VCP) to provide governmental oversight for the cleanup of contaminated property in NYC. This Remedial Action Work Plan ("cleanup plan") describes the findings of prior environmental studies that show the location of contamination at the site, and describes the plans to clean up the site to protect public health and the environment.

This Remedial Action Work Plan for **FORTE ITALIA LLC / MARCO HOTEL** provides a very high level of protection for neighboring communities. This cleanup plan also includes many other elements that address common community concerns, such as community air monitoring, odor, dust and noise controls, hours of operation, good housekeeping and egress cleanliness, truck management and routing, and opportunities for community participation. The purpose of this Community Protection Statement is to explain these community protection measures in non-technical language to simplify community review.

Remedial Investigation and Cleanup Plan. Under the NYC BCPVCP, a thorough cleanup study of this property (Phase II Environmental Site Assessment Remedial Investigation Report (RIR)) has been performed to identify past property usage, to sample and test soils and groundwater, and identify contaminant sources present on the property. The cleanup plan has been designed to address all contaminant sources that have been identified during the study of this property.

Identification of Sensitive Land Uses. Prior to selecting a cleanup, the neighborhood was evaluated to identify sensitive land uses nearby, such as schools, day care facilities, hospitals and residential areas. The cleanup program was then tailored to address the special conditions of this community. Land uses in the area include the following adjacent uses:

Qualitative Human Health Exposure Assessment. An important part of the cleanup study of the Site is the performance of a study to find all of the ways that people might come in contact with contaminants of the Site now or in the future. This study is called a Qualitative Human Health Exposure Assessment (QHHEA). A QHHEA was performed for this project and is included in this plan. This assessment has considered all known contamination at the Site and evaluated the potential for people to come in contact with this contamination. All potential public exposures will be addressed under this cleanup plan.

Health and Safety Plan. This cleanup plan includes a Health and Safety Plan that is designed to protect community residents and on-Site workers. The elements of this plan are in compliance with safety requirements of the United States Occupational Safety and Health and Safety Administration. This plan includes many protective elements including those discussed below.

Site Safety Coordinator. This project has a designated Site safety coordinator to implement the Health and Safety Plan. The safety coordinator maintains an emergency contact sheet and protocol for management of emergencies.

Worker Training. Workers participating in cleanup of contaminated material on this project are required to be trained in a 40-hour hazardous waste operators training course and to take annual refresher training. This pertains to workers performing specific tasks including removing contaminated material and installing cleanup systems in contaminated areas.

Community Air Monitoring Plan (CAMP). Community air monitoring will be performed during this cleanup project to ensure that the community is properly protected from contaminants, dust and odors. Air samples will be tested in accordance with a detailed plan called the Community Air Monitoring Plan or CAMP. Results will be regularly reported to the NYC Office of Environmental Remediation. This cleanup plan also has a plan to address any unforeseen problems that might occur during the cleanup.

Odor, Dust and Noise Control. This cleanup plan includes actions for odor and dust control. These actions are designed to prevent off-Site odor and dust nuisances and includes steps to be taken if nuisances are detected. Generally, dust is managed by application of physical covers and by water sprays. Odors are controlled by limiting the area of open excavations, physical covers, foams and by a series of other actions (called operational measures). The project is also required to comply with NYC noise control standards. If you observe problems in these areas, please contact Alexander Avracen of CES at 516-374-7890 or Shaminder Chawla of OER at 212-442-3007.

Quality Assurance Plan. This cleanup plan requires that evidence be provided to illustrate that all cleanup work required under the plan has been completed properly. This evidence will be summarized in the final report, called the Remedial Action Report. This report will be submitted to the NYC Office of Environmental Remediation and will be thoroughly reviewed.

Storm-Water Management. To limit the potential for soil erosion and discharge, this cleanup plan has a storm-water management plan. The main elements of the storm water management plan include physical barriers such as tarp covers and fencing, and a program for frequent inspection.

Hours of Operation. The hours for operation of cleanup will comply with the NYC Department of Buildings construction code requirements or according to specific variances issued by that agency. For this cleanup project, the hours of operation are from 7:00am to 4:00pm, Monday through Friday.

Signage. The project Fact Sheet will be prominently posted at the main entrance of the property noting that the project is participating in the NYC Brownfield Cleanup Program.

Complaint Management. The contractor performing this cleanup is required to address all complaints. If you have any complaints, you can call the facility Project Manager, Michael Musa at 917-355-3192, the NYC Office of Environmental Remediation Project Manager, Zach Schreiber at 212-788-3056, or call 311 and mention the Site is in the NYC Brownfield Cleanup Program.

Utility Mark-outs. To promote safety during excavation in this cleanup, the contractor is required to first identify all utilities and must perform all excavation and construction work in compliance with NYC Department of Buildings regulations.

Soil and Liquid Disposal. All soil and liquid material removed from the Site as part of the cleanup will be transported and disposed of in accordance with all City, State and Federal regulations and required permits will be obtained.

Soil Chemical Testing and Screening. All excavations will be supervised by a trained and properly qualified environmental professional. In addition to extensive sampling and chemical testing of soils on the Site, excavated soil will be screened continuously using hand-held instruments, by sight, and by smell to ensure proper material handling and management, and community protection.

Stockpile Management. Soil stockpiles will be kept covered with tarps to prevent dust, odors and erosion. Stockpiles will be frequently inspected. Damaged tarp covers will be promptly replaced. Stockpiles will be protected with silt fences. Hay bales will be used, as needed to protect storm water catch basins and other discharge points.

Trucks and Covers. Loaded trucks leaving the Site will be securely covered to prevent dust and odor, and properly recorded in logs and records and placarded in compliance with City, State and Federal laws, including those of the New York State Department of Transportation. If loads contain wet material that can leak, truck liners will be used. All transport of materials will be performed by licensed truckers and in compliance with all laws and regulations.

Imported Material. Though not expected, if fill material is to be brought onto the Site it will comply with rules outlined in this cleanup plan and will be inspected and approved by a qualified worker located on-Site. Waste materials will not be brought onto the Site. Trucks entering the Site with imported clean materials will be covered in compliance with applicable laws and regulations.

Equipment Decontamination. All equipment used for cleanup work will be washed before it leaves the Site. Trucks will be cleaned at a washing station on the property before leaving the Site.

Housekeeping. Locations where trucks enter or leave the Site will be inspected every day and cleaned regularly to ensure that they are free of dirt and other materials from the Site.

Truck Routing. Truck routes have been selected to: (a) limit transport through residential areas and past sensitive nearby properties; (b) maximize use of city-mapped truck routes; (c) limit total distance to major highways; (d) promote safety in entry to highways; (e) promote overall safety in trucking; and (f) minimize off-Site line-ups (queuing) of trucks entering the property. Loaded trucks leaving the Site will not stop or idle in the local neighborhood.

Final Report. The results of all cleanup work will be fully documented in a final report (called a Remedial Action Report) that will be available for you to review in the public document repositories located at the Flushing Public Library.

Long-Term Site Management. To provide long-term protection after the cleanup is complete, the property will be subjected to the highest quality cleanup available. It is a permanent cleanup called a “Track 1” cleanup.

REMEDIAL ACTION WORK PLAN

1.0 INTRODUCTION

Forte Italia LLC /Marco Hotel has enrolled as a Volunteer in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate a 0.9 acre site located at 39-16 Prince Street in Queens, New York City. Mixed residential and commercial use, is proposed for the property. This Remedial Action Work Plan (RAWP) summarizes the nature and extent of contamination as determined from data gathered during the RIR, performed in May 2010. The RAWP provides a remedial alternative analysis that includes consideration of a Track 1 (permanent) cleanup, and a description of the proposed remedial action. The remedial action described in this document provides for the protection of public health and the environment, complies with applicable environmental standards, criteria and guidance and conforms with applicable City, State and Federal laws and regulations.

1.1 SITE LOCATION AND DESCRIPTION

Forte Italia LLC/Marco Hotel Site (**VCP ID# 12CVCP046Q**) is comprised of a 30,000 sq. feet parcel of land (200' x 150'). The Site is located in the Long Island City section of Queens County, New York, and is identified as Lot 23, Block 414 on the New York City Tax Map. According to a review of records on file with the New York City Department of Buildings (NYCDOB), this property has been assigned an E-designation (OER Project # 09EHAZ191Q, CEQR 00DCP055Q) for potential presence of hazardous materials due to its past use as a Gasoline dispensing station and an auto-repair garage.

Figures A & B attached to this RAWP presents the Site Location and Site Aerial Photograph respectively. Figure C presents the Site Survey.

The subject site is currently developed as a paved parking lot and a pre-fabricated metal garage. It is bordered to the north by 41st Avenue; to the east by Crescent Street; to the south by a newly erected multiple-story building; and to the west by 24th Street. The depth to groundwater beneath the Site ranges between 17 and 22 bgs and not likely influenced by subsurface structures and impediments such as building foundations, sewer lines, utility vaults.

Historically, the Subject Site contained a gasoline dispensing station and an auto repair shop located on the southeast corner of the lot.

1.2 PROPOSED REDEVELOPMENT PLAN

The planned redevelopment of the Site entails the construction of a single-use development that consists of a 17-story hotel structure atop a one-story commercial base with two levels of subterranean parking. The building will include retail spaces on the podium levels. The current zoning designation is manufacturing (M1-5/10-3 Special DST: UC). The proposed site use is consistent with existing zoning for the property. The subterranean level will cover the entire footprint of the site. The ground level building will cover the majority of the site, the remaining space will consist of a paved access ramp to the subterranean parking, trash dumpsters, handicap parking, and landscape areas contained in planters. Since the subterranean parking will encompass the entire site footprint, the portions at the ground level outside the building footprint will be constructed directly above the subsurface structure. To allow for the construction of the proposed structure the entire footprint of the site will be excavated to an approximate depth of 17-22 feet below ground surface. Based on the site dimensions (30,000 ft^2) and planned depth of the excavation (17 feet) approximately 510,000 ft^3 or 18,900 yd^3 of soil will be excavated. Based on an estimate weight of 1.5 tons/yd^3 this is a total of 28,333 tons of soil. During the recent Phase II investigation ground water was encountered at a depth of 17-22 feet below ground surface, therefore it is expected the excavation will not extend into the ground water table.

The Enrollee is a Volunteer under the Voluntary Cleanup Program.

The remedial action contemplated under this RAWP may be implemented independently of the proposed redevelopment plan.

1.3 DESCRIPTION OF SURROUNDING PROPERTIES

The Site is located in a mixed commercial/residential area. Land uses in the area include the following adjacent uses:

- Crescent Street followed by multi-story commercial office building currently under construction to the east;

- A two-story office building (occupied by a Teamsters Union Hall) and a parking lot to the south;
- 24th Street followed by a vacant lot with a building under construction and a one-story commercial retail building to the west; and
- 41st Avenue followed by an Exxon gas station and a commercial retail building with residential apartments above to the north.

Based on the Property inspection, Recognized Environmental Conditions were not visually observed on the adjoining properties.

The surrounding area is served by public water supply and municipal sanitary sewers.

Sensitive Receptors

No nearby sensitive environmental receptors have been identified within the immediate vicinity of the subject site.

1.4 PRIOR ACTIVITY

Based on an evaluation of the data and information from the CES Phase II Environmental Site Assessment and Limited Soil Vapor Testing Report, the presence of inactive hazardous waste as defined in ECL §27-1303 is not suspected.

- Phase II Environmental Assessment dated March 2012 prepared by Cosmos Environmental Services, Inc.
- Limited Soil Vapor Testing & Analysis dated February 22, 2011 prepared by Cosmos Environmental Services, Inc.

1.5 FINDINGS OF REMEDIAL INVESTIGATION

The findings of the environmental investigations are summarized below.

A review of the results of the Phase I ESA, GPR survey, soil, soil vapor, and groundwater investigations (see Tables 1 through 5 and VC Tables 1 and 2) indicated the following:

1. The Site is underlain by historical urban fill of undocumented origin;

2. Elevation of the property ranges from 26.5 to 36.2 feet (relative to site datum from USGS Manhattan Quadrangle Map).

3. Depth to groundwater ranges from 17 to 22 feet bgs.

4. Groundwater flow is generally from east-southeast to west-southwest beneath the Site.

5. Depth to bedrock is greater than 100 feet at the Site.

6. The stratigraphy, from land surface to approximately 35 feet below land surface, consists of 4 to 6 feet of historic fill underlain by a layer of brown to orange-brown, fine to coarse sand with little gravel extending to the water table.

7. A geophysical survey conducted at the site indicated anomalies at several locations of the site, though the anomalies do not appear to reflect the presence of a tank farm at the site;

8. Soil/fill samples collected during the RI detected low concentrations of Volatile Organic Compounds (VOCs) with no exceedance of the Unrestricted Use SCOs (Track 1 SCOs). PCE, TCE and other chlorinated hydrocarbons were not detected. Several BTEX and associated compounds were detected but at low concentrations and well below Track 1 SCOs. One pesticide (4,4-DDT at 13.9 μg/kg) exceeded UUSCOs in one shallow, 0-2 ft bgs soil sample. No PCBs were detected in any sample. Several SVOCs (specifically PAHs) were identified in shallow soil (0-2 ft bgs). Five SVOCs were detected in shallow soils at concentrations above Restricted Residential SCOs and included benzo(a)anthracene (maximum of 6,100 ppb), benzo(a)pyrene (max. of 6,000 ppb), benzo(a)fluoranthene (max. of 11,000 ppb), benzo(k)fluoranthene (max. of 3,800 ppb), and chrysene (max. of 6,600 ppb). Three of these SVOCs, all PAH compounds, were also found above Track 2 Restricted Commercial SCOs. The types of PAHs found in shallow soils and the concentrations at which they were identified are commonly found in urban areas with historical fill and do not appear to be indicative of an onsite source. Metals including cadmium (maximum of 13.6 ppm), chromium (maximum of 165 ppm), lead (maximum of 217 ppm), mercury (maximum of 1.48 ppm), nickel (maximum of 102 ppm) and zinc (maximum of 278 ppm) were detected in soil at concentrations above Track 1 SCOs. None of these metals exceeded Track 2 Restricted Commercial SCOs. Overall, the Site is contaminated chemical compounds related to regional historical fill

material and the RI did not reveal any substantial contaminant source areas on this property.

9. Groundwater sampling performed during the remedial investigation showed VOCs were not detected in groundwater samples. No PCE, TCE or other chlorinated hydrocarbons were detected. SVOCs, pesticides and PCBs were not detected in groundwater samples. Dissolved concentrations of aluminum, iron, manganese, and sodium were detected above 6NYCRR Part 703.5 Class GA groundwater quality standards (GQS). These findings are associated with regional groundwater quality and are not attributed to site contaminant sources..

10. Soil vapor samples collected during the RI showed BTEX and a variety of associated petroleum VOCs, below 50 ug/m^3 in all cases except toluene which had a maximum concentration of 86 ug/m^3 in one sample. PCE was detected in one of five samples with a concentration of 128.9 ug/m^3. TCE and other chlorinated hydrocarbons were not detected in soil vapor. PCE was not detected in onsite soil or groundwater samples.

Consult the reports listed in Section 1.4 for analytical data gathered during Cosmos Remedial Investigation. Disposal requirements for soil impacted with historic fill will be determined based upon pre-excavation waste characterization data to be collected.

The **AOCs** identified during the Historical Maps Review for this site include:

1. Area formerly occupied by an auto body repair shop and Gasoline/Diesel Fuel Dispensing Station;
2. Current parking lot with four dry wells;
3. Urban Fill deposited beneath the Macadam-paved parking lot.

2.0 DESCRIPTION OF REMEDIAL ACTION OBJECTIVES

2.1 REMEDIAL ACTION OBJECTIVES

Based on the results of the Phase II Environmental Site Assessment, the following Remedial Action Objectives (RAOs) have been identified for this Site:

2.1.1 Groundwater

- Remove contaminant sources causing impact to groundwater, if detected during the 5 drywells excavation.
- Prevent direct exposure of groundwater to potential sources of contamination, such as contaminated upper layer of urban fill, drywell's sludge and water, if found.

2.1.2 Soil

- Prevent direct human contact with contaminated soil.
- Prevent migration of contaminants that would result in groundwater or surface water contamination.

2.1.3 Soil Vapor

- Prevent human exposure to contaminants in soil vapor.
- Prevent migration of soil vapor into dwellings and other occupied structures.

3.0 REMEDIAL ALTERNATIVES ANALYSIS

The goal of the remedy selection process under is to select a remedy that is protective of human health and the environment taking into consideration the current, intended and reasonably anticipated future use of the property. The remedy selection process begins by establishing RAOs for media in which chemical constituents were found in exceedance of applicable standards, criteria and guidance values (SCGs). A remedy is then developed based on the following ten criteria:

- Protection of human health and the environment;
- Compliance with SCGs;
- Short-term effectiveness and impacts;
- Long-term effectiveness and permanence;
- Reduction of toxicity, mobility, or volume of contaminated material;
- Implementability;
- Cost effectiveness;
- Community Acceptance;
- Land use; and
- Sustainability.

The following is a detailed description of the alternatives analysis and remedy selection to address impacted media at the Site. As required, a minimum of two remedial alternatives (including a Track 1 scenario) are evaluated, as follows:

Alternative 1 is a Track 1 alternative that involves removal of all soil impacted above Unrestricted Use (Track 1) SCOs. Alternative 2 removes all impacted soil above Restricted Residential (Track 2) SCOs.

Alternative 1 involves:

- Establishment of Unrestricted Use Site Specific Cleanup Objectives (SCOs).
- Removal of all soils exceeding Unrestricted Use SCOs throughout the Site and confirmation that Track 1 Unrestricted Use SCOs have been achieved with post-excavation endpoint sampling. Based on the results of the remedial investigation, it is

expected that this alternative would require excavation to a depth of approximately 8 feet across the entire site to remove all historic fill. The planned excavation depth for proposed building is 18-22 feet below street grade. If soil/ fill containing analytes at concentrations above Track 1 Unrestricted Use SCOs is still present at the base of the excavation after removal of all soil required for construction of the new building is complete, additional excavation will be performed to ensure complete removal of soil that does not meet Track 1 Unrestricted Use SCOs.

- Footings and foundations would be constructed after the removal of the contaminated fill. This alternative involves the excavation and removal of approximately 20,000 tons of soil.
- No engineering or institutional controls can be utilized in a Track 1 cleanup, but placement of a vapor barrier beneath the building foundation and behind foundation sidewalls of the new building, would be installed as part of development to prevent future exposures from off-Site soil vapor.
- Site controls would be implemented to prevent exposure of site workers, the surrounding community, and nearby surface water; those controls would include a Construction Health and Safety Plan (CHASP), Community Air Monitoring Plan (CAMP), and an Erosion and Sediment Control Plan (E&SC).

Alternative 2 (Track 4 Remediation) includes:

- Establishment of Track 4 Site Specific SCOs.
- Excavation and removal of all soil/fill exceeding Track 4 SCOs and confirmation that Track 4 has been achieved with post-excavation endpoint sampling. Excavation for development purposes would take place to a depth of more than 18 feet of soil across the building footprint for new development. If soil/ fill containing SVOCs at concentrations above Track 4 Site-Specific SCOs is still present at the base of the excavation after removal of all soil required for construction of the new building is complete, additional excavation will be performed to ensure complete removal of soil that does not meet Track 4 Site-Specific SCOs.
- Placement of vapor barrier beneath foundation slab and sidewalls to prevent soil vapor entering new building;

- Placement of a final cover layer consisting of the building slab over the entire Site to eliminate exposure to remaining soil/fill; Placement of ORC at the base of the open excavation to provide management of any site-derived residual VOCs in groundwater;
- Establishment of use restrictions including prohibitions on the use of groundwater from the site and prohibitions on sensitive site uses, such as farming or vegetable gardening, to eliminate future exposure pathways.
- Establishment a Site Management Plan to ensure long-term management of these Institutional Controls including the performance of periodic inspections and certification that the controls are performing as they were intended; and
- The property will continue to be registered with an E-Designation by the NYC Buildings Department. This RAWP includes a description of all ECs and ICs and summarizes the requirements of the Site Management Plan which will note that the property owner and property owner's successors and assigns must comply with the approved SMP

3.1 THRESHOLD CRITERIA

Protection of Public Health and the Environment

This criterion is an evaluation of the remedy's ability to protect public health and the environment, and an assessment of how risks posed through each existing or potential pathway of exposure are eliminated, reduced or controlled through removal, treatment, and implementation of Engineering Controls or Institutional Controls. Protection of public health and the environment must be achieved for all approved remedial actions.

Alternative 1 would be protective of human health and the environment by removing the historic fill and contaminated soils at the Site, thus eliminating potential for direct contact with contaminated soil/ fill once construction is complete and eliminating the risk of contamination leaching into groundwater. Potential exposure to contaminated soils during construction would be minimized by implementing an approved Soil and Materials Management Plan and Community Air Monitoring Plan (CAMP). There is potential for contact with contaminated groundwater and appropriate protections would be required to protect on-site workers. Groundwater is not used for potable water supply. Potential migration of soil vapors into the new building would be prevented by installing a vapor barrier as part of new construction. The building slab is below the water table and prevents the potential for accumulation of soil vapors.

Alternative 2 would achieve comparable protections of human health and the environment since soil to a depth of 18+ feet will be removed for purposes of construction and by ensuring that remaining soil/ fill on-Site meets Track 4 Site-Specific SCOs as well as by placement of institutional and engineering controls, including a composite cover system. The composite cover system would prevent direct contact with any remaining on-Site soil/fill. Implementing institutional controls including a site management plan would ensure that the composite cover system remains intact and protective. Establishment of Track 4 Site-Specific SCOs would minimize the risk of contamination leaching into groundwater. Potential exposure to contaminated soils during construction would be minimized by implementing an approved Soil and Materials Management Plan and Community Air Monitoring Plan (CAMP). Potential contact with contaminated groundwater would be eliminated as it would be prohibited by city laws and regulations. Potential migration of soil vapors into the new building would be prevented by installing a vapor barrier as well as by construction of a ventilated parking garage which will be ventilated per Building Department's codes. In addition, the building slab is at or near the water table and prevents the potential for accumulation of soil vapors.

3.2. BALANCING CRITERIA

Compliance with Standards, Criteria and Guidance (SCGs)

Alternative #1 would achieve compliance with the remedial goals, SCG and RAOs for soil through the removal of soil/fill in excess of the NYSDEC Part 375 Unrestricted Use SCOs and groundwater protection standards. All soil/fill excavated from the Site would be managed and disposed of in accordance with all applicable regulations. Focused attention on means and methods employed during the remedial action would ensure that handling and management of contaminated material would be in compliance with applicable SCGs. Compliance with SCGs for soil vapor will also be achieved by installation of vapor barrier system, a concrete building slab and a ventilated parking garage over the entire footprint of the Site as part of construction.

Alternative #2 would achieve compliance with the remedial goals, the chemical-specific SCGs and RAOs for soil through removal of soil to meet Track 4 Site Specific SCOs. Similar to the Track 1 alternative, focused attention on means and methods employed during the remedial action would ensure that handling and management of contaminated material would be in compliance with applicable SCGs. Compliance with SCGs for soil vapor will also be achieved

by installation of vapor barrier system, a concrete building slab and a ventilated garage over the entirety of the Site.

Short-term effectiveness and impacts

This evaluation criterion assesses the effects of the alternative during the construction and implementation phase until remedial action objectives are met. Under this criterion, alternatives are evaluated with respect to their effects on public health and the environment during implementation of the remedial action, including protection of the community, environmental impacts, time until remedial response objectives are achieved, and protection of workers during remedial actions.

The Track 1 alternative would provide short-term effectiveness with the removal of all soil/fill above Track 1 SCOs. All potential exposure pathways for site-derived contaminants would be incomplete following construction. Implementation of this RAWP, which includes a CAMP and HASP would prevent unacceptable exposure during remediation and construction activities. The duration of short-term exposures to site contaminants would be extended during Alternative #1 due to the need for excavation, shoring, and other intrusive activities.

Both remedial alternatives would provide similar short-term effectiveness during their respective implementations, as each requires excavation of historic fill material. If historic fill is identified at depths exceeding 18 feet (not expected), short term impacts could be higher for Alternative 1 due to excavation of greater amounts of historical fill material. All potential exposure pathways for site-derived contaminants would be eliminated following construction and development of the Site.

Both Alternatives would both employ appropriate measures including a Community Air Monitoring Plan (CAMP) and a Soil/Materials Management Plan (SMMP), during all on-site soil disturbance activities and would effectively mitigate the release of significant contaminants into the environment by properly handling and disposing of soil encountered during the development. Construction workers operating under appropriate management procedures and a Construction Health and Safety Plan (CHASP) will be protected from on-site contaminants through the use of the appropriate personal protective equipment (consistent with the documented risks within the respective work zones).

Long-term effectiveness and permanence

This evaluation criterion addresses the results of a remedial action in terms of its permanence and quantity/nature of waste or residual contamination remaining at the Site after response objectives have been met, such as permanence of the remedial alternative, magnitude of remaining contamination, adequacy of controls including the adequacy and suitability of ECs/ICs that may be used to manage contaminant residuals that remain at the Site and assessment of containment systems and ICs that are designed to eliminate exposures to contaminants, and long-term reliability of Engineering Controls.

Alternative 1 would achieve the highest level of long-term effectiveness and permanence by permanent removal of all impacted soil/fill above Track 1 SCOs. Removal of on-site contaminant sources will prevent future groundwater contamination. Sub-grade parking will be constructed with mechanical ventilation that complies with NYC Building Code requirements that will address any potential for buildup of vapors in occupied areas of the building. Construction of the building slab at or near water table would also prevent accumulation of vapors beneath the slab.

Alternative 2 would also be effective over the long-term by attaining Track 4 SCOs through the placement of a concrete slab under the building, establishing use restrictions, establishing a Site Management Plan to ensure long-term management of Institutional and Engineering Controls, and placing a deed restriction to memorialize these controls for the long term. Groundwater use restrictions would eliminate potential exposure to groundwater and establishment of an SMP and continued E-designation of the property would ensure that this protection remains effective for the long-term. The SMP will ensure long-term effectiveness of all Engineering and Institutional Controls by requiring periodic inspection and certification that these controls and use restrictions continue to be in place and functioning as they were intended assuring that protections designed into the remedy will provide continued high level of protection in perpetuity. Migration of soil vapor from offsite into occupied structures and associated inhalation exposures would be prevented by installation of vapor/waterproofing barrier system beneath the building slab and along foundation sidewalls, as well as construction of a ventilated garage.

Reduction of toxicity, mobility, or volume of contaminated material

This evaluation criterion assesses the remedial alternative's use of remedial technologies that permanently and significantly reduce toxicity, mobility, or volume of contaminants as their principal element. The following is the hierarchy of source removal and control measures that are to be used to remediate a Site, ranked from most preferable to least preferable: removal and/or treatment, containment, elimination of exposure and treatment of source at the point of exposure. It is preferred to use treatment or removal to eliminate contaminants at a Site, reduce the total mass of toxic contaminants, cause irreversible reduction in contaminants mobility, or reduce of total volume of contaminated media.

Alternative 1 would permanently eliminate the toxicity, mobility, and volume of contaminants from on-site soil by removing all soil in excess of unrestricted use SCOs. The remedy will also achieve Groundwater Protection Standards and will eliminate future groundwater contamination.

Alternative #2 would permanently reduce the toxicity, mobility, and volume of contaminants from on-site soil by excavation to approximately 18-22 feet below sidewalk grade and removal of soil/fill and any remaining soil/fill beneath the new building would meet Track 4 Site-Specific SCOs. Since all soil to a minimum depth of 18 feet will be removed under either alternative, Alternative 1 would eliminate only a marginally greater total mass of contaminants on Site.

Implementability

This evaluation criterion addresses the technical and administrative feasibility of implementing an alternative and the availability of various services and materials required during its implementation, including technical feasibility of construction and operation, reliability of the selected technology, ease of undertaking remedial action, monitoring considerations, administrative feasibility (e.g. obtaining permits for remedial activities), and availability of services and materials.

The proposed remedial action is both feasible and implementable and uses reliable methods and standard construction technologies. Standard construction equipment utilized for the overall earthwork would be used. The techniques, materials and equipment to implement Alternative #1 and Alternative #2 are readily available and have been proven effective in remediating and/or mitigating the contaminants associated with the Site. OSHA trained

personnel will complete all activities that include excavation and handling of petroleum-contaminated or other soils with contamination beyond that associated with typical historical fill material. No special permits other than earthwork and dewatering permits are expected to be required for completion of the site redevelopment and implementation of the remedy. The reliability of each remedy is also high. There are no special difficulties associated with any of the activities proposed.

Cost effectiveness

This evaluation criterion addresses the cost of alternatives, including capital costs (such as construction costs, equipment costs, and disposal costs, engineering expenses) and site management costs (costs incurred after remedial construction is complete) necessary to ensure the continued effectiveness of a remedial action. The remedial plan creates an approach that combines the remedial action with the redevelopment of the Site, including the construction of the building foundation and subgrade structures. The remedial plan is also cost effective in that it will take into consideration the selection of the closest and most appropriate disposal facilities to reduce transportation and disposal costs during the excavation of historic fill and other soils during the redevelopment of the Site.

The capital costs associated with Alternative #1 is marginally higher than Alternative #2 due to the removal of a slightly higher total volume of soil/fill that would be excavated and transported from the Site and disposed of at an off-Site location. Long-term costs are anticipated to be higher for Alternative #2 based on the need to implement a Site Management Plan as part of remediation. In both cases, appropriate public health and environmental protections are achieved.

Both alternatives satisfy the threshold balancing criterion and other criterion listed here, and are fully protective of public health and the environment, will control migration of contaminants, will comply with SCGs, are effective for the short-term and long-term, are implementable, and reduce both mobility and toxicity of contaminants.

Community Acceptance

This evaluation criterion addresses community opinion and support for the remedial action. Observations here will be supplemented by public comment received on the RAWP.

Based on the overall goals of the remedial program and initial permitting associated with the proposed site development, no adverse community opinion is anticipated for either alternative. This RAWP will be subject to and undergo public review under the NYC VCP and will provide the opportunity for detailed public input on the remedial alternatives and the selected remedial action. Any public comment related to environmental remediation will be considered by OER prior to approval and execution of this remedial plan. The Citizen Participation Plan for the project is provided in Attachment B.

Land use

This evaluation criterion addresses the proposed use of the property. This evaluation has considered reasonably anticipated future uses of the Site and takes into account: current use and historical and/or recent development patterns; applicable zoning laws and maps; NYS Department of State's Brownfield Opportunity Areas (BOA) pursuant to section 970-r of the general municipal law; applicable land use plans; proximity to real property currently used for residential use, and to commercial, industrial, agricultural, and/or recreational areas; environmental justice impacts, Federal or State land use designations; population growth patterns and projections; accessibility to existing infrastructure; proximity of the site to important cultural resources and natural resources, potential vulnerability of groundwater to contamination that might emanate from the site, proximity to flood plains, geography and geology; and current Institutional Controls applicable to the site.

Both Alternatives are consistent with the proposed use and to land uses in the vicinity of the Site. The proposed redevelopment of the Site is compatible with the existing zoning designation for the property and is consistent with recent development patterns. The Site is surrounded by commercial and mixed-use commercial/residential properties and the proposed cleanup provides comprehensive protection of public health and the environment for these uses. Improvements in the current condition of the property achieved by both cleanup alternatives are also consistent with the City's goals for cleanup of contaminated land, bringing such properties to productive reuse, and making such properties protective of natural and cultural resources.

Sustainability of the Remedial Action

This criterion evaluates the overall sustainability of the remedial action alternatives and the degree to which sustainable means are employed to implement the remedial action including those that take into consideration NYC's sustainability goals defined in *PlaNYC: A Greener,*

Greater New York. Sustainability goals may include: maximizing the recycling and reuse of non-virgin materials; reducing the consumption of virgin and non-renewable resources; minimizing energy consumption and greenhouse gas emissions; improving energy efficiency; and promotion of the use of native vegetation and enhancing biodiversity during landscaping associated with Site development.

The remedial plan would take into consideration the shortest trucking routes during off-site disposal of historic fill and other soils, which would reduce greenhouse gas emissions and conserve energy used to fuel trucks. New York City Clean Soil Bank program will be utilized for reuse of native soils. To the extent practicable, energy efficient building materials, appliances, and equipment will be utilized to complete the development. While Alternative 2 would result in lower energy use based on reducing the volume of material transported off-site, both remedial alternatives are comparable with respect to the opportunity to achieve sustainable remedial action. Both alternatives achieve cleanup of impacts on the site and are equally capable of utilizing green remedial methods. A complete list of green remedial activities considered as part of the NYC VCP is included in the Sustainability Statement, included as Appendix 2.

4.0 REMEDIAL ACTION

4.1 SUMMARY OF PREFERRED REMEDIAL ACTION

The preferred remedial alternative is the Track 1 Alternative. The preferred remedy achieves protection of public health and the environment for the intended use of the property. The preferred remedial action alternative will achieve all of the remedial action objectives established for the project and addresses applicable SCGs. The preferred remedial action alternative is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants. The preferred remedial action alternative is cost effective and implementable and uses standards methods that are well established in the industry.

The elements of this remedial action are:

1. Preparation of a Community Protection Statement and implementation of all required NYC VCP Citizen Participation activities according to an approved Citizen Participation Plan.
2. Performance of a Community Air Monitoring Program for particulates and volatile organic carbon compounds.
3. Selection of Track 1 Unrestricted Use Soil Cleanup Objectives (SCOs).
4. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.
5. Excavation and removal of soil/fill exceeding Track 1 SCOs. The entire footprint of the property will be excavated to approximate depth of 18 feet below grade for development purposes.
6. Screening of excavated soil/fill during intrusive work for indications of contamination (by visual means, odor, and monitoring with a photo ionization detector (PID)) of excavated soil/fill during all intrusive work.
7. Appropriate segregation of excavated media on-Site. Sampling and analysis of excavated media as required by disposal facilities.

8. Removal of underground storage tanks and closure of petroleum spills in compliance with applicable local, State and Federal laws and regulations.

9. Transportation and off-Site disposal of all soil material to permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan. Sampling and analysis of excavated media as required by disposal facilities. Appropriate segregation of excavated media onsite.

10. Collection and analysis of end-point samples to evaluate the performance of the remedy with respect to attainment of Track 1SCOs.

11. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.

12. The development architectural and engineering design to be provided by the building design team and not provided herein is to include a continuous waterproofing barrier system beneath the building slab and on the exterior of the below grade vertical foundation walls. The barrier is to consist of W.R. Grace Preprufe 160R on the exterior of the below grade foundation walls and W.R. Grace Preprufe 300R directly under the ground floor slab, or alternate waterproofing barrier system as determined by the building design team. This barrier system is to provide vapor intrusion control for the building. Preprufe 160R is a concrete adhering 16-mil high density polyethylene liner material that is commonly used in the industry for waterproofing and vapor intrusion control on the exteriors of vertical, below grade building walls. Preprufe 300R is a concrete adhering 30-mil high density polyethylene liner material that is commonly used in the industry for waterproofing and vapor intrusion control on the underside of on-grade concrete slabs.

13. As part of development, a two level underground parking garage will be built below grade and will be ventilated in conformance with the NYC building code.

14. As part of development, construction and maintenance of an engineered composite cover over all soils materials that are left in place after the building excavation is complete. The composite cover may consist of the concrete building structure with waterproofing barrier system, or a combined minimum two-foot thickness of clean paving or walkway materials and certified clean fill. Construction and maintenance of the engineered composite cover is necessary to prevent human exposure to residual subsurface soil materials that remain in place after the building excavation is complete;

15. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.

16. Performance of all activities associated with the remedial action, including permitting requirements and pretreatment requirements, in compliance with all applicable Federal, State and City laws and regulations.

17. Submission of an RAR that describes the remedial activities, certifies that the remedial requirements have been achieved, defines the Site boundaries, lists any changes from this RAWP, and if Track 1 SCOs are not achieved, describes all Engineering and Institutional Controls to be implemented at the Site.

18. If Track 1 SCOs are not achieved, submission of an approved Site Management Plan (SMP) in the RAR for long-term management of residual contamination, including plans for operation, maintenance, monitoring, inspection and certification of Engineering and Institutional Controls and reporting at a specified frequency.

19. If Track 1 SCOs are not achieved, the property will continue to be registered with an E-Designation by the NYC Buildings Department. Establishment of Engineering Controls and Institutional Controls in this RAWP and a requirement that management of these controls must be in compliance with an approved SMP. Institutional Controls will include prohibition of the following: (1) vegetable gardening and farming; (2) use of groundwater without treatment rendering it safe for the intended use; (3) disturbance of residual contaminated material unless it is conducted in accordance with the SMP; and (4) higher level of land usage without OER-approval.

Remedial activities will be performed at the Site in accordance with this OER-approved RAWP. All deviations from the RAWP will be promptly reported to OER. Changes will be documented in the RAR.

4.2 SOIL CLEANUP OBJECTIVES AND MATERIALS REMOVAL

Track 1 cleanup standards are proposed for this project. The SCOs for this Site are the NYSDEC Part 375-6.8(a) SCOs for Unrestricted Use. The NYSDEC Part 375-6.8(a) SCOs for Unrestricted Use are values which, when achieved at a site, will require no use restrictions regarding the protection of public health, groundwater, and ecological resources. Any reference to ‘Groundwater Protection Standards’ in this RAWP refers to NYSDEC Part 375-6.8(a) SCOs.

As a contingency, if Track 1 SCOs cannot be achieved, the following Track 4 Site-Specific SCOs are proposed for the Site:

Contaminant	**Track 4 Site-Specific SCO**
Total SVOCs	250 ppm
Lead	600 ppm
Mercury	2.0 ppm
Zinc	300 ppm

Soil and materials management on-site and off-site will be conducted in accordance with the soil management plan as described below. All primary contaminant sources (such as hotspots) identified during the remedial action will be documented and identified on the site plan. This information will be provided on maps in the Remedial Action Report.

4.3 ESTIMATED MATERIAL REMOVAL AND IMPORT QUANTITIES

The total quantity of soil and fill expected to be disposed off-Site is approximately 19,000 cubic yards. Based on the results of Phase II Environmental Site Assessment, estimated 8,900 cubic yards will be analyzed in accordance with disposal criteria and, if analytical data permits, will be disposed as non-hazardous urban fill material and will be disposed at a solid waste landfill.

No soil is anticipated to be imported into the Site since the entire excavated area will be developed into a multi-story building.

4.4 POST EXCAVATION END-POINT SAMPLING

Track 1 confirmation samples will be collected in completed excavation areas above the groundwater table to establish that Track 1 SCOs have been achieved. The excavation activities during Site development are anticipated to extend into and beneath the groundwater table across the entire Site.

Urban fill and drywells, as well as concrete floor beneath the pre-fabricated metal-frame garage are to be removed under this remedial action and will be performed in conjunction with remedial performance end-point sampling. Sampling and testing will be performed promptly following materials removal and completed prior to Site development activities.

Remedial actions under this plan will also be performed in conjunction with remedial performance end-point sampling. End-point sampling and testing will be performed promptly following materials removal and completed prior to Site development activities. To evaluate attainment of Track 4 SCOs, samples will be collected and analyzed for SVOCs (PAH only) and TAL Metals (Lead and Mercury only).

For areas where Track 1 SCOs are pursued, endpoint samples will be analyzed for the full Target Compound List (TCL) of VOCs, SVOCs, PCBs, Pesticides, and Target Analyte List (TAL) Metals.

If hotspots are identified during the remedial action or construction, hotspot removal actions under this plan will be performed in conjunction with remedial end-point sampling. The end-point sampling protocol is discussed below:

1. End-point sampling frequency for hotspots will consist of the following:
    a. For excavations less than 20 feet in total perimeter, at least one bottom sample and one sidewall sample biased in the direction of surface runoff.
    b. For excavations 20 to 300 feet in perimeter:
        i. For surface removals, one sample from the top of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.
        ii. For subsurface removals, one sample from each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.
2. For any hotspots encountered during the remedial action, endpoint samples will be analyzed for applicable constituents of concern using the following analyses, as determined in consultation with OER:
    - VOCs by EPA Method 8260;
    - SVOCs by EPA Method 8270;
    - Target Analyte List metals, and
    - Pesticides/PCBs by Method 8081/8082.
3. For sampling of volatile organics, bottom samples taken within 24 hours of excavation will be taken from the zero to six-inch interval beneath the excavation floor. Samples taken after 24 hours would be taken at six to twelve inches beneath the excavation floor.

4. For contaminated soil removal, post remediation soil samples for laboratory analysis will be taken immediately after contaminated soil removal. If the excavation is enlarged horizontally, additional soil samples will be taken pursuant to guidelines described above.

Post-remediation sample locations and depth will be biased towards the areas and depths of highest contamination identified during previous sampling episodes unless field indicators such as field instrument measurements or visual contamination identified during the remedial action indicate that other locations and depths may be more heavily contaminated. In all cases, post-remediation samples should be biased toward locations and depths of the highest expected contamination.

New York State ELAP certified labs will be used for all end-point sample analyses. Labs for end-point sample analyses will be reported in the RAR. The RAR will provide a tabular and map summary of all end-point sample results and will include all data including non-detects and applicable standards and/or guidance values. End-point samples will be analyzed for trigger analytes (those for which SCO exceedance is identified) utilizing the following methodology:

If either LNAPL and/or DNAPL are detected, appropriate samples will be collected for characterization and “finger print analysis” and required regulatory reporting (i.e. spills hotline) will be performed.

4.5 QUALITY ASSURANCE/QUALITY CONTROL

The fundamental QA objective with respect to accuracy, precision, and sensitivity of analysis for laboratory analytical data is to achieve the QC acceptance of the analytical protocol. The accuracy, precision and completeness requirements will be addressed by the laboratory for all data generated.

Collected samples will be appropriately packaged, placed in coolers and shipped via overnight courier or delivered directly to the analytical laboratory by field personnel. Samples will be containerized in appropriate laboratory provided glassware and shipped in plastic coolers. Samples will be preserved through the use of ice or “cold-paks” to maintain a temperature of $4^{o}C$.

Dedicated disposable sampling materials will be used for the collection endpoint samples, eliminating the need to prepare field equipment (rinsate) blanks. However, if non-disposable equipment is used, (stainless steel scoop, etc.) field rinsate blanks will be prepared at the rate of 1 for every eight samples collected. Decontamination of non-dedicated sampling equipment will consist of the following:

- Gently tap or scrape to remove adhered soil
- Rinse with tap water
- Wash with alconox® detergent solution and scrub
- Rinse with tap water
- Rinse with distilled or deionized water

Prepare field blanks by pouring distilled or deionized water over decontaminated equipment and collecting the water in laboratory provided containers. Trip blanks will be used whenever samples are transported to the laboratory for analysis of VOCs. Trip blanks will not be used for samples to be analyzed for metals, SVOCs or pesticides. One blind duplicate sample will be prepared and submitted for analysis every 20 samples.

4.6 IMPORT AND REUSE OF SOILS

Import of soils onto the property is not required for this development.

4.7 ENGINEERING CONTROLS

Engineering Controls are not required as part of Track 1 remedial action alternatives. However, as part of the development, a composite cover system and waterproofing barrier system (providing vapor intrusion control) will be installed and can be considered to be the two primary Engineering Control Systems:

4.8 COMPOSITE COVER SYSTEM

As part of development, construction and maintenance of an engineered composite cover will cover all soil materials that are left in place after the building excavation is complete. The composite cover may consist of the concrete building structure with waterproofing barrier system, or a combined minimum two-foot thickness of clean paving or walkway materials and certified clean fill. Construction and maintenance of the engineered composite cover is

necessary to prevent human exposure to residual subsurface soil materials that remain in place after the building excavation is complete. Figure D shows the typical location and type of cover to be constructed at the site.

The composite cover system is a permanent engineering control for the Site. The system will be inspected and reported at specified intervals as required by this RAWP and the SMP. A Soil Management Plan will be included in the Site Management Plan and will outline the procedures to be followed in the event that the composite cover system and underlying residual soil/fill is disturbed after the remedial action is complete. Maintenance of this composite cover system will be described in the Site Management Plan in the RAR.

4.9 VAPOR INTRUSION CONTROL SYSTEM

The development architectural and engineering design to be provided by the building design team and not provided herein is to include a continuous waterproofing barrier system beneath the building slab and on the exterior of the below grade vertical foundation walls. The barrier is to consist of W.R. Grace Preprufe 160R on the exterior of the below grade foundation walls and W.R. Grace Preprufe 300R directly under the ground floor slab, or alternate waterproofing barrier system as determined by the building design team. This barrier system is to provide vapor intrusion control for the building. Preprufe 160R is a concrete adhering 16-mil high density polyethylene liner material that is commonly used in the industry for waterproofing and vapor intrusion control on the exteriors of vertical, below grade building walls. Preprufe 300R is a concrete adhering 30-mil high density polyethylene liner material that is commonly used in the industry for waterproofing and vapor intrusion control on the underside of on-grade concrete slabs.

The waterproofing barrier system will be installed in accordance with the manufacturer's specifications, including those for sealing penetrations through the foundations. Proof of installation of the barrier will be included in the Professional Engineer (P.E.) certified Remedial Closure Report discussed in Section 4.0. The barrier will be determined and specified by the development architectural and engineering design team. The barrier system is a permanent engineering control for the Site. Details of a typical waterproofing barrier system, in common use in the industry for the purpose intended, are provided in Appendix 13 of this RAWP.

4.10 INSTITUTIONAL CONTROLS

Institutional Controls will render the Site protective of public health and the environment. Institutional Controls are listed below. Institutional Controls (IC) are not required as part of Track 1 remedial action alternatives. However, if Track 1 is not achieved, long-term employment of EC/ICs will be implemented under a site-specific Site Management Plan (SMP) that will be included in the RAR. The property will continue to be registered with an E-Designation by the NYC Buildings Department.

If Track 1 cannot be achieved, Institutional Controls for this remedial action will be:

- The property will continue to be registered with an E-Designation by the NYC Buildings Department. This RAWP includes a description of all ECs and ICs and summarizes the requirements of the Site Management Plan which will note that the property owner and property owner's successors and assigns must comply with the approved SMP;
- Submittal of a Site Management Plan in the RAR for approval by OER that provides procedures for appropriate operation, maintenance, monitoring, inspection, reporting and certification of ECs. SMP will require that the property owner and property owner's successors and assigns will submit to OER a periodic written statement that certifies that: (1) controls employed at the Site are unchanged from the previous certification or that any changes to the controls were approved by OER; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. OER retains the right to enter the Site in order to evaluate the continued maintenance of any controls. This certification shall be submitted at a frequency to be determine by OER in the SMP and will comply with RCNY §43-1407(l)(3).
- Vegetable gardens and farming on the Site are prohibited in contact with residual soil materials;
- Use of groundwater underlying the Site is prohibited without treatment rendering it safe for its intended use;
- All future activities on the Site that will disturb residual material must be conducted pursuant to the soil management provisions in an approved SMP;

- The Site will be used for residential and commercial use and will not be used for a higher level of use without prior approval by OER.

4.11 SITE MANAGEMENT PLAN

Site Management is not required for Track 1 remedial actions. However, if Track 1 SCOs are not achieved, Site Management will be the last phase of remediation and begins with the approval of the Remedial Action Report and issuance of the Notice of Completion (NOC) for the Remedial Action. The Site Management Plan (SMP) describes appropriate methods and procedures to ensure implementation of all ECs and ICs that are required by the DCR and this RAWP. The Site Management Plan is submitted as part of the RAR but will be written in a manner that allows its use as an independent document. Site Management continues until terminated in writing by OER. The property owner is responsible to ensure that all Site Management responsibilities defined in the DCR and the Site Management Plan are implemented.

The SMP will provide a detailed description of the procedures required to manage residual soil/fill left in place following completion of the remedial action in accordance with the Brownfield Cleanup Agreement with OER. This includes a plan for: (1) implementation of EC's and ICs; (2) implementation of monitoring programs; (3) operation and maintenance of EC's; (4) inspection and certification of EC's; and (5) reporting.

Site management activities, reporting, and EC/IC certification will be scheduled by OER on a periodic basis to be established in the SMP and will be subject to review and modification by OER. The Site Management Plan will be based on a calendar year and certification reports will be due for submission to OER by March 31 of the year following the reporting period.

4.12 QUALITATIVE HUMAN HEALTH EXPOSURE ASSESSMENT

The objective of the qualitative exposure assessment is to identify potential receptors and pathways for human exposure to the contaminants of concern (COC) that are present at, or migrating from, the Site. The identification of exposure pathways describes the route that the COC takes to travel from the source to the receptor. An identified pathway indicates that the potential for exposure exists; it does not imply that exposures actually occur.

Investigations reported in the Remedial Investigation Report (RIR) are sufficient to complete a Qualitative Human Health Exposure Assessment (QHHEA). As part of the VCP process, a QHHEA was performed to determine whether the Site poses an existing or future health hazard to the Site's exposed or potentially exposed population. The sampling data from the RI were evaluated to determine whether there is any health risk by characterizing the exposure setting, identifying exposure pathways, and evaluating contaminant fate and transport. This QHHEA was prepared in accordance with Appendix 3B and Section 3.3 (b) 8 of the NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation.

4.13 KNOWN AND POTENTIAL SOURCES

Site inspections and subsurface investigations (including Phase I ESAs, Phase II Site Investigations, and a Remedial Investigation) have been performed at the Site to identify Areas of Concern (AOCs). The AOCs identified by investigations conducted at the Site include:

1. Site historical usage includes auto body repair shop and Gasoline/Diesel Fuel Dispensing Station.
2. Soil beneath the Site was observed to consist of fill material comprising sand and silt with concrete, gravel, brick, asphalt, wood, and ash to depths of approximately 6 feet below grade at the Site.

Based on the results of the RIR, the contaminants of concern are:

Soil:

- VOCs: trace concentrations, all below the Unrestricted Use SCO
- SVOCs: including benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, and chrysene exceeded their Unrestricted Use as well as Restricted Residential SCOs.
- Metals (cadmium, chromium, lead, mercury, nickel and zinc) exceeding Track 1 Unrestricted Residential Use SCOs.
- Pesticides: 4,4-DDT (13.9 µg/kg) exceeded UUSCOs in one shallow soil sample.

Groundwater:

- VOCs: none detected
- SVOCs none detected
- Metals (aluminum, iron, manganese, and sodium) exceeding the GQS.

Soil Gas:

- Chlorinated VOCs including PCE detected at concentrations (128.9 ug/m^3) exceeding NYSDOH Soil Vapor Intrusion Guidance Air Guideline Values. Toluene was also detected at low levels.

4.14 NATURE, EXTENT, FATE AND TRANSPORT OF CONTAMINANTS

SVOCs and metals are present in the historic fill materials throughout the Site. These contaminants are constituents associated with the historic fill material that was used to fill the land for development purposes and is present throughout the Site to a depth of up to 6 feet below grade. Metal contaminants found in soil were not found in the groundwater samples at concentrations above their respective GQSs, indicating that this contamination is not mobilizing into groundwater or migrating off-Site. The chlorinated VOCs identified in the soil vapor were well below guidance issued by New York State DOH for action and were below monitoring guidance values, and were not found in any of the on-Site soil samples or groundwater samples collected.

4.15 POTENTIAL ROUTES OF EXPOSURE

On-Site Receptors – The Site is currently vacant. Potential receptors include site representatives and trespassers. During redevelopment of the Site, the on-Site potential receptors will include construction workers, site representatives, and visitors. Once the Site is redeveloped, the on-Site potential receptors will include adult and child building residents, workers, and visitors.

Off-Site Receptors - Potential off-Site receptors within a 0.25-mile radius of the Site include: adult and child residents, and commercial and construction workers, pedestrians, trespassers, and cyclists, based on the following:

1. Commercial Businesses (up to 0.25 mile) – existing and future
2. Residential Buildings (up to 0.25 mile) – existing and future
3. Building Construction/Renovation (up to 0.25 mile) – existing and future

4. Pedestrians, Trespassers, Cyclists (up to .25 mile) – existing and future
5. Schools (up to .25 mile) – existing and future.

4.16 EXISTENCE OF HUMAN HEALTH EXPOSURE

Current Conditions: The potential for exposure to historic fill and potential petroleum contaminated soil is limited due to the asphalt and concrete cap constructed over the entire parking area. Groundwater is not impacted and is not accessible, nor is it used for any purpose as the entire area is serviced by the NYC Municipal water system. There is potential for soil vapors to accumulate in existing garage buildings.

Construction/ Remediation Activities: Once redevelopment activities begin, construction workers will come into direct contact with surface and subsurface soils, as a result of on-Site construction and excavation activities. Due to the depth of groundwater at the Site (approximately 18 feet), exposure to groundwater is unlikely. However, on-Site construction workers potentially could ingest, inhale or have dermal contact with any exposed impacted soil, and fill. Similarly, off-Site receptors could be exposed to dust and vapors from on-Site activities. During construction, on-Site and off-Site exposures to contaminated dust will be addressed through the Soil/Materials Management Plan, dust controls, and through the implementation of the Community Air-Monitoring Program and a Construction Health and Safety Plan.

Proposed Future Conditions: Under future remediated conditions, there will be no potential on-Site or off-Site exposure points. The Site will be fully capped with concrete building slab, limiting potential exposure to soil and groundwater remaining in place, and a ventilated garage and a vapor barrier system will prevent exposure to potential off-Site soil vapors in the future. The Site is served by a public water supply, and groundwater is not used at the Site for potable supply.

4.17 RECEPTOR POPULATIONS

The receptors identified under current conditions and the proposed remedy includes:

- On-site workers: adult (remediation and construction workers); and

- Temporary worker: adult (utility worker/inspector, subcontractors, sampler/remediation inspector).
- Off-site receptors: Potential off-site receptors within a 0.25-mile radius of the Site include: adult and child residents, and commercial and construction workers, pedestrians, trespassers, and cyclists, based on the following:

    1. Commercial Businesses – existing and future
    2. Residential Buildings – existing and future
    3. Building Construction/Renovation – existing and future
    4. Pedestrians and Trespassers – existing and future

The receptors identified under the proposed future Site use as mixed-use commercial/residential development include:

- Adult and child patrons of commercial and retail properties;
- Adult and child occupants of the residential units;
- On-site workers: adult retail/commercial office/maintenance workers; and
- Temporary worker: adult (utility worker/inspector, landscape worker, construction worker).

The receptors identified above are believed to be the primary receptors of interest.

4.18 OVERALL HUMAN HEALTH EXPOSURE ASSESSMENT

Complete on-site exposure pathways appear to be present only during the current unremediated phase and the construction and remediation phase. Under current conditions, on-site exposure pathways are limited by engineered covers (i.e. asphalt paving,).

Exposure of both on-site workers and the off-site local population to Site contaminated media (soil, groundwater and soil vapor) has the greatest potential during the remedial and

construction work. In order to mitigate possible exposure levels, a Construction Health and Safety Plan (CHASP) will be implemented during construction and remedial work for the safety of the on-site workers and off-site local population. Other measures include conducting a community air monitoring programs (CAMP) for dust and VOCs to track on-site and off-site conditions, requiring personal protective equipment, provisions for upgrading the level of personal protective equipment when needed, applying dust and vapor suppression measures, requiring truck inspection and washing prior to departure from the Site, and stormwater controls will be employed.

The proposed development will achieve Track 1 SCOs and require excavation to a minimum depth of 18 feet across the entire Site for development purposes. After the remedial action is complete, there will be no remaining exposure pathways to on-Site soil/fill, as all soil above Unrestricted Use SCOs will have been removed and a vapor barrier system will have been installed as part of development. The composite cover system and use restrictions will prevent contact with residual soil or groundwater. If Track 1 is not achieved, continued protection after the remedial action will be achieved by continued designation of the property with an E-Designation and the implementation of site management including periodic inspection and certification of the performance of remedial controls.

5.0 REMEDIAL ACTION MANAGEMENT

5.1 PROJECT ORGANIZATION

Principal personnel who will participate in the remedial action include Richard Arnold, Remediation Engineer of EWMA and Don Richardson, Qualifying Environmental Professional (QEP) of EWMA.

5.2 PROGRAM OVERSIGHT

The Licensed Architect for this project is Dan Ionescu. The Professional Engineer (P.E.) for the environmental remediation portion of the project is Richard Arnold.

5.3 SITE SECURITY

Site access will be controlled by Forte Italia/Marco Hotel, LLC through gated entrances to the fenced property. Barriers will be installed as needed to delineate and restrict access to the work area. For work areas of limited size, barrier tape will be sufficient to delineate and restrict access. For larger worker areas, temporary fencing will be provided.

5.4 WORK HOURS

The hours for operation of remedial construction will conform to the New York City Department of Buildings construction code requirements or according to specific variances issued by that agency.

5.5 CONSTRUCTION HEALTH AND SAFETY PLAN (HASP)

EWMA will prepare and approve The Health and Safety Plan. The Site Safety Coordinator will be Richard Arnold. All remedial work performed under this RAWP will be in full compliance with all applicable laws and regulations, including Site and OSHA worker safety requirements and HAZWOPER requirements. Confined space entry, if any, will comply with all OSHA requirements and industry standards and will address potential risks. The parties performing the remedial construction work will ensure that performance of work is in compliance with the HASP and all applicable laws and regulations. The HASP pertains to all remedial and invasive work performed at the Site until the issuance of the Notice of Completion.

5.6 WORKER TRAINING AND MONITORING

All field personnel involved in remedial activities will participate in all training required under 29 CFR 1910.120, including 40-hour hazardous waste operator training and annual 8-hour refresher training. Site Safety Officer will be responsible for maintaining all workers training records.

All personnel entering the exclusion zone will be trained in the provisions of the HASP and be required to sign an HASP acknowledgment. Site-specific training will be provided to all field personnel. Additional safety training may be added depending on the tasks performed. Emergency telephone numbers will be posted at the site location before any remedial work begins. A safety meeting will be conducted before each shift begins. Topics to be discussed include task hazards and protective measures (physical, chemical, environmental); emergency procedures; PPE levels and other relevant safety topics. Meetings will be documented in a log book or specific form.

5.7 EMERGENCY CONTACT INFORMATION

An emergency contact sheet with names and phone numbers is included in the HASP. That document will define the specific project contacts for use by OER in the case of emergency.

5.8 COMMUNITY AIR MONITORING PLAN

Real-time air monitoring for volatile organic compounds (VOCs) and particulate levels at the perimeter of the exclusion zone or work area will be performed. Continuous monitoring will be performed for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pit excavation or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be performed during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. Periodic monitoring during sample collection, for instance, will consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. Depending upon the proximity of potentially exposed individuals, continuous monitoring may be performed during sampling activities. Examples of such situations include

groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence. Exceedances of action levels observed during performance of the Community Air Monitoring Plan (CAMP) will be reported to the OER Project Manager and included in the Daily Report.

5.8.1 VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) will be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis during invasive work. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work will be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment will be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment will be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities will resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities will resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities will be shutdown.

All 15-minute readings must be recorded and be available for OER personnel to review. Instantaneous readings, if any, used for decision purposes will also to be recorded.

5.8.2 Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment will be equipped with an audible alarm to indicate exceedances of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work will continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work will be stopped and a re-evaluation of activities initiated. Work will resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

All readings will be recorded and be available for OER personnel to review.

5.9 AGENCY APPROVALS

All permits or government approvals required for remedial construction have been or will be obtained prior to the start of remedial construction. Approval of this RAWP by OER does not constitute satisfaction of these requirements and will not be a substitute for any required permit.

5.10 SITE PREPARATION

5.10.1 Pre-Construction Meeting

OER will be invited to attend the pre-construction meeting at the Site with all parties involved in the remedial process prior to the start of remedial construction activities.

5.10.2 Mobilization

The first step in site preparation is mobilization. Mobilization will be conducted as necessary for each phase of work at the Site. Mobilization includes field personnel orientation, equipment mobilization (including securing all sampling equipment needed for the field investigation), marking/staking sampling locations and utility mark-outs. Each field team member will attend an orientation meeting to become familiar with the general operation of the Site, health and safety requirements, and field procedures.

5.10.3 Stabilized Construction Entrance

Steps will be taken to ensure that trucks departing the site are not tracking soil fill or debris off-Site. Such actions may include use of cleaned asphalt or concrete roads or use of stone or other aggregate-based egress paths between the truck wash and the property exit. Measures will be taken to ensure that adjacent roadways will be kept clean of project related soils, fill and debris.

5.10.4 Utility Marker Layouts, Easement Layouts

The presence of utilities and easements on the Site will be fully investigated prior to the performance of invasive work such as excavation or drilling under this plan by using, at a minimum, the One-Call System (811). Underground utilities may pose an electrocution, explosion, or other hazard during excavation or drilling activities. Utility companies and other responsible authorities will be contacted to locate and mark the locations, and a copy of the Mark out Ticket will be retained by the contractor prior to the start of drilling, excavation or other invasive subsurface operations. Overhead utilities may also be present within the anticipated work zones. Electrical hazards associated with drilling in the vicinity of overhead utilities will be prevented by maintaining a safe distance between overhead power lines and drill rig masts.

Proper safety and protective measures pertaining to utilities and easements, and compliance with all laws and regulations will be employed during invasive and other work contemplated under this RAWP. The integrity and safety of on-Site and off-Site structures will be maintained during all invasive, excavation or other remedial activity performed under the RAWP.

5.10.5 Dewatering

Excavations that extend below the water table may require dewatering. Submersible pumps will be used to extract groundwater from gravel lined sumps in the excavations or a system of well points will be used for groundwater extraction. Extracted groundwater will be conveyed to a storage tank or treatment system.

Depending on the selected discharge option, a NYC DEP sewer use permit will be obtained to discharge treated groundwater to the nearest sewers.

5.10.6 Equipment and Material Staging

Equipment and materials will be stored and staged in a manner that is consistent with City, State, and Federal regulations. A Site map showing the location(s) of proposed equipment and material staging areas, truck wash, stockpile areas, and other pertinent remedial management features will be prepared by the Subcontractor prior to start of construction activities.

5.10.7 Decontamination Area and Truck Wash

A decontamination area will be established on the project site.

A truck wash pad will be set up close to the Site exit. Before exiting the NYC VCP Site, trucks will be required to stop at the truck wash pad and will be inspected for evidence of contaminated soil on the undercarriage, body, and wheels. Soil will be removed. After wetting with potable water, brooms or shovels will be utilized for the bulk removal of soil from vehicles and equipment. The procedure for the removal of the remaining soil and liquids will consist of washing with potable water. Odor suppressant foam will be applied, if necessary, to control odors from soil in trucks.

Soil generated by the truck wash process will be stockpiled and tested, and based on the results of the testing will be either reused on-Site or transported off-Site for disposal.

5.11 DEMOBILIZATION

Demobilization will include:

- As necessary, restoration of temporary access areas and areas that may have been disturbed to accommodate support areas (e.g., staging areas, decontamination areas, storage areas, temporary water management area[s], and access area);

- Removal of sediment from erosion control measures and truck wash and disposal of materials in accordance with applicable laws and regulations;
- Equipment decontamination, and;
- General refuse disposal.

Equipment will be decontaminated and demobilized at the completion of all field activities. Investigation equipment and large equipment (*e.g.*, soil excavators) will be washed on the truck wash pad as necessary. In addition, all investigation and remediation derived waste (IDW) *e.g.*, decontamination fluids, drill cuttings, recirculation water, well development purge water, etc. will be containerized in 55-gallon drums and staged for characterization at a secured location on-Site and will be appropriately disposed.

5.12 TRAFFIC CONTROL

Trucks leaving the NYC VCP Site will proceed without stopping in the neighborhood to prevent neighborhood impacts. The planned route on local roads for trucks leaving the site will be prepared by the Subcontractor prior to start of construction activities.

5.13 REPORTING

All required reports will be included as an Appendix in the Remedial Action Report.

Daily Reports

Daily reports providing a summary of activities for each day of active remedial work will be emailed to the OER Project Manager by the end of the following day. A Daily Report template will be provided by the OER Project Manager. Those reports will include:

- A statement of the activities and an update of progress made;
- Locations of work performed;
- Quantities of material imported and exported from the Site;
- Status of on-Site soil/fill stockpiles;
- A summary of all citizen complaints, with relevant details (basis of complaint; actions taken; etc.);
- A summary of CAMP excursions;

- Photographs of notable Site conditions and activities.
- OER assigned project number.

The frequency of the reporting period may be revised in consultation with OER project manager based on planned project tasks. Daily email reports are not intended to be the primary mode of communication for notification to OER of emergencies (accidents, spills), requests for changes to the RAWP or other sensitive or time critical information. However, such information will be included in the daily reports. Emergency conditions and changes to the RAWP will be communicated directly to the OER project manager by personal communication.

5.14 RECORD KEEPING AND PHOTO-DOCUMENTATION

Job-site record keeping for all remedial work will be performed. These records will be maintained on-Site at all times during the project and will be available for inspection by OER staff. Representative photographs will be taken of the Site prior to any remedial activities and during all major remedial activities to illustrate remedial program elements and all contaminant source areas. Select photographs will be submitted everyday along with the daily reports. Photographs will be properly tagged and submitted at the completion of the project in the RAR on electronic media (jpeg files).

5.15 COMPLAINT MANAGEMENT

All complaints from citizens will be promptly notified to OER by phone and email. Complaints from the public will be addressed as appropriate through modifications to the remedial program. Complaints will be promptly addressed and outcomes will also be reported to OER in daily reports. These reports will include the nature of the complaint, the party providing the complaint, and the actions taken to resolve any problems.

5.16 DEVIATIONS FROM THE REMEDIAL ACTION WORK PLAN

All changes to the RAWP will be reported to the OER Project Manager and will be documented in daily reports and in the Remedial Action Report. The process to be followed if there are any deviations from the RAWP, at a minimum, will include a written submission to the OER with the following information:

- A request for OER approval regarding the deviation.

- Reasons for deviating from the approved RAWP;
- Effect of the deviations on overall remedy; and
- Determination that the remedial action with the deviation(s) is protective of public health and the environment.

5.17 EXTREME STORM PREPAREDNESS AND RESPONSE CONTINGENCY PLAN

Damage from flooding or storm surge can include dislocation of soil and stockpiled materials, dislocation of site structures and construction materials and equipment, and dislocation of support of excavation structures. Damage from wind during an extreme storm event can create unsafe or unstable structures, damage safety structures and cause downed power lines creating dangerous site conditions and loss of power. In the event of emergency conditions caused by an extreme storm event, the enrollee will undertake the following steps for site preparedness prior to the event and response after the event.

5.17.1 Storm Preparedness

Preparations in advance of an extreme storm event will include the following: containerized hazardous materials and fuels will be removed from the property; lose materials will be secured to prevent dislocation and blowing by wind or water; heavy equipment such as excavators and generators will be removed from holes, trenches and depressions on the property to high ground or removed from the property; an inventory of the property with photographs will be performed to establish conditions for the site and equipment prior to the event; stockpile covers for soil and fill will be secured by adding weights such as sandbags for added security and worn or ripped stockpile covers will be replaced with competent covers; stockpiled hazardous wastes will be removed from the property; stormwater management systems will be inspected and fortified, including, as necessary: clean and reposition silt fences, hay-bales; clean storm sewer filters and traps; and secure and protect pumps and hosing.

5.17.2 Storm Response

At the conclusion of an extreme storm event, as soon as it is safe to access the property, a complete inspection of the property will be performed. A site inspection report will be submitted to OER at the completion of site inspection and after the site security is assessed. Site conditions

will be compared to the inventory of site conditions and material performed prior to the storm event and significant differences will be noted. Damage from storm conditions that result in acute public safety threats, such as downed power lines or imminent collapse of buildings, structures or equipment will be reported to public safety authorities via appropriate means such as calling 911. Petroleum spills will be reported to NYS DEC within 2 hours of identification and consistent with State regulations. Emergency and spill conditions will also be reported to OER. Public safety structures, such as construction security fences will be repaired promptly to eliminate public safety threats. Debris will be collected and removed. Dewatering will be performed in compliance with existing laws and regulations and consistent with emergency notifications, if any, from proper authorities. Eroded areas of soil including unsafe slopes will be stabilized and fortified. Dislocated materials will be collected and appropriately managed. Support of excavation structure will be inspected and fortified as necessary. Impacted stockpiles will be contained and damaged stockpile covers will be replaced. Storm-water control systems and structures will be inspected and maintained as necessary. If soil or fill materials are discharged off site to adjacent properties, property owners and OER will be notified and corrective measure plan designed to remove and clean dislocated material will be submitted to OER and implemented following approval by OER and granting of site access by the property owner. Impacted offsite areas may require characterization based on site conditions, at the discretion of OER. If on-Site petroleum spills are identified, a qualified environmental professional will determine the nature and extent of the spill and report to NYS DEC's spill hotline at DEC 800-457-7362. If the source of the spill is ongoing and can be identified, it should be stopped it this can be done safely. Potential hazards will be addressed immediately, consistent with guidance issued by NYS DEC.

5.17.3 Storm Response Reporting

A site inspection report will be submitted to OER at the completion of site inspection. An inspection report established by OER is available on OER's website (www.nyc.gov/oer) and will be used for this purpose. Site conditions will be compared to the inventory of Site conditions and material performed prior to the storm event and significant differences will be noted. The Site inspection report will be sent to the OER project manager and will include the Site name, address, tax block and lot, Site primary and alternate contact name and phone number. Damage and soil release assessment will include: whether the project had stockpiles; whether stockpiles were damaged; photographs of damage and notice of plan for repair; report of whether soil from

the site was dislocated and whether any of the soil left the site; estimates of the volume of soil that left the site, nature of impact, and photographs; description of erosion damage; description of equipment damage; description of damage to the remedial program or the construction program, such as damage to the support of excavation; presence of on-Site or off-Site exposure pathways caused by the storm; presence of petroleum or other spills and status of spill reporting to NYS DEC; description of corrective actions; schedule for corrective actions. This report should be completed and submitted to OER project manager with photographs within 24 hours of the time of safe entry to the property after the storm event.

6.0 SOILS/MATERIALS MANAGEMENT PLAN

6.1 SOIL SCREENING METHODS

Visual, olfactory and PID soil screening and assessment will be performed under the supervision of a Qualified Environmental Professional and will be reported in the RAR. Soil screening will be performed during all excavation and invasive work performed during the remedy and development phases, including excavations for foundations and utility work, prior to issuance of the Notice of Completion. It will be the responsibility of the P.E. certifying the remedy to provide technically competent field staff with proper experience to oversee the excavation activity. A description of experience of field staff will be provided to OER upon request.

6.2 STOCKPILE METHODS

Excavated soil from suspected areas of contamination and contaminated materials from different sources (e.g., hot spots, USTs, drains, drywells, etc.) will be stockpiled separately and will be segregated from other soil and construction materials.

Stockpiles will be used only when necessary and will be removed as soon as practicable. While stockpiles are in place, they will be inspected daily, and before and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by OER. Excavated soils will be stockpiled on double layers of 6-mil minimum sheeting, will be kept covered at all times with appropriately anchored plastic tarps, and will be routinely inspected. Broken or ripped tarps will be promptly replaced. Stockpiles of excavated soils and other materials shall be located at least of 25 feet from the property boundaries, where possible. Hay bales will surround soil stockpiles except for areas where access by equipment is required. Silt fencing and, hay bales will be used as needed near catch basins, surface waters and other discharge points. Soil stockpile areas will be appropriately graded to control run-off in accordance with a Storm water Pollution Prevention Plan for the Site. All stockpile activities will be compliant with applicable City, State and Federal laws and regulations.

6.3 CHARACTERIZATION OF EXCAVATED MATERIALS

Soil/fill or other excavated media that is transported off-Site for disposal will be sampled in a manner that is consistent with the requirements of the receiving facility, and in compliant with applicable laws and regulations. Soils proposed for reuse on-Site will be managed as defined in Section 6.7 of this plan.

6.4 MATERIALS EXCAVATION, LOAD-OUT AND DEPARTURE

The P.E. and/ or QEP will oversee all invasive work and the excavation and load-out of all excavated material and will ensure that there is a party responsible for the safe execution of all invasive and other work performed under this work plan.

The LA will ensure that Site development activities will not interfere with, or otherwise impair or compromise the remedial activities proposed in this RAWP. Development-related grading cuts will not interfere with, or otherwise impair or compromise, the performance of remediation required by this plan.

The presence of utilities and easements on the Site has been investigated by the QEP who will ensure that any identified risks from work proposed under this plan are properly addressed by appropriate parties.

A truck wash pad will be maintained on-Site and the QEP will be responsible for ensuring that all loaded outbound trucks are cleaned before leaving the Site. Locations where vehicles exit the Site shall be inspected daily for evidence of off-Site soil tracking. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site-derived materials. The QEP will be responsible for ensuring that all egress points for truck and equipment transport from the Site will be kept clean of Site-derived materials during Site remediation and development.

Open and uncontrolled mechanical processing of historical fill and contaminated soil on-Site will not be performed without prior OER approval.

6.5 OFF-SITE MATERIALS TRANSPORT

Loaded vehicles leaving the Site will comply with all applicable materials transportation requirements (including appropriate tarping and secure covering, manifests, and placards) in accordance with City, State, and Federal laws and regulations, including use of licensed haulers

in accordance with 6 NYCRR Part 364. Loose or incomplete truck covers will be prohibited. If loads contain wet material capable of causing leakage from trucks, truck liners will be used. Queuing of trucks will be performed on-Site, when possible in order to minimize off Site disturbance. Off-Site queuing will be minimized.

Outbound truck transport routes figure will be prepared by the Subcontractor prior to start of construction activities. This routing takes into account the following factors: (a) limiting transport through residential areas and past sensitive sites; (b) use of City mapped truck routes; (c) minimizing off-Site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport. To the extent possible, all trucks loaded with Site materials will travel from the Site using these truck routes. Trucks will not stop or idle in the neighborhood after leaving the project Site.

6.6 MATERIALS DISPOSAL OFF-SITE

Disposal facilities have not yet been identified for this project. Prior to the start of remedial construction, OER will be provided with the information for the selected disposal facilities as outlined below. The following documentation will be established and reported by the P.E./ QEP for each disposal destination used in this project to document that the disposal of regulated material exported from the Site conforms with all applicable laws and regulations: (1) a letter from the P.E./ QEP or Enrollee to each disposal facility describing the material to be disposed and requesting written acceptance of the material. This letter will state that material to be disposed of is regulated material generated at an environmental remediation Site in Queens, New York City under a governmental remediation program. The letter will provide the project identity and the name and phone number of the P.E./QEP or Enrollee. The letter will include as an attachment a summary of all chemical data for the material being transported (including site characterization data); and (2) a letter from each disposal facility stating it is in receipt of the correspondence (above) and is approved to accept the material. These documents will be included in the RAR.

The Remedial Action Report will include an itemized account of the destination of all material removed from the Site during this remedial action. Documentation associated with disposal of all material will include records and approvals for receipt of the material. This information will be presented in the RAR.

The proposed disposal locations for Site-derived impacted materials will be prepared prior to start of construction activities in accordance with the template below. Additional disposal locations established at a later date will be reported promptly to the OER Project Manager.

Disposal Facility	**Waste Type**	**Estimated Quantities**
To Be Determined)	i.e. historic fill	19,000 tons
To Be Determined	Concrete and Debris (C&D)	(#) tons
To Be Determined	Contaminated liquid	(#) gallons

All impacted soil/fill or other waste excavated and removed from the Site will be managed as regulated material and will be disposed in accordance with all City, State and Federal laws and regulations. Historic fill and contaminated soils taken off-Site will be handled as solid waste and will not be disposed at a Part 360-16 Registration Facility (also known as a Soil Recycling Facility).

If disposal of soil/fill from this Site is proposed for unregulated disposal (i.e., clean soil removed for development purposes), including transport to a Part 360-16 Registration Facility, a formal request will be made for approval by OER with an associated plan compliant with 6NYCRR Part 360-16. This formal request and plan will include the location, volume and a description of the material to be recycled, including verification that the material is not impacted by site uses and that the material complies with receipt requirements for recycling under 6NYCRR Part 360. This material will be appropriately handled on-Site to prevent mixing with impacted material. Unregulated off-Site management of soil, fill or other excavated materials from this Site without OER approval is otherwise prohibited.

Waste characterization will be performed for off-Site disposal in a manner required by the receiving facility and in conformance with its applicable permits. Waste characterization sampling and analytical methods, sampling frequency, analytical results and QA/QC will be reported in the RAR. A manifest system or equivalent to oversee off-Site transportation of exported materials will be employed. This information will be reported in the RAR. Hazardous wastes derived from on-Site will be stored, transported, and disposed of in full compliance with applicable City, State, and Federal laws and regulations.

6.7 MATERIALS REUSE ON-SITE

Soil and fill that is derived from the property will not be reused onsite.

Organic matter (wood, roots, stumps, etc.) or other waste derived from clearing and grubbing of the Site will not be buried on-Site. Soil or fill excavated from the site for grading or other purposes will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

6.8 DEMARCATION

Since the entire Site will be excavated and no backfilling is required, a demarcation layer is not necessary.

6.9 IMPORT OF BACKFILL SOIL FROM OFF-SITE SOURCES

No backfill soil from off-site sources is anticipated to be imported. Recycled concrete aggregate (RCA) will be imported from facilities permitted or registered by, and in full compliance with applicable regulations of NYSDEC. Facilities will be identified in the RAR. A P.E./ QEP is responsible to ensure that the facility is compliant with 6NYCRR Part 360 registration and permitting requirements for the period of acquisition of RCA. RCA imported from compliant facilities will not require additional testing, unless required by NYSDEC under its terms for operation of the facility. RCA imported to the Site must be derived from recognizable and uncontaminated concrete. RCA material is not acceptable for, and will not be used as, cover material.

6.10 FLUIDS MANAGEMENT

All liquids to be removed from the Site, including dewatering fluids, will be handled, transported and disposed in accordance with applicable City, State, and Federal laws and regulations. Discharge to the New York City sewer represents the preferred method for management of dewatering fluid during construction. Liquids discharged into the New York City sewer system will receive prior approval by New York City Department of Environmental Protection (NYC DEP). Discharge to the New York City sewer system will require an authorization and sampling data demonstrating that the groundwater meets the City's discharge

criteria. The NYC DEP regulates discharges to the New York City sewers under Title 15, Rules of the City of New York Chapter 19. The dewatering fluid will be pretreated as necessary to meet the NYC DEP discharge criteria. If discharge to the City sewer system is not appropriate, the dewatering fluids will be managed by transportation and disposal at an off-Site treatment facility.

Discharge of water generated during remedial construction to surface waters (i.e. a stream or river) is prohibited without a SPDES permit issued by New York State Department of Environmental Conservation.

6.11 STORM-WATER POLLUTION PREVENTION

All applicable laws and regulations pertaining to storm-water pollution prevention will be addressed during the remedial program. Erosion and sediment control measures identified in this RAWP (silt fences and barriers, and hay bale checks) will be installed around the entire perimeter of the remedial construction area and inspected once a week and after every storm event to ensure that they are operating appropriately. Where discharge locations or points are accessible, they will be inspected to determine whether erosion control measures are effective in preventing significant impacts to receptors. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by OER. All necessary repairs shall be made immediately. Accumulated sediments will be removed as required to keep the barrier and hay bale check functional. Undercutting or erosion of the silt fence toe anchor will be repaired immediately with appropriate backfill materials. Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

6.12 CONTINGENCY PLAN

This contingency plan is developed for the remedial construction to address the discovery of unknown structures or contaminated media during excavation. Identification of unknown or unexpected contamination source areas during invasive Site work will be promptly communicated to OER’s Project Manager. Petroleum spills will be reported to the NYS DEC Spill Hotline. These findings will be included in the daily report. If previously unidentified contaminant sources are found during on-Site remedial excavation or development-related excavation, sampling will be performed on contaminated source material and surrounding soils

and reported to OER. Chemical analytical testing will be performed for TAL metals, TCL volatiles and semi-volatiles, TCL pesticides and PCBs, as appropriate.

6.13 ODOR, DUST AND NUISANCE CONTROL

6.13.1. Odor Control

All necessary means will be employed to prevent on- and off-Site odor nuisances. At a minimum, procedures will include: (a) limiting the area of open excavations; (b) shrouding open excavations with tarps and other covers; and (c) use of foams to cover exposed odorous soils. If odors develop and cannot otherwise be controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-Site disposal; and (e) use of chemical odorants in spray or misting systems.

This odor control plan is capable of controlling emissions of nuisance odors. If nuisance odors are identified, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. OER will be notified of all odor complaint events. Implementation of all odor controls, including halt of work, will be the responsibility of the PE/QEP's certifying the Remedial Action Report.

6.13.2 Dust Control

Dust management during invasive on-Site work will include, at a minimum:

- Use of a dedicated water spray methodology for roads, excavation areas and stockpiles.
- Use of properly anchored tarps to cover stockpiles.
- Exercise extra care during dry and high-wind periods.
- Use of gravel or recycled concrete aggregate on egress roadways to provide a clean and dust-free road surface.

This dust control plan is capable of controlling emissions of dust. If nuisance dust emissions are identified, work will be halted and the source of dusts will be identified and corrected. Work will not resume until all nuisance dust emissions have been abated. OER will be notified of all dust complaint events. Implementation of all dust controls, including halt of

work, will be the responsibility of the PE/QEP's responsible for certifying the Remedial Action Report.

6.13.3 Other Nuisances

Noise control will be exercised during the remedial program. All remedial work will conform, at a minimum, to NYC noise control standards.

7.0 REMEDIAL ACTION REPORT

A Remedial Action Report (RAR) will be submitted to OER following implementation of the remedial action defined in this RAWP. The RAR will document that the remedial work required under this RAWP has been completed and has been performed in compliance with this plan. The RAR will include:

- Information required by this RAWP;
- As-built drawings for all constructed remedial elements, required certifications, manifests, bills of lading and other written and photographic documentation of remedial work performed under this remedy;
- Description of any changes in the remedial action from the elements provided in this RAWP and associated design documents;
- Tabular summary of all performance evaluation sampling results and all material characterization results and other sampling and chemical analysis performed as part of the remedial action;
- Test results or other evidence demonstrating that remedial systems are functioning properly;
- Tabular summary and comparison of end point samples to Track 1 6NYCRR Part 375-6.8 SCOs;
- Account of the source area locations and characteristics of all contaminated material removed from the Site including excavated contaminated soil, historic fill, solid waste, hazardous waste, non-regulated material, and fluids, including a map showing all source areas;
- Account of the disposal destination of all contaminated material removed from the Site and documentation associated with disposal of all material will include records and approvals for receipt of the material.
- All reports and supporting material will be submitted in digital form (pdf format) and other digital formats as required by OER.

7.1 REMEDIAL ACTION REPORT CERTIFICATION

The following certification will appear in front of the Executive Summary of the Remedial Action Report. The certification will include the following statements:

*I, Richard D. Arnold, am currently a professional engineer licensed by the State of New York. I had primary direct responsibility for implementation of the remedial program Forte Italia / Marco Hotel, LLC [**OER Project # 09EHAZ191Q /RAWP**].*

*I, , am a Qualified Environmental Professional with substantive project experience in the State of New York. I had primary direct responsibility for implementation of the remedial program for the Forte Italia / Marco Hotel, LLC [**OER Project # 09EHAZ191Q /RAWP**].*

I certify that the OER-approved Remedial Action Work Plan dated month day year and Stipulations in a letter dated month day, year; if any were implemented and that all requirements in those documents have been substantively complied with. I certify that contaminated soil, fill, liquids or other material from the property were taken to facilities licensed to accept this material in full compliance with applicable laws and regulations.

8.0 SCHEDULE

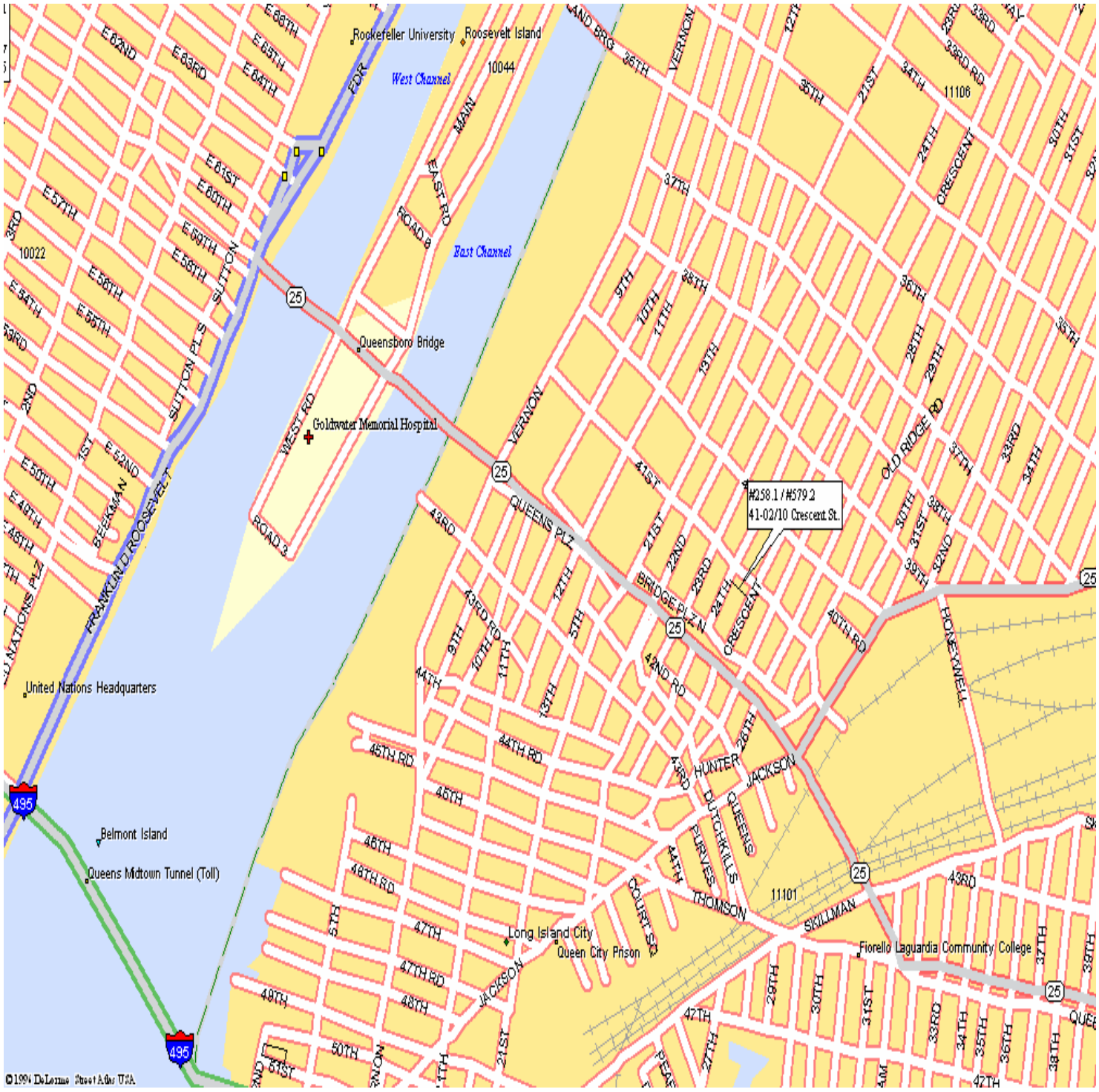
The table below presents a schedule for proposed remediation and reporting. If the schedule for remediation and development activities changes, it will be updated and submitted to OER. Currently, a 2-3 month remediation (earthwork and concrete work) period is anticipated. The construction for the superstructure will continue until January 2015.

Schedule Milestone	Estimated Start Date
OER Approval of RAWP	July 2013
Fact Sheet (start of Remedy)	July 2013
Mobilization	August 2013
Contaminated Soil & Clean Fill Excavation	August 2013
Demobilization	October 2013
Submit Draft Remedial Action Report	December 2013
Submit Final Remedial Action Report	December 2013
Obtain Notice of Completion	January 2014

ATTACHMENTS

FIGURE A

SITE LOCATION



42-02/10 Crescent Street, LIC, NY

NYC BCP Project Number: 09EHAZ191Q

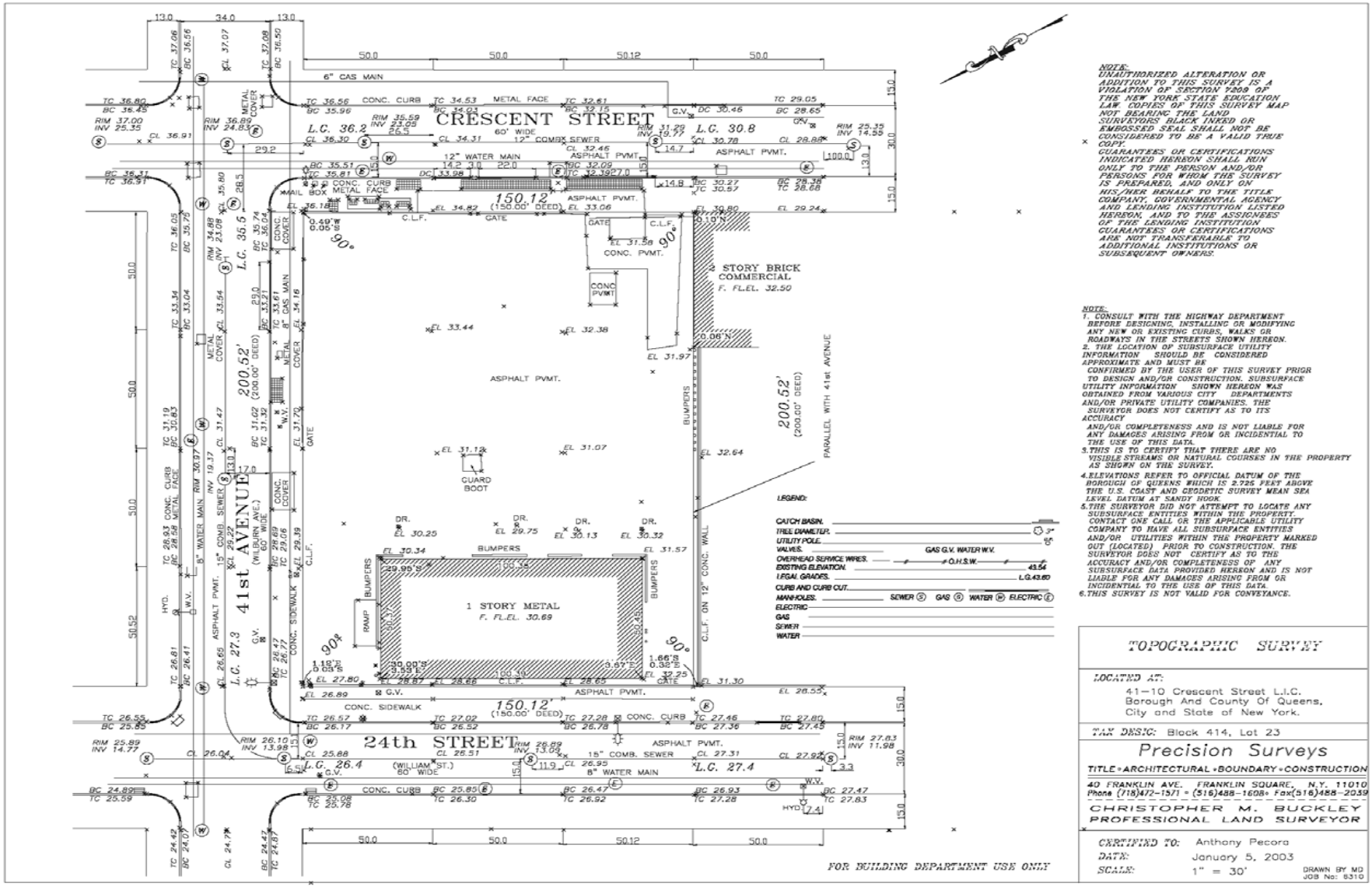
FIGURE B ARIAL SITE PHOTOGRAPH

42-02/10 Crescent Street, LIC, NY

NYC BCP Project Number: 09EHAZ191Q

FIGURE C

SITE SURVEY

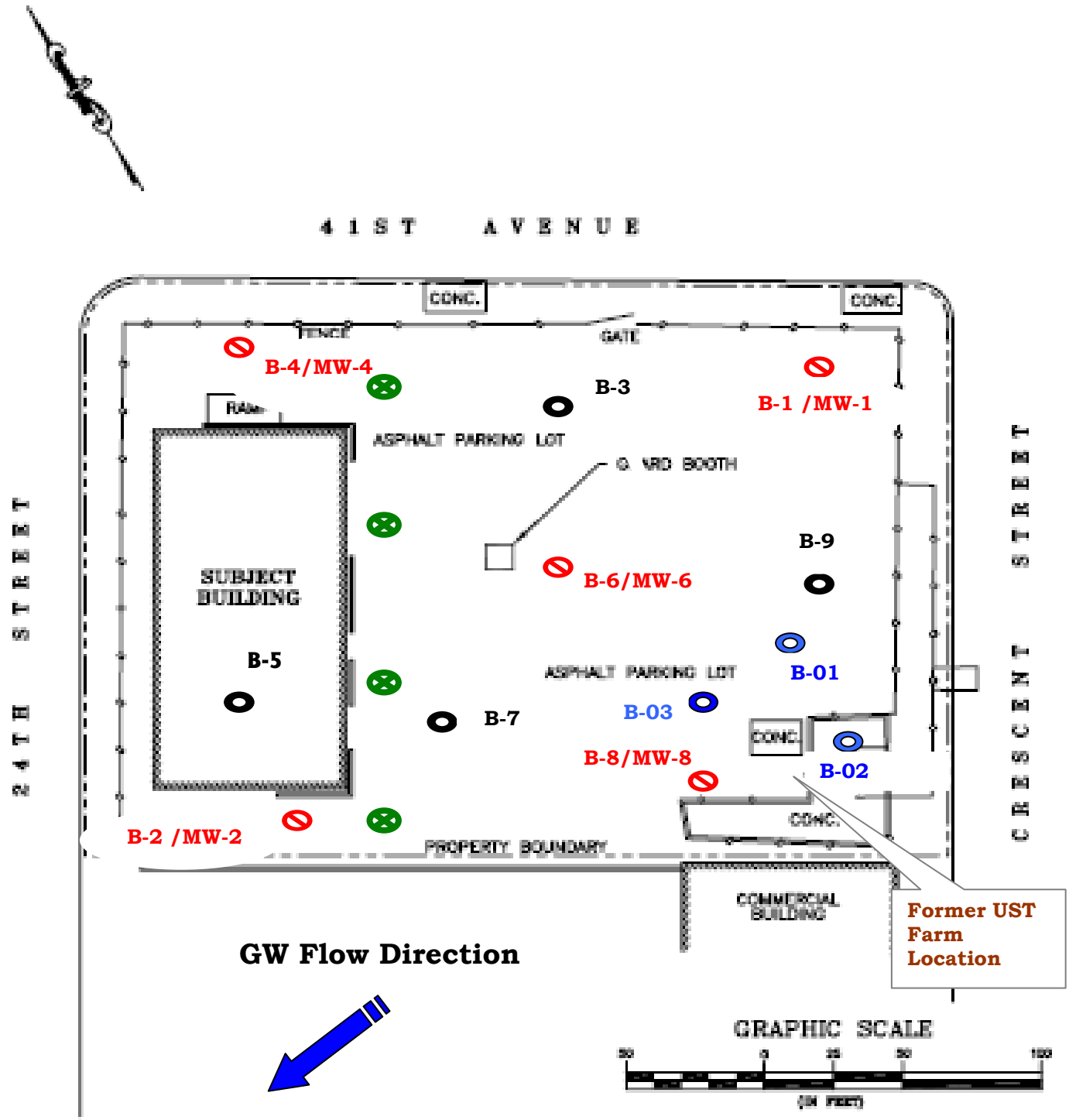


42-02/10 Crescent Street, LIC, NY

NYC BCP Project Number: 09EHAZ191Q

FIGURE D

SITE PLAN & SAMPLING LOCATIONS



Locations of temporary groundwater monitoring wells (MW)

Locations of test borings (**B**)

Locations of additio0nal test borings (**B**)

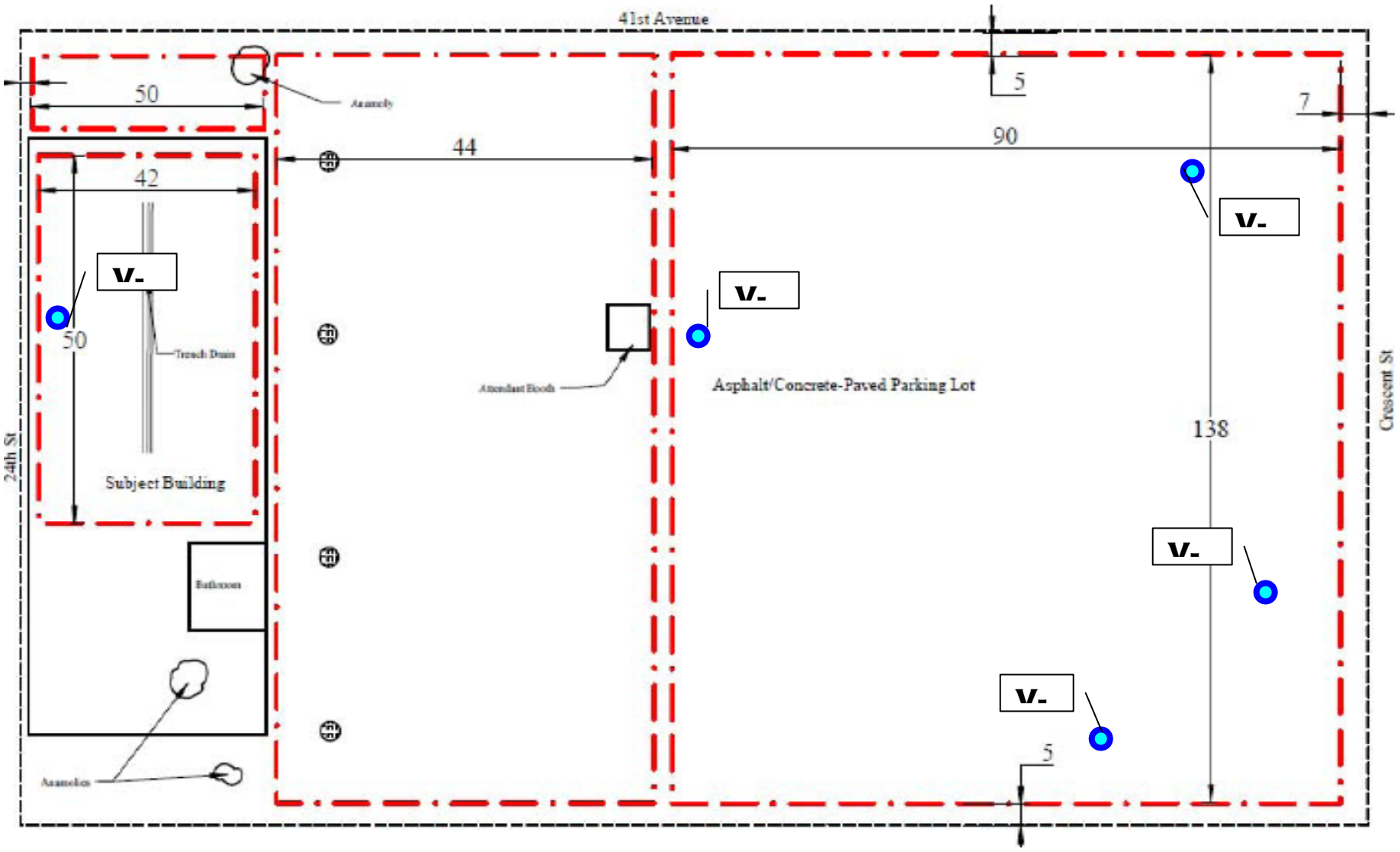
Locations of 4 Drywells

GW Depth MW-6 (20' 07.50" BGS)
MW-4 (17'11.25" BGS)

42-02/10 Crescent Street, LIC, NY

Cosmos Environmental services, Inc.

FIGURE E **SITE PLAN & VAPOR SAMPLING LOCATIONS**



- Vapor Sampling Points

42-02/10 Crescent Street, LIC, NY

Cosmos Environmental services, Inc.

Table I

Soil Sampling & Analysis – Volatile Organics (EPA Method 8260)

CAS Number	Parameter Name	Parameter ID	B-1.1 (.5'-2.5')	B-1.2 (20'-22')	B-2.1 (.5'-2.5')	B-2.2 (20'-22')	B-3.1 (.5'-2.5')	B-3.2 (20'-22')	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	NYCRR 375 Protection of Groundwater	NYCRR 375 Restricted-Commercial	NYC 37 Restr Indu
	Sample ID / Unit		*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug*
95-63-6	**1,2,4-Trimethylbenzene**	VOC	<5.1	<5.3	**45**	**11**	<5.2	<5.6	NA	10,000	3,600	47,000	52,000	3,600	190,000	380
108-67-8	**1,3,5-Trimethylbenzene**	VOC	<5.1	<5.3	**11**	<6.4	<5.2	<5.6	NA	3,300	8,400	47,000	52,000	8,400	190,000	380
100-41-4	**Ethylbenzene**	VOC	<5.1	<5.3	**6.3**	<6.4	<5.2	<5.6	NA	5,500	1,000	30,000	41,000	1,000	390,000	780
91-20-3	**Naphthalene**	VOC	<5.1	<5.3	**33**	**9**	<5.2	<5.6	NA	13,000	12,000	100,000a	100,000a	12,000	500,000b	1,000
1330-20-7	**Total Xylenes**	VOC	<5.1	<5.3	**31.9**	**9.1**	<5.2	<5.6	NA	1,200	260	100,000a	100,000a	1,600	500,000b	1,000

CAS Number	Parameter Name	Parameter ID	B-4.1 (0.5'-2.5')	B-4.2 (20'-22')	B-5.1 (0.5'-2.5')	B-5.2 (20'-22')	B-6.1 (0.5'-2.5')	B-6.2 (20'-22')								
	Sample ID / Unit		*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug*
95-63-6	**1,2,4-Trimethylbenzene**	VOC	<5.6	<5.9	<5.2	<5.6	<5.2	<6.2	NA	10,000	3,600	47,000	52,000	3,600	190,000	380
108-67-8	**1,3,5-Trimethylbenzene**	VOC	<5.6	<5.9	<5.2	<5.6	<5.2	<6.2	NA	3,300	8,400	47,000	52,000	8,400	190,000	380
100-41-4	**Ethylbenzene**	VOC	<5.6	<5.9	<5.2	<5.6	<5.2	<6.2	NA	5,500	1,000	30,000	41,000	1,000	390,000	780
91-20-3	**Naphthalene**	VOC	<5.6	<5.9	<5.2	<5.6	<5.2	<6.2	NA	13,000	12,000	100,000a	100,000a	12,000	500,000b	1,000
1330-20-7	**Total Xylenes**	VOC	<5.6	<5.9	<5.2	<5.6	<5.2	<6.2	NA	1,200	260	100,000a	100,000a	1,600	500,000b	1,000

CAS Number	Parameter Name	Parameter ID	B-7.1 (0.5'-2.5')	B-7.2 (20'-22')	B-8.1 (0.5'-2.5')	B-8.2 (20'-22')	B-9.1 (0.5'-2.5')								
	Sample ID / Unit		*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug*
95-63-6	**1,2,4-Trimethylbenzene**	VOC	<5.5	<6.3	<5.3	<5.1	<5.6	NA	10,000	3,600	47,000	52,000	3,600	190,000	380
108-67-8	**1,3,5-Trimethylbenzene**	VOC	<5.5	<6.3	<5.3	<5.1	<5.6	NA	3,300	8,400	47,000	52,000	8,400	190,000	380
100-41-4	**Ethylbenzene**	VOC	<5.5	<6.3	<5.3	<5.1	<5.6	NA	5,500	1,000	30,000	41,000	1,000	390,000	780
91-20-3	**Naphthalene**	VOC	<5.5	<6.3	<5.3	<5.1	<5.6	NA	13,000	12,000	100,000a	100,000a	12,000	500,000b	1,000
1330-20-7	**Total Xylenes**	VOC	<5.5	<6.3	<5.3	<5.1	<5.6	NA	1,200	260	100,000a	100,000a	1,600	500,000b	1,000

Bold Font (Black) – Concentrations above MDL but within Recommended Soil Cleanup Objectives (TAGM) and/ or NYSDEC Background Levels limit
Bold Font (Red) – Concentrations above Recommended Soil Cleanup Objectives (TAGM)

Table II.A

Soil Sampling & Analysis – Semi-Volatile Organics (EPA Method 8270)

CAS Number	Parameter Name	Parameter ID	B-1.1 (.5'-2')	B-1.2 (20'-22')	B-2.1 (.5'-2')	B-2.2 (20'-22')	B-3.1 (.5'-2')	B-3.2 (20'-22')	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	NYCRR 375 Protection of Groundwater	NYCRR 375 Restricted-Commercial	NYCRR 375 Restricted-Industrial
	Sample ID / Unit		*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*
83-32-9	**Acenaphthene**	SVOC	**580**	<360	**610**	<340	<340	<360	NA	50,000	20,000	100,000a	100,000a	98,000	500,000b	1,000,000c
208-96-8	**Acenaphthylene**	SVOC	**490**	<360	<350	<340	<340	<360	NA	41,000	100,000a	100,000a	100,000a	107,000	500,000b	1,000,000c
120-12-7	**Anthracene**	SVOC	**1,800**	<360	**1,100**	<340	<340	<360	NA	50,000	100,000a	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
56-55-3	**Benzo(a)Anthracene**	SVOC	**4,800**	<360	**2,800**	<340	<340	<360	NA	224 or MDL	1,000c	1,000f	1,000f	1,000f	5,600	11,000
50-32-8	**Benzo(a)Pyrene**	SVOC	**3,800**	<360	**2,300**	<340	<340	<360	NA	61 or MDL	1,000c	1,000f	1,000f	22,000	1,000f	1,100
205-99-2	**Benzo(b)Fluoroanthene**	SVOC	**6,700**	<360	**4,200**	<340	<340	<360	NA	1,100	1,000c	1,000f	1,000f	1,700	5600	11,000
207-08-9	**Benzo(k)Fluoroanthene**	SVOC	**2,300**	<360	**1,400**	<340	<340	<360	NA	1,100	800c	1,000	3,900	1,700	56,000	110,000
191-24-2	**Benzo(g,h,i)Perylene**	SVOC	**1,300**	<360	**780**	<340	<340	<360	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
218-01-9	**Chrysene**	SVOC	**4,800**	<360	**3,100**	<340	<340	<360	NA	400	1,000c	1,000f	3,900	1,000f	56,000	110,000
132-64-9	**Dibenzofuran**	SVOC	**590**	<360	**540**	<340	<340	<360	NA	6,200	7,000	14,000	59,000	210,000	350,000	1,000,000c
206-44-0	**Fluoranthene**	SVOC	**13,000**	<360	**6,400**	<340	<340	<360	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
86-73-7	**Fluorene**	SVOC	**840**	<360	**690**	<340	<340	<360	NA	50,000	30,000	100,000a	100,000a	386,000	500,000b	1,000,000c
193-39-5	**Indeno(1,2,3-c,d)Pyrene**	SVOC	**640**	<360	<350	<340	<340	<360	NA	3,200	500c	500f	500f	8,200	5,600	11,000
85-01-8	**Phenanthrene**	SVOC	**10,000**	<360	**6,500**	<340	<340	<360	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
129-00-0	**Pyrene**	SVOC	**11,000**	<360	**6,900**	<340	<340	<360	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
	Total		**62,640**		**37,320**											

Bold Font (Black) – Concentrations above MDL but within Recommended Soil Cleanup Objectives (TAGM) and/ or NYSDEC Background Levels limit
Bold Font (Red) – Concentrations above Recommended Soil Cleanup Objectives (TAGM)

Table II.B

Soil Sampling & Analysis – Semi-Volatile Organics (EPA Method 8270)

CAS Number	Parameter Name	Parameter ID	B-4.1 (.5'-2.5')	B-4.2 (20'-22')	B-5.1 (.5'-2.5')	B-5.2 (20'-22')	B-6.1 (.5'-2.5')	B-6.2 (20'-22')	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	NYCRR 375 Protection of Groundwater	NYCRR 375 Restricted-Commercial	NYCRR 375 Restricted-Industrial
	Sample ID / Unit		*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*
83-32-9	**Acenaphthene**	SVOC	<370	<390	<3500	<3700	<350	<430	NA	50,000	20,000	100,000a	100,000a	98,000	500,000b	1,000,000c
208-96-8	**Acenaphthylene**	SVOC	<370	<390	<3500	<3700	<350	<430	NA	41,000	100,000a	100,000a	100,000a	107,000	500,000b	1,000,000c
120-12-7	**Anthracene**	SVOC	<370	<390	<3500	<3700	<350	<430	NA	50,000	100,000a	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
56-55-3	**Benzo(a)Anthracene**	SVOC	<370	<390	**6,100**	<3700	<350	<430	NA	224 or MDL	1,000c	1,000f	1,000f	1,000f	5,600	11,000
50-32-8	**Benzo(a)Pyrene**	SVOC	<370	<390	**6,000**	<3700	<350	<430	NA	61 or MDL	1,000c	1,000f	1,000f	22,000	1,000f	1,100
205-99-2	**Benzo(b)Fluoroanthene**	SVOC	<370	<390	**11,000**	<3700	<350	<430	NA	1,100	1,000c	1,000f	1,000f	1,700	5600	11,000
207-08-9	**Benzo(k)Fluoroanthene**	SVOC	<370	<390	**3,800**	<3700	<350	<430	NA	1,100	800c	1,000	3,900	1,700	56,000	110,000
191-24-2	**Benzo(g,h,i)Perylene**	SVOC	<370	<390	<3500	<3700	<350	<430	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
218-01-9	**Chrysene**	SVOC	<370	<390	**6,600**	<3700	<350	<430	NA	400	1,000c	1,000f	3,900	1,000f	56,000	110,000
132-64-9	**Dibenzofuran**	SVOC	<370	<390	<3500	<3700	<350	<430	NA	6,200	7,000	14,000	59,000	210,000	350,000	1,000,000c
206-44-0	**Fluoranthene**	SVOC	<370	**640**	**11,000**	<3700	<350	<430	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
86-73-7	**Fluorene**	SVOC	<370	<390	<3500	<3700	<350	<430	NA	50,000	30,000	100,000a	100,000a	386,000	500,000b	1,000,000c
193-39-5	**Indeno(1,2,3-c,d)Pyrene**	SVOC	<370	<390	<3500	<3700	<350	<430	NA	3,200	500c	500f	500f	8,200	5,600	11,000
85-01-8	**Phenanthrene**	SVOC	<370	**630**	**4,300**	<3700	<350	<430	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
129-00-0	**Pyrene**	SVOC	<370	**720**	**11,000**	<3700	<350	<430	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
	Total			**1,990**	**59,800**											

Bold Font (Black) – Concentrations above MDL but within Recommended Soil Cleanup Objectives (TAGM) and/ or NYSDEC Background Levels limit
Bold Font (Red) – Concentrations above Recommended Soil Cleanup Objectives (TAGM)

Table II.C

Soil Sampling & Analysis – Semi-Volatile Organics (EPA Method 8270)

CAS Number	Parameter Name	Parameter ID	[redacted]	B-7.1 (.5'-2.5')	B-7.2 (20'-22')	B-8.1 (.5'-2.5')	B-8.2 (20'-22')	B-9.1 (.5'-2.5')	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	NYCRR 375 Protection of Groundwater	NYCRR 375 Restricted-Commercial	NYCRR 375 Restricted-Industrial
	Sample ID / Unit			*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*
83-32-9	**Acenaphthene**	SVOC		<340	<340	<340	<360	<340	NA	50,000	20,000	100,000a	100,000a	98,000	500,000b	1,000,000c
208-96-8	**Acenaphthylene**	SVOC		<340	<340	<340	<360	<340	NA	41,000	100,000a	100,000a	100,000a	107,000	500,000b	1,000,000c
120-12-7	**Anthracene**	SVOC		<340	<340	<340	<360	<340	NA	50,000	100,000a	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
56-55-3	**Benzo(a)Anthracene**	SVOC		<340	<340	**1,100**	<360	<340	NA	224 or MDL	1,000c	1,000f	1,000f	1,000f	5,600	11,000
50-32-8	**Benzo(a)Pyrene**	SVOC		<340	<340	**890**	<360	<340	NA	61 or MDL	1,000c	1,000f	1,000f	22,000	1,000f	1,100
205-99-2	**Benzo(b)Fluoroanthene**	SVOC		<340	<340	**1,400**	<360	<340	NA	1,100	1,000c	1,000f	1,000f	1,700	5600	11,000
207-08-9	**Benzo(k)Fluoroanthene**	SVOC		<340	<340	**520**	<360	<340	NA	1,100	800c	1,000	3,900	1,700	56,000	110,000
191-24-2	**Benzo(g,h,i)Perylene**	SVOC		<340	<340	**380**	<360	<340	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
218-01-9	**Chrysene**	SVOC		<340	<340	**1,100**	<360	<340	NA	400	1,000c	1,000f	3,900	1,000f	56,000	110,000
132-64-9	**Dibenzofuran**	SVOC		<340	<340	<340	<360	<340	NA	6,200	7,000	14,000	59,000	210,000	350,000	1,000,000c
206-44-0	**Fluoranthene**	SVOC		<340	<340	**2,100**	<360	<340	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
86-73-7	**Fluorene**	SVOC		<340	<340	<340	<360	<340	NA	50,000	30,000	100,000a	100,000a	386,000	500,000b	1,000,000c
193-39-5	**Indeno(1,2,3-c,d)Pyrene**	SVOC		<340	<340	<340	<360	<340	NA	3,200	500c	500f	500f	8,200	5,600	11,000
85-01-8	**Phenanthrene**	SVOC		<340	<340	**1,100**	<360	<340	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
129-00-0	**Pyrene**	SVOC		<340	<340	**2,000**	<360	<340	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
	Total					**10,590**										

Bold Font (Black) – Concentrations above MDL but within Recommended Soil Cleanup Objectives (TAGM) and/ or NYSDEC Background Levels limit
Bold Font (Red) – Concentrations above Recommended Soil Cleanup Objectives (TAGM)

Table III

Soil Sampling & Analysis – Pesticides and PCBs (EPA Method 8081/8082)

CAS Number	Parameter Name	Parameter ID	B-1.1 (.5'-2.5')	B-1.2 (20'-22')	B-2.1 (.5'-2.5')	B-2.2 (20'-22')	B-3.1 (.5'-2.5')	B-3.2 (20'-22')	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	NYCRR 375 Protection of Groundwater	NYCRR 375 Restricted-Commercial	NYCRR 375 Restricted-Industrial
	Sample ID / Unit		*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*
50-29-3	**4,4-DDT**	PESTICIDE	<2.06	<2.16	<2.12	<2.51	<2.05	<2.18	NA	2,100	3.3b	1,700	7,900	136,000	47,000	94,000
319-84-6	**alpha-BHC**	PESTICIDE	<2.06	<2.16	<2.12	<2.51	<2.05	<2.18	NA	110	20	97	480	20	3,400	6,800
7421-93-4	**Endrin Aldehyde**	PESTICIDE	**4.63**	<2.16	<2.12	<2.51	<2.05	<2.18	NA	NA	NA	NA	NA	NA	NA	NA
53494-70-5	**Endrin Ketone**	PESTICIDE	**30.5**	<2.16	<2.12	<2.51	<2.05	<2.18	NA	NA	NA	NA	NA	NA	NA	NA

CAS Number	Parameter Name	Parameter ID	B-4.1 (.5'-2.5')	B-4.2 (20'-22')	B-5.1 (.5'-2.5')	B-5.2 (20'-22')	B-6.1 (.5'-2.5')	B-6.2 (20'-22')	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	NYCRR 375 Protection of Groundwater	NYCRR 375 Restricted-Commercial	NYCRR 375 Restricted-Industrial
	Sample ID / Unit		*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*
50-29-3	**4,4-DDT**	PESTICIDE	<2.23	<2.34	**13.9**	<2.22	<2.09	<2.54	NA	2,100	3.3b	1,700	7,900	136,000	47,000	94,000
319-84-6	**alpha-BHC**	PESTICIDE	**3.88**	<2.34	<2.11	<2.22	<2.09	<2.54	NA	110	20	97	480	20	3,400	6,800
7421-93-4	**Endrin Aldehyde**	PESTICIDE	<2.23	<2.34	**2.7**	<2.22	<2.09	<2.54	NA	NA	NA	NA	NA	NA	NA	NA
53494-70-5	**Endrin Ketone**	PESTICIDE	<2.23	<2.34	**31.1**	<2.22	<2.09	<2.54	NA	NA	NA	NA	NA	NA	NA	NA

CAS Number	Parameter Name	Parameter ID		B-7.1 (.5'-2.5')	B-7.2 (20'-22')	B-8.1 (.5'-2.5')	B-8.2 (20'-22')	B-9.1 (.5'-2.5')	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	NYCRR 375 Protection of Groundwater	NYCRR 375 Restricted-Commercial	NYCRR 375 Restricted-Industrial
	Sample ID / Unit			*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*
50-29-3	**4,4-DDT**	PESTICIDE		<2.14	<2.55	<2.07	<2.14	<2.2	NA	2,100	3.3b	1,700	7,900	136,000	47,000	94,000
319-84-6	**alpha-BHC**	PESTICIDE		<2.14	<2.55	<2.07	<2.14	<2.2	NA	110	20	97	480	20	3,400	6,800
7421-93-4	**Endrin Aldehyde**	PESTICIDE		<2.14	<2.55	<2.07	<2.14	<2.2	NA	NA	NA	NA	NA	NA	NA	NA
53494-70-5	**Endrin Ketone**	PESTICIDE		<2.14	<2.55	<2.07	<2.14	<2.2	NA	NA	NA	NA	NA	NA	NA	NA

Bold Font (Black) – Concentrations above MDL but within Recommended Soil Cleanup Objectives (TAGM) and/ or NYSDEC Background Levels limit
Bold Font (Red) – Concentrations above Recommended Soil Cleanup Objectives (TAGM)

Table IV.A

Soil Sampling & Analysis – TAL Metals (EPA Method 6010/6020/7471)

CAS Number	Parameter Name	Parameter ID	B-1.1 (.5'-2.5')	B-1.2 (20'-22')	B-2.1 (.5'-2.5')	B-2.2 (20'-22')	B-3.1 (.5'-2.5')	B-3.2 (20'-22')	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	NYCRR 375 Protection of Groundwater	NYCRR 375 Restricted-Commercial	NYCRR 375 Restricted-Industrial
	Sample ID / Unit		*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*
7429-90-5	**Aluminum**	METAL	**5,559**	**52,588**	**6,093**	**7,779**	**5,605**	**4,638**	33,000	SB	NA	NA	NA	NA	NA	NA
7440-36-0	**Antimony**	METAL	0.682	3.65	0.745	1.06	0.344	0.218	NA	SB	NA	NA	NA	NA	NA	NA
7440-38-2	**Arsenic**	METAL	**1.79**	**2.01**	**2.1**	**0.432**	**0.617**	**0.308**	3.0-12	7.5 or SB	13c	16f	16f	16f	16f	16f
7440-39-3	**Barium**	METAL	**63.9**	**264**	**123**	**55.7**	**25.1**	**33.1**	15-600	300 or SB	350c	350f	400	820	400	10,000d
7440-41-7	**Beryllium**	METAL	**0.257**	**2.73**	**0.301**	**0.349**	**0.232**	**0.197**	0-1.75	.16 or SB	7.2	14	72	47	590	2,700
7440-43-9	**Cadmium**	METAL	**1.73**	**13.6**	**2.23**	**9.14**	**2.38**	**2.41**	0.1-1	1 or SB	2.5c	2.5f	4.3	7.5	9.3	60
7440-70-2	**Calcium**	METAL	**3,289**	**21,707**	**2,246**	**5,475**	**1,430**	**3,985**	130-35,000	SB	NA	NA	NA	NA	NA	NA
7440-47-3	**Chromium**	METAL	**14.5**	**165**	**16.3**	**19.6**	**11.3**	**11.3**	1.5-40	10 or SB	NA	NA	110	NA	NA	NA
16065-83-1	**Chromium, trivalent**	METAL	**14.5**	**165**	**16.3**	**19.6**	**11.3**	**11.3**	NA	NA	30c	36	180	NA	1,500	6,800
7440-48-4	**Cobalt**	METAL	**6.25**	**42.5**	**5.45**	**7.47**	**3.87**	**4.85**	2.5-60	30 or SB	NA	NA	NA	NA	NA	NA
7440-50-8	**Copper**	METAL	**85.2**	**106**	**27.4**	**22.1**	**13.9**	**11.8**	1.0-50	25 or SB	50	270	270	1,720	270	10,000d
7439-89-6	**Iron**	METAL	**9,662**	**86,383**	**11,725**	**23,455**	**8,796**	**8,523**	2,000-550,000	2,000 or SB	NA	NA	NA	NA	NA	NA
7439-92-1	**Lead**	METAL	**100**	**36.8**	**65.3**	**9.2**	**4.49**	**5.46**	4.0-61 or 200-500	SB	63c	400	400	450	1,000	3,900
7439-95-4	**Magnesium**	METAL	**2,192**	**25,431**	**2,582**	**5,436**	**2,923**	**3,189**	100-5,000	SB	NA	NA	NA	NA	NA	NA
7439-96-5	**Manganese**	METAL	**235**	**2,553**	**1,533**	**341**	**212**	**266**	50-5,000	SB	1,600c	2,000f	2,000f	2,000f	10,000d	10,000d
7439-97-6	**Mercury**	METAL	<0.1	**0.107**	**0.178**	**1.48**	<0.1	**0.11**	0.001-0.2	.1 or SB	.18c	0.81j	.81j	0.73	2.8j	5.7j
7440-02-0	**Nickel**	METAL	**12.3**	**102**	**11.3**	**15.2**	**9.16**	**9.2**	0.5-25	13 or SB	30	140	310	130	310	10,000d
7440-09-7	**Potassium**	METAL	**627**	**955**	**866**	**1,660**	**572**	**910**	8,500-43,000	SB	NA	NA	NA	NA	NA	NA
7440-22-4	**Silver**	METAL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA	SB	2	36	180	8.3	1,500	6,800
7440-23-5	**Sodium**	METAL	**95.6**	**1819**	**144**	**288**	**77.6**	**172**	6,000-8,000	SB	NA	NA	NA	NA	NA	NA
7440-28-0	**Thallium**	METAL	**0.191**	**0.715**	**0.393**	**3.03**	**0.421**	**0.418**	NA	SB	NA	NA	NA	NA	NA	NA
7440-62-2	**Vanadium**	METAL	**16.6**	**153**	**18**	**23.6**	**14.4**	**13.6**	1-300	150 or SB	NA	NA	NA	NA	NA	NA
7440-66-6	**Zinc**	METAL	**278**	**215**	**95.7**	**49.2**	**19.1**	**22.8**	9.0-50	20 or SB	109c	2,200	10,000d	2,480	10,000d	10,000d

Bold Font (Black) – Concentrations above MDL but within Recommended Soil Cleanup Objectives (TAGM) and/ or NYSDEC Background Levels limit
Bold Font (Red) – Concentrations above Recommended Soil Cleanup Objectives (TAGM)

Table IV.B

Soil Sampling & Analysis – TAL Metals (EPA Method 6010/6020/7471)

CAS Number	Parameter Name	Parameter ID	B-4.1 (.5'-2.5')	B-4.2 (20'-22')	B-5.1 (.5'-2.5')	B-5.2 (20'-22')	B-6.1 (.5'-2.5')	B-6.2 (20'-22')	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	NYCRR 375 Protection of Groundwater	NYCRR 375 Restricted-Commercial	NYCRR 375 Restricted-Industrial
	Sample ID / Unit		*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*
7429-90-5	**Aluminum**	METAL	**12,889**	**7,495**	**6,283**	**7,399**	**3,726**	**7,393**	33,000	SB	NA	NA	NA	NA	NA	NA
7440-36-0	**Antimony**	METAL	0.496	0.538	0.358	2.11	0.356	0.563	NA	SB	NA	NA	NA	NA	NA	NA
7440-38-2	**Arsenic**	METAL	**1.13**	**0.569**	**3.15**	<0.1	<0.1	<0.1	3.0-12	7.5 or SB	13c	16f	16f	16f	16f	16f
7440-39-3	**Barium**	METAL	**87.4**	**67.9**	**122**	**42.7**	**24.8**	**37**	15-600	300 or SB	350c	350f	400	820	400	10,000d
7440-41-7	**Beryllium**	METAL	**0.456**	**0.229**	**0.316**	**0.27**	**0.197**	**0.418**	0-1.75	.16 or SB	7.2	14	72	47	590	2,700
7440-43-9	**Cadmium**	METAL	**2.95**	**2.4**	**2.98**	**3.12**	**2.71**	**3.6**	0.1-1	1 or SB	2.5c	2.5f	4.3	7.5	9.3	60
7440-70-2	**Calcium**	METAL	**9,009**	**9,393**	**14,223**	**2,978**	**638**	**3,170**	130-35,000	SB	NA	NA	NA	NA	NA	NA
7440-47-3	**Chromium**	METAL	**25.5**	**21.4**	**15.1**	**20.6**	**10.7**	**16.6**	1.5-40	10 or SB	NA	NA	110	NA	NA	NA
16065-83-1	**Chromium, trivalent**	METAL	**25.5**	**21.4**	**15.1**	**20.6**	**10.7**	**16.6**	NA	NA	30c	36	180	NA	1,500	6,800
7440-48-4	**Cobalt**	METAL	**7.95**	**6.86**	**4.47**	**6.04**	**3.23**	**7.33**	2.5-60	30 or SB	NA	NA	NA	NA	NA	NA
7440-50-8	**Copper**	METAL	**33.8**	**23.4**	**48.6**	**16.9**	**9.97**	**15.4**	1.0-50	25 or SB	50	270	270	1,720	270	10,000d
7439-89-6	**Iron**	METAL	**16,513**	**13,849**	**10,300**	**14,049**	**6,663**	**14,644**	2,000-550,000	2,000 or SB	NA	NA	NA	NA	NA	NA
7439-92-1	**Lead**	METAL	**67.1**	**29.4**	**217**	**26.3**	**7.87**	**6.79**	4.0-61 or 200-500	SB	63c	400	400	450	1,000	3,900
7439-95-4	**Magnesium**	METAL	**3,211**	**6,762**	**3,723**	**3,759**	**1,612**	**4,076**	100-5,000	SB	NA	NA	NA	NA	NA	NA
7439-96-5	**Manganese**	METAL	**334**	**308**	**231**	**310**	**259**	**396**	50-5,000	SB	1,600c	2,000f	2,000f	2,000f	10,000d	10,000d
7439-97-6	**Mercury**	METAL	**0.156**	**0.112**	**0.235**	**0.111**	**0.101**	**0.125**	0.001-0.2	.1 or SB	.18c	0.81j	.81j	0.73	2.8j	5.7j
7440-02-0	**Nickel**	METAL	**16.5**	**15.2**	**13.9**	**12.9**	**7.15**	**14.3**	0.5-25	13 or SB	30	140	310	130	310	10,000d
7440-09-7	**Potassium**	METAL	**1,193**	**1,388**	**758**	**184**	**636**	**1,363**	8,500-43,000	SB	NA	NA	NA	NA	NA	NA
7440-22-4	**Silver**	METAL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA	SB	2	36	180	8.3	1,500	6,800
7440-23-5	**Sodium**	METAL	**494**	**349**	**189**	**130**	**119**	**192**	6,000-8,000	SB	NA	NA	NA	NA	NA	NA
7440-28-0	**Thallium**	METAL	**0.214**	**0.243**	<0.1	**1.27**	**0.493**	**0.263**	NA	SB	NA	NA	NA	NA	NA	NA
7440-62-2	**Vanadium**	METAL	**30.5**	**24**	**34.5**	**23.5**	**9.43**	**23.5**	1-300	150 or SB	NA	NA	NA	NA	NA	NA
7440-66-6	**Zinc**	METAL	**73.9**	**49.1**	**148**	**42.2**	**18.8**	**35**	9.0-50	20 or SB	109c	2,200	10,000d	2,480	10,000d	10,000d

Bold Font (Black) – Concentrations above MDL but within Recommended Soil Cleanup Objectives (TAGM) and/ or NYSDEC Background Levels limit
Bold Font (Red) – Concentrations above Recommended Soil Cleanup Objectives (TAGM)

Table IV.C

Soil Sampling & Analysis – TAL Metals (EPA Method 6010/6020/7471)

Parameter Name	Parameter ID	[redacted]	B-7.1 (.5'-2.5')	B-7.2 (20'-22')	B-8.1 (.5'-2.5')	B-8.2 (20'-22')	B-9.1 (.5'-2.5')	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	NYCRR 375 Protection of Groundwater	NYCRR 375 Restricted-Commercial	NYCRR 375 Restricted-Industrial
Sample ID / Unit			*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*
Aluminum	METAL		**6,011**	**7,109**	**4,564**	**6,097**	**4,571**	33,000	SB	NA	NA	NA	NA	NA	NA
Antimony	METAL		0.665	0.4	1.72	0.614	0.234	NA	SB	NA	NA	NA	NA	NA	NA
Arsenic	METAL		0.2	0.158	**0.744**	<0.1	**0.837**	3.0-12	7.5 or SB	13c	16f	16f	16f	16f	16f
Barium	METAL		**34.2**	**41.1**	**28.2**	**28.6**	**31.2**	15-600	300 or SB	350c	350f	400	820	400	10,000d
Beryllium	METAL		**0.268**	**0.261**	**0.206**	**0.319**	**0.23**	0-1.75	.16 or SB	7.2	14	72	47	590	2,700
Cadmium	METAL		**4.06**	**4.33**	**1.41**	**1.69**	**4.84**	0.1-1	1 or SB	2.5c	2.5f	4.3	7.5	9.3	60
Calcium	METAL		**2,076**	**3,428**	**1,410**	**2,121**	**1,733**	130-35,000	SB	NA	NA	NA	NA	NA	NA
Chromium	METAL		**17.4**	**17.3**	**11.1**	**16.1**	**10.4**	1.5-40	10 or SB	NA	NA	110	NA	NA	NA
Chromium, trivalent	METAL		**17.4**	**17.3**	**11.1**	**16.1**	**10.4**	NA	NA	30c	36	180	NA	1,500	6,800
Cobalt	METAL		**4.74**	**6.82**	**3.05**	**5.13**	**4.95**	2.5-60	30 or SB	NA	NA	NA	NA	NA	NA
Copper	METAL		**14.8**	**16.9**	**9.7**	**10.5**	**17.1**	1.0-50	25 or SB	50	270	270	1,720	270	10,000d
Iron	METAL		**9,932**	**13,384**	**7,800**	**10,735**	**7,484**	2,000-550,000	2,000 or SB	NA	NA	NA	NA	NA	NA
Lead	METAL		**7.1**	**7.81**	**16.8**	**4.73**	**20.9**	4.0-61 or 200-500	SB	63c	400	400	450	1,000	3,900
Magnesium	METAL		**2,432**	**4,318**	**1,743**	**2,930**	**1,785**	100-5,000	SB	NA	NA	NA	NA	NA	NA
Manganese	METAL		**268**	**320**	**146**	**327**	**245**	50-5,000	SB	1,600c	2,000f	2,000f	2,000f	10,000d	10,000d
Mercury	METAL		**0.106**	**0.125**	**0.101**	**0.103**	**0.106**	0.001-0.2	.1 or SB	.18c	0.81j	.81j	0.73	2.8j	5.7j
Nickel	METAL		**10.7**	**14.2**	**7.54**	**10.9**	**8.6**	0.5-25	13 or SB	30	140	310	130	310	10,000d
Potassium	METAL		**865**	**1,267**	**602**	**1,066**	**643**	8,500-43,000	SB	NA	NA	NA	NA	NA	NA
Silver	METAL		<0.1	<0.1	<0.1	<0.1	**0.263**	NA	SB	2	36	180	8.3	1,500	6,800
Sodium	METAL		**134**	**270**	**104**	**172**	**120**	6,000-8,000	SB	NA	NA	NA	NA	NA	NA
Thallium	METAL		**1.21**	**0.803**	**0.151**	<0.1	**2.13**	NA	SB	NA	NA	NA	NA	NA	NA
Vanadium	METAL		**15.4**	**23.6**	**12.2**	**17.4**	**11.1**	1-300	150 or SB	NA	NA	NA	NA	NA	NA
Zinc	METAL		**35.9**	**38.6**	**27.6**	**23.9**	**41.5**	9.0-50	20 or SB	109c	2,200	10,000d	2,480	10,000d	10,000d

Bold Font (Black) – Concentrations above MDL but within Recommended Soil Cleanup Objectives (TAGM) and/ or NYSDEC Background Levels limit
Bold Font (Red) – Concentrations above Recommended Soil Cleanup Objectives (TAGM)

Table V

Groundwater Sampling & Analysis – TAL Metals (EPA Method 6010/6020/7471)

CAS Number	Parameter Name / Sample ID	Parameter ID	MW-1	MW-1	MW-2	MW-2	MW-4	MW-4	MW-6	MW-6	MW-8	MW-8		NYSDEC TOGS 1.1.1. Ambient Water Quality Standards and Guidance Values
	Unit		*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*FILTERED*		*ug/L*
7429-90-5	**Aluminum, Al**	METAL	**29.5**	**1.82**	**112**	**8.94**	**40.7**	**0.506**	**37**	**0.24**	**7.85**	**0.177**		0.1
7440-36-0	**Antimony, Sb**	METAL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.003
7440-38-2	**Arsenic, As**	METAL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.025
7440-39-3	**Barium, Ba**	METAL	**0.262**	<0.1	**1.18**	<0.1	**0.647**	<0.1	**0.421**	<0.1	<0.1	<0.1		1
7440-41-7	**Beryllium, Be**	METAL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.003
7440-43-9	**Cadmium, Cd**	METAL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.005
7440-70-2	**Calcium, Ca**	METAL	**22.7**	**6.84**	**53.6**	**6.53**	**142**	**40.3**	**91.4**	**28.2**	**44.8**	**20.5**		NA
7440-47-3	**Chromium, Cr**	METAL	<0.1	<0.1	**0.289**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.05
16065-83-1	**Chromium, trivalent**	METAL	<0.1	<0.1	**0.289**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		NA
7440-48-4	**Cobalt, Co**	METAL	<0.1	<0.1	**0.161**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		NA
7440-50-8	**Copper, Cu**	METAL	**0.117**	<0.1	**0.483**	<0.1	**0.189**	<0.1	**0.172**	<0.1	<0.1	<0.1		0.2
7439-89-6	**Iron, Fe**	METAL	**52.4**	**1.65**	**228**	**8.77**	**74.3**	**0.707**	**91.9**	**0.38**	**14.7**	**0.303**		0.3
7439-92-1	**Lead, Pb**	METAL	**0.137**	<0.1	**0.203**	<0.1	**0.231**	<0.1	**0.16**	<0.1	<0.1	<0.1		0.025
7439-95-4	**Magnesium, Mg**	METAL	**19.7**	**3.09**	**79.9**	**3.67**	**50.9**	**8.04**	**38.6**	**8.93**	**11.7**	**4.54**		35
7439-96-5	**Manganese, Mn**	METAL	**3.06**	**0.109**	**11**	**0.393**	**2.19**	**0.149**	**3.91**	<0.1	**0.844**	<0.1		0.3
7439-97-6	**Mercury, Hg**	METAL	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		0.0007
7440-02-0	**Nickel, Ni**	METAL	<0.1	<0.1	**0.292**	<0.1	<0.1	<0.1	**0.103**	<0.1	<0.1	<0.1		0.1
7440-09-7	**Potassium, K**	METAL	**9.39**	**2.22**	**28**	**3.51**	**16.8**	**3.29**	**12.4**	**2.65**	**6.33**	**2.31**		NA
7782-49-2	**Selenium, Se**	METAL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.01
7440-22-4	**Silver, Ag**	METAL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.05
7440-23-5	**Sodium, Na**	METAL	**12.2**	**4.87**	**11.9**	**4.42**	**33.6**	**16**	**46.1**	**22.6**	**58**	**28.7**		20
7440-28-0	**Thallium, Ti**	METAL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.0005
7440-62-2	**Vanadium, V**	METAL	<0.1	<0.1	**0.288**	<0.1	**0.102**	<0.1	**0.101**	<0.1	<0.1	<0.1		NA
7440-66-6	**Zinc, Zn**	METAL	**0.232**	<0.1	**0.813**	<0.1	**0.392**	<0.1	**0.299**	<0.1	<0.1	<0.1		2

Bold Font (Black) – Concentrations above MDL but within Ambient Water Quality Standards and Guidance Values limit
Bold Font (Red) – Concentrations above Ambient Water Quality Standards and Guidance Values (NYS DEC TOGS)

SOIL VAPOR ANALYSIS RESULTS

ONLY DETECTED COMPOUNDA ARE LISTED

TABLE 1

SOURCE OF SAMPLE **Project #579.2V / Crescent Street**

ANALYTE / Sample ID	V-1	V-2	V-3	V-4	V-5
124-Trimethylbenzene	3.3				4.1
2,2,4-Trimethylpentane	9.2				
Acetone	4.3	1.2	1.5		1.9
Benzene	2.9				0.55
Ethyl alcohol	21				23
Ethyl Benzene	1.8				0.98
Hexane	2.2				
m + p Xylene	6				4.5
Methyl Ethyl Ketone	9.3				
o Xylene	1.5				0.94
p-Ethyltoluene	2.9	0.74			2.6
Tetrachloroethene			0.32		19
Toluene	23	2.2	0.89	0.75	11
Total	87.4	4.14	2.71	0.75	68.57

ALL CONCENTRATIONS IN PPBV

TABLE 2

SOURCE OF SAMPLE **Project #579.2V / Crescent Street**

ANALYTE / Sample ID	V-1	V-2	V-3	V-4	V-5
124-Trimethylbenzene	16.23				20.17
2,2,4-Trimethylpentane	42.92				
Acetone	10.23	2.85	3.57		4.52
Benzene	9.26				1.76
Ethyl alcohol	39.54				43.31
Ethyl Benzene	7.81				4.25
Hexane	7.76				
m + p Xylene	26.08				19.56
Methyl Ethyl Ketone	27.40				
o Xylene	6.52				4.09
p-Ethyltoluene	14.24	3.63			12.77
Tetrachloroethene					128.92
Toluene	86.60	8.28	3.35	2.82	41.42
Total	294.58	14.77	6.92	2.82	280.75

ALL CONCENTRATIONS IN UG/M3

Appendix 1

Citizen Participation Plan

The NYC Office of Environmental Remediation and Forte Italia/Marco Hotel, LLC has established this Citizen Participation Plan because the opportunity for citizen participation is an important component of the NYC Brownfield Cleanup Program. This Citizen Participation Plan describes how information about the project will be disseminated to the Community during the remedial process. As part of its obligations under the NYC VCP, Forte Italia/Marco Hotel, LLC will maintain a repository for project documents and provide public notice at specified times throughout the remedial program. This Plan also takes into account potential environmental justice concerns in the Community that surrounds the project Site. Under this Citizen Participation Plan, project documents and work plans are made available to the public in a timely manner. Public comment on work plans is strongly encouraged during public comment periods. Work plans are not approved by the NYC Office of Environmental Remediation (OER) until public comment periods have expired and all comments are formally reviewed. An explanation of cleanup plans in the form of a public meeting or informational session is available upon request to OER's project manager assigned to this Site, Zach Schreiber who can be contacted about these issues or any others questions, comments or concerns that arise during the remedial process at (212) 788-8841.

Project Contact List. OER has established a Site Contact List for this project to provide public notices in the form of fact sheets to interested members of the Community. Communications will include updates on important information relating to the progress of the cleanup program at the Site as well as to request public comments on the cleanup plan. The Project Contact List includes owners and occupants of adjacent buildings and homes, principal administrators of nearby schools, hospitals and day care centers, the public water supplier that serves the area, established document repositories, the representative Community Board, City Council members, other elected representatives and any local Brownfield Opportunity Area (BOA) grantee organizations. Any member of the public or organization will be added to the Site Contact List on request. A copy of the Site Contact List is maintained by OER's project manager. If you would like to be added to the Project Contact List, contact NYC OER at (212) 788-8841 or by email at brownfields@cityhall.nyc.gov.

Repositories. A document repository is maintained in the nearest public library that maintains evening and weekend hours. This document repository is intended to house, for community review, all principal documents generated during the cleanup program including project applications, Remedial Investigation plans and reports, draft and final Remedial Action plans and reports, the Site Management Plan, the Notice of Completion and all public notices and fact sheets produced during the lifetime of the remedial project. Forte Italia/Marco Hotel, LLC will inspect the repositories to ensure that they are fully populated with project information.

The repository for this project is:

Queens Library – Court Square Branch

25-01 Jackson Avenue, Long Island City, NY 11101

Tel: (718) 937-2790

Hours of Operation:

Monday – 10am – 9pm
Tuesday – 1pm – 9pm
Wednesday – 10am – 9pm
Thursday - 10am – 9pm
Friday – 10am – 6pm
Saturday – 10am – 5:30pm
Sunday – closed

Digital Documentation. NYC OER strongly encourages the use of digital documents in repositories as a means of minimizing paper use while also increasing convenience in access and ease of use.

Public Notice and Public Comment. Public notice to all members of the Project Contact List is required at three major steps during the performance of the cleanup program (listed below) and at other points that may be required by OER. Notices will include Fact Sheets with descriptive project summaries, updates on recent and upcoming project activities, repository information, and important phone and email contact information. All notices will be prepared by Forte Italia/Marco Hotel, LLC reviewed and approved by OER prior to distribution and mailed by Forte Italia/Marco Hotel, LLC, who is obligated to submit a certification of mailing to OER

within five days of the mailing date. Public comment is solicited in public notices for all work plans developed under the NYC Brownfield Cleanup Program. Final review of all work plans by OER will consider all public comments. Approval will not be granted until the public comment period has been completed.

Citizen Participation Milestones. Public notice and public comment activities occur at several steps during a typical NYC VCP project. See the following page, which identifies when during the NYC VCP public notices are issued: These steps include:

- **Public Notice of the availability of the Remedial Investigation Report and Remedial Action Work Plan and a 30-day public comment period on the Remedial Action Work Plan.**

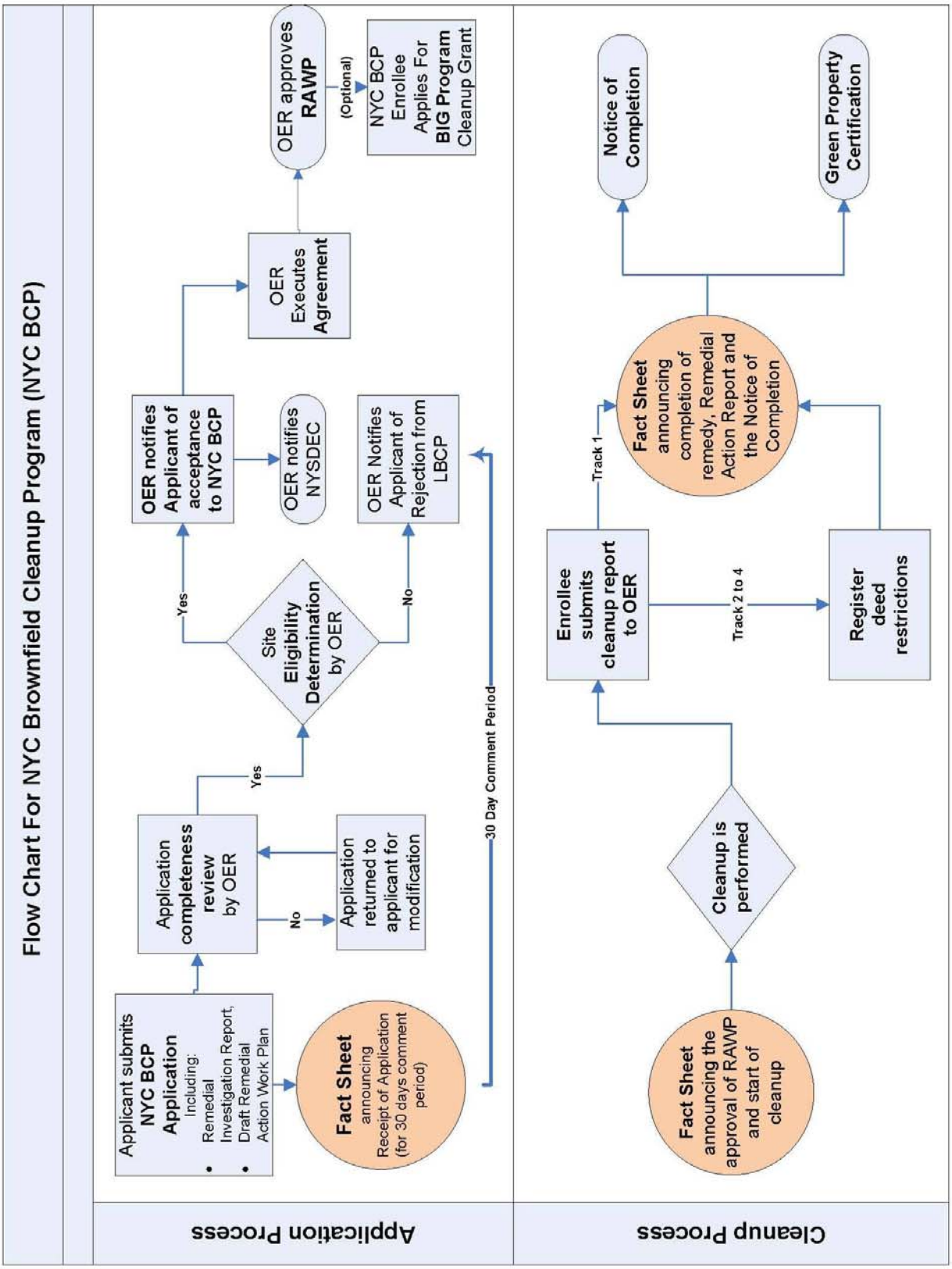
  Public notice in the form of a Fact Sheet is sent to all parties listed on the Site Contact List announcing the availability of the Remedial Investigation Report and Remedial Action Work Plan and the initiation of a 30-day public comment period on the Remedial Action Work Plan. The Fact Sheet summarizes the findings of the RIR and provides details of the RAWP. The public comment period will be extended an additional 15 days upon public request. A public meeting or informational session will be conducted by OER upon request.

- **Public Notice announcing the approval of the RAWP and the start of remediation**

  Public notice in the form of a Fact Sheet is sent to all parties listed on the Site Contact List announcing the approval of the RAWP and the start of remediation.

- **Public Notice announcing the completion of remediation, designation of Institutional and Engineering Controls and issuance of the Notice of Completion**

  Public notice in the form of a Fact Sheet is sent to all parties listed on the Site Contact List announcing the completion of remediation, providing a list of all Institutional and Engineering Controls implemented for to the Site and announcing the issuance of the Notice of Completion.


Flow Chart For NYC Brownfield Cleanup Program (NYC BCP)
Application Process
Cleanup Process
Applicant submits NYC BCP Application
Including:
Remedial Investigation Report,
Draft Remedial Action Work Plan
Fact Sheet announcing Receipt of Application (for 30 days comment period)
Application completeness review by OER
No
Application returned to applicant for modification
Yes
Site Eligibility Determination by OER
Yes
OER notifies Applicant of acceptance to NYC BCP
OER notifies NYSDEC
No
OER Notifies Applicant of Rejection from LBCP
OER Executes Agreement
OER approves RAWP
(Optional)
NYC BCP Enrollee Applies For BIG Program Cleanup Grant
30 Day Comment Period
Fact Sheet announcing the approval of RAWP and start of cleanup
Cleanup is performed
Enrollee submits cleanup report to OER
Track 1
Track 2 to 4
Register deed restrictions
Fact Sheet announcing completion of remedy, Remedial Action Report and the Notice of Completion
Notice of Completion
Green Property Certification

Appendix 2

SUSTAINABILITY STATEMENT

The Sustainability Statement is a process employed by OER to encourage consideration of the benefits of sustainable remediation and development during the formative project planning process. The Sustainability Statement provides a summary of sustainability efforts to be employed by the Enrollee or its contracting team.

This Sustainability Statement summarizes sustainable activities and green remediation efforts to be employed under this Remedial Action Work Plan (RAWP). Forte Italia LLC /Marco Hotel proposes the following means to address these goals in the remediation and redevelopment.

Reuse of Clean, Recyclable Materials. Reuse of clean, recyclable materials reduces consumption of non-renewable virgin resources and can provide energy savings and greenhouse gas reduction since these materials can be locally-derived.

An estimate of the mass (tonnage) of clean, non-virgin materials (reported by type of material) reused under this plan will be quantified and reported in the RAR.

Reduce Consumption of Virgin and Non-Renewable Resources. Reduced consumption of virgin and non-renewable resources lowers the overall environmental impact of the project on the region by conserving these resources.

An estimate of the mass (tonnage) of virgin and non-renewable resources, the use of which will be avoided under this plan, will be quantified and reported in the RAR.

Reduced Energy Consumption and Promotion of Greater Energy Efficiency. Reduced energy consumption lowers greenhouse gas emissions, improves local air quality, lessens in-city power generation requirements, can lower traffic congestion, and provides substantial cost savings.

Best efforts will be made to quantify energy efficiencies achieved during the remediation and will be reported in the Remedial Action Report (RAR). Where energy savings cannot be easily quantified, a gross indicator of the amount of energy saved or the means by which energy savings was achieved will be reported.

Conversion to Clean Fuels. Use of clean fuel improves NYC's air quality by reducing harmful emissions.

An estimated volume of clean fuels used during remedial activities will be quantified and reported in the RAR.

Recontamination Control. Recontamination after cleanup and redevelopment is completed undermines the value of work performed, may result in a property that is less protective of public health or the environment, and may necessitate additional cleanup work later or impede future redevelopment. Recontamination can arise from future releases that occur within the property or by influx of existing contamination from off-Site.

Under future conditions, building recontamination from potential off-site sources will be prevented through the use of a vapor/waterproofing membrane beneath the concrete foundation and foundation wall surfaces.

An estimate of the area of the Site that utilizes recontamination controls under this plan will be reported in the RAR in total acres and percentage of total Site area.

Storm-Water Retention. Storm-water retention improves water quality by lowering the rate of combined storm-water and sewer discharges to NYC's sewage treatment plants during periods of precipitation, and reduces the volume of untreated influent to local surface waters.

An estimate of the enhanced storm-water retention capability of the brownfield redevelopment project will be included in the RAR.

Linkage with Green Building. Green buildings provide a multitude of benefits to the city across a broad range of areas, such as reduction of energy consumption, conservation of resources, and reduction in toxic materials use.

The number of Green Buildings that are associated with this brownfield redevelopment property will be reported in the RAR. The total square footage of green building space created as a function of this brownfield redevelopment will be quantified for residential, commercial and industrial/manufacturing uses.

Paperless Brownfield Cleanup Program. Forte Italia LLC/Marco Hotel is participating in OER's Paperless Brownfield Cleanup Program. Under this program, submission of electronic documents will replace submission of hard copies for the review of project documents,

communications and milestone reports. A gross estimate of the mass (pounds) of paper saved under this plan will be reported in the RAR.

Low-Energy Project Management Program. Forte Italia LLC/Marco Hotel is participating in OER's low-energy project management program. Under this program, whenever possible, meetings are held using remote communication technologies, such as videoconferencing and teleconferencing to reduce energy consumption and traffic congestion associated with personal transportation. A gross estimate of the number of miles of personal transportation that is conserved in this process, and the number of commuter trips within NYC that are avoided will be quantified and reported in the RAR.

Grey Water Reuse. Reuse of gray water, including harvested rainwater, in place of water from NYC's water distribution system reduces demand on the city's water supply and conserves this valuable resource.

A gross estimate of the value of gray water reuse of the brownfield redevelopment project will be reported (gallons per day).

Appendix 3
Health and Safety Plan

Forte Italia LLC/41-10 Crescent Street
41-10 Crescent Street
Block 414, Lot 23
Long Island City, Queens, NY
Job # 208094

Health & Safety Plan

Scope of Service:	Soil Excavation Air Monitoring (Dust & VOC) Possible UST Removal Soil & Ground Water Sampling Soil Borings
Contaminants of Concern:	Metals PAHs
Approved On:	January 30, 2013

Prepared by

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Parsippany, NJ 07054
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Parsippany, NJ Lawrenceville, NJ New York, NY

Environmental Consulting & Remediation Firm

TABLE OF CONTENTS

SECTION **PAGE**

ATTACHMENTS

SECTION 1.0
PROJECT IDENTIFICATION

CLIENT NAME:	Forte Italia LLC
CLIENT ADDRESS:	253 Fifth Avenue, 6th Floor New York, NY 10016
CLIENT CODE:	20FO027
EWMA PROJECT No.:	208094
PROJECT NAME:	Forte Italia LLC/41-10 Crescent Street
LOCATION/ADDRESS:	41-10 Crescent Street (Block 414, Lot 23) Long Island City, Queens, NY
EWMA PROJECT MANAGER:	Don Richardson
EWMA SITE MANAGER:	Richard Arnold
EWMA SITE SAFETY OFFICER:	Daniel DiRocco
PLAN VALID FROM:	January 30, 2013
PLAN EXPIRES:	**Plan shall be revised periodically upon discovery of new contaminants of concern or significant increases in health or safety hazards**

- End of Section -

SECTION 2.0
INTRODUCTION

The purpose of this Health and Safety Plan (HASP) is to identify, evaluate and control health and safety hazards, and to provide for emergency response during field activities. All employees of Environmental Waste Management Associates, LLC (EWMA), as well as its contractors and subcontractors who have agreed to abide by this HASP and who are involved in field activities on this project, will be bound by these provisions. Contractors and subcontractors who abide by this HASP, but whose work activities are not covered by this HASP must develop and follow their own site specific HASP. As an example, tank removal and cleaning as well as confined space entry work will be performed by subcontractors. As such, these tasks are not specifically covered by this HASP, and the subcontractors performing these tasks must develop and follow their own site specific HASP, training and confined space equipment.

This site-specific HASP is based on a review and evaluation of the potential hazards and risks associated with this project. It outlines the health and safety procedures, and the equipment required, needed to minimize the potential for harm to field personnel and site visitors. Since work activities, site conditions and exposures to various combinations of contaminants which may be present are variable, the potential for adverse health effects associated with field activities on this site cannot be predicted with confidence.

2.1 SITE DESCRIPTION & HISTORY

Forte Italia LLC/Marco Hotel Site (VCP ID# 12CVCP046Q) is comprised of a 30,000 sq. feet parcel of land (200' x 150') and identified as Lot 23, Block 414 on the Long Island City section of Queens County, New York Tax Map. According to a review of records on file with the New York City Department of Buildings (NYCDOB), this property has been assigned an E-designation (OER Project # 09EHAZ191Q, CEQR 00DCP055Q) for potential presence of hazardous materials due to its past use as a Gasoline dispensing station and an auto-repair garage.

The subject site is currently developed as a paved parking lot and a pre-fabricated metal garage. It is bordered to the north by 41st Avenue; to the east by Crescent Street; to the south by a newly erected multiple-story building; and to the west by 24th Street. The depth to groundwater beneath the Site ranges between 17 and 22 feet below land surface (ft bls) and not likely influenced by subsurface structures and impediments such as building foundations, sewer lines, utility vaults. Historically, the Subject Site contained a gasoline dispensing station and an auto repair shop located on the southeast corner of the lot.

Proposed Redevelopment Plan

The planned redevelopment of the Site entails the construction of a single-use development that consists of a 17-story hotel structure atop a one-story commercial base with two levels of subterranean parking. The building will include retail spaces on the podium levels. The current zoning designation is manufacturing (M1-5/10-3

Special DST: UC). The proposed site use is consistent with existing zoning for the property. The subterranean level will cover the entire footprint of the site. The ground level building will cover the majority of the site, the remaining space will consist of a paved access ramp to the subterranean parking, trash dumpsters, handicap parking, and landscape areas contained in planters. Since the subterranean parking will encompass the entire site footprint, the portions at the ground level outside the building footprint will be constructed directly above the subsurface structure. To allow for the construction of the proposed structure the entire footprint of the site will be excavated to an approximate depth of 17-22 feet below ground surface. Based on the site dimensions (30,000 ft^2) and planned depth of the excavation (17 feet) approximately 510,000 ft^3 or 18,900 yd^3 of soil will be excavated. Based on an estimate weight of 1.5 tons/yd^3 this is a total of 28,333 tons of soil. During the recent Phase II investigation ground water was encountered at a depth of 17-22 feet below ground surface, therefore it is expected the excavation will not extend into the ground water table.

See the List of Attachments for a site location map, and a street map identifying the location and possible routes to the nearest hospital.

2.2 KEY PERSONNEL

2.2.1 EWMA Project Manager: Don Richardson

The EWMA Project Manager has the following responsibilities:

- To provide the EWMA Health and Safety Officer (HSO) with project-related health and safety information.
- To have a site-specific Health & Safety Plan (HASP) prepared.
- To implement the HASP.
- To see that the project is performed in a manner consistent with applicable local, state and federal regulations..
- To monitor compliance with the HASP.

The EWMA Project Manager has the authority to take the following actions:

- To suspend field activities, if the health and safety of field personnel are endangered, pending further consideration by the EWMA HSO.
- To suspend an individual from field activities for infractions of the HASP, pending further consideration by the EWMA HSO.

2.2.2 EWMA HSO: Ken Bickerton, CIH, CSP

The EWMA HSO has the following responsibilities:

- To consult with the EWMA Project Manager in project-related matters of health and safety.
- To monitor compliance with the HASP.

- To assist the EWMA Project Manager in complying with the terms of this HASP, and applicable regulations.
- To verify that on-site personnel are properly trained and medically qualified to carry out their duties.

The EWMA HSO has the authority to take the following actions:

- To suspend work or otherwise limit personnel exposure if a HASP appears to be unsuitable or inadequate.
- To direct personnel to modify any work practices that are deemed to be hazardous to health and safety.
- To remove field personnel from the project if their physical actions or mental condition endangers their own health and safety, or that of their coworkers.

2.2.3 EWMA Site Safety Officer: Daniel DiRocco

The EWMA Site Safety Officer (EWMA SSO) and EWMA Alternate Site Safety Officer(s) (Alternate EWMA SSO) have the following responsibilities:

- To direct on-site health and safety activities.
- To report safety-related incidents to the EWMA Project Manager and EWMA HSO.
- To assist the EWMA Project Manager in all aspects of implementing the HASP.
- To maintain an adequate supply of health and safety equipment on-site, as specified in the HASP.
- To observe on-site health and safety activities, as specified in the HASP, and report results to the EWMA Project Manager and the EWMA HSO.

The EWMA SSO has the authority to take the following actions:

- To suspend field activities, if the health and safety of field personnel are endangered, pending further consideration by the EWMA HSO.
- To suspend an individual from field activities for infractions of the HASP, pending further consideration by the EWMA HSO.

- End of Section -

3.1 PERSONNEL MEDICAL CLEARANCE

Prior to working at this site, EWMA assigned employees must: 1) have been certified by a licensed, EWMA-approved physician as being physically able to perform their assigned field work, and to use the Personal Protective Equipment (PPE) which will be required for this project, in accordance with the provisions of OSHA Regulation 29 CFR 1910.120(f)(2) have successfully completed an EWMA 40-hour basic health and safety training course (Level C) for field personnel or its equivalent, and 3) passed a Qualitative Respirator Fit Test. Site managers and supervisors must have successfully completed an 8-hour managers' health and safety course, in addition to the other clearance requirements.

EWMA subcontractor employees must also have similar medical, training, and respirator fit clearances and they will be required to provide proof of clearance before beginning work.

3.2 HAZARD TRAINING

All personnel working on-site who have potential exposures to health or safety hazards shall be thoroughly trained as specified in OSHA Regulations 29 CFR 1910.120(e). This training will include: (1) Attendance at an initial 40-hour basic health and safety training course off the Site; (2) At least three days of actual field experience under the direct supervision of a trained, experienced supervisor; (3) On-site, site-specific training; and (4) an 8-hour annual update in the basic health and safety training course. EWMA personnel may also receive specific topic training throughout the year. This training may include blood-borne pathogen training, low-level radioactivity safety, ergonomics updates, and newsletters/bulletins with pertinent or applicable information.

In addition to the above, on-site Managers and supervisors who are directly responsible for, or who supervise employees engaged in hazardous waste operations must also receive: (1) 8-hours of site supervisor training; and (2) additional training at the time of job assignment on such topics as, but not limited to, the company's safety and health program and the associated employee training program; personal protective equipment program; spill containment program; air quality monitoring; emergency response; monitoring equipment usage and calibration; and, health hazard monitoring procedures and techniques, as per 1910.120(e)(4.

At the time of job assignment, special training will be provided to on-site personnel who may be exposed to unique or special hazards not covered by the initial 40-hour basic health and safety course. If unique or special hazards are unexpectedly encountered, specialized training will be provided before work proceeds.

3.3 INCIDENT REPORTING

An EWMA Health & Safety Incident Report will be filed for any incident involving personnel working at this Site. Situations covered by this policy include, but are not limited to, fires, explosions, illnesses, injuries and motor vehicle collisions. These reports must be sent to the EWMA HSO within 24 hours of the incident. Worker's Compensation Insurance reports for EWMA employees must be filed within 48 hours of each incident or illness which results from work-related activities and requires medical attention. See the Attachment List for a copy of the EWMA Health & Safety Incident Report. The EWMA SSO or Project Manager will complete this form if needed.

3.4 ILLUMINATION, SANITATION AND CONFINED SPACE ENTRY

3.4.1 Illumination

All major work tasks are expected to occur during daylight hours. The illumination requirements set forth by OSHA Regulations 29 CFR 1910.120 (m) will be met.

3.4.2 Sanitation

The sanitation requirements regarding potable and non-potable waters, toilet facilities and washing facilities will be followed as set forth in OSHA Regulations 29 CFR 1910.120(n).

3.4.3 Confined Space Entry

Confined Space Entries are not anticipated.

3.5 RESPIRATOR MAINTENANCE, FITTING AND DECONTAMINATION

Respirators, if used, will be cleaned daily according to procedures described below. Cartridges will be replaced either daily or if breakthrough is detected at any time while in use. The following checks will be performed daily, in addition to the above:

- Exhalation valve - pull off plastic cover and check valve for debris or for tears in the neoprene valve, which could cause leakage.
- Inhalation valves - screw off both cartridges and visually inspect neoprene valves for tears. Make sure that the inhalation valves and cartridge receptacle gaskets are in place.
- Make sure a protective lens cover is in place.
- Make sure you have the correct cartridges.
- Make sure that the facepiece harness is not damaged. The serrated portion of the harness can fragment which will prevent proper face seal adjustment.
- Make sure the speaking diaphragm retainer ring is hand tight.

NOTE: <u>The respirator MUST be Leak-Tested before each use</u>.

Test the respirator for leakage by using both the positive- and the negative-pressure method. Lightly place your palm over the exhalation valve cover. Exhale gently. The body of the respirator should bulge slightly outward from your face. If any leakage is detected around the face seal, readjust the head harness straps and repeat the test until there is no leakage. If leakage is detected other than in the face seal, the condition must be investigated and corrected before another test is made. The negative pressure test must also be made. Lightly place your palms or some impervious material, like Saran Wrap® over the cartridges or filter holders. Inhale gently. The face-piece should collapse against the face. The respirator must pass these two tightness tests before the respirator is used. The respirator will not furnish protection unless all inhaled air is drawn through suitable cartridges or filters. **NOTE: Respirators provide no protection in oxygen-deficient atmospheres!**

After use, follow these steps to clean your respirator:

- Wash with Alconox® solution and brush gently. (This step will remove any soil/solid particulate matter that may have been collected on the respirator during field activities.)
- Rinse with distilled/de-ionized water, making sure that the inhalation and exhalation valves are clean and unobstructed.
- Rinse with distilled/de-ionized water.
- Wipe with sanitizing solution. (This step will assure the sterility of the respirator.)
- Allow your respirator to air dry.
- Place the respirator inside a sealed bag or a clean area away from extreme heat or extreme cold.

3.6 EWMA PROJECT MANAGER NOTIFICATION

All field personnel must inform the EWMA SSO or the Alternate EWMA SSO before entering the Site.

IF ANY PREVIOUSLY UNIDENTIFIED POTENTIAL HAZARDS ARE DISCOVERED DURING ANY FIELD WORK, LEAVE THAT AREA OF THE SITE IMMEDIATELY AND CONTACT THE EWMA SSO FOR FURTHER INSTRUCTIONS.

3.7 OSHA INFORMATION AND STATE WAGE AND INFORMATION POSTERS

In accordance with the Occupational Safety and Health Act of 1970, a copy of the OSHA information poster must be present at the Site. It will be posted at full size (11" x 17") in a permanent structure or temporary field office, or be distributed to on-site personnel by way of this HASP. Appropriate state of New Jersey wage and employment posters will also be posted in accordance with state laws.

3.8 PROHIBITIONS

Smoking, eating, drinking, chewing tobacco or toothpicks, applying cosmetics, storing food or food containers, and having open fires will be permitted only in designated areas that will be established by the EWMA SSO. Under no circumstances will any of the above activities be permitted within the Exclusion or Contamination Reduction Zones. Good personal hygiene should be practiced by field personnel to avoid ingesting contaminants.

3.9 INITIAL SITE SAFETY MEETING AND SIGNING THE HEALTH AND SAFETY PLAN COMPLIANCE AGREEMENT

The EWMA SSO will hold an initial site safety meeting with EWMA, subcontractor and contractor field personnel before work activities begin at the Site. At this meeting, it will be verified that all personnel have been provided with or have reviewed a HASP for the work activities to be performed at this Site. For EWMA personnel, its subcontractor's personnel, and contractor personnel whose employer(s) have adopted this HASP, the HASP shall be reviewed, discussed and questions will be answered. Signed Health and Safety Plan Compliance Agreement Forms of personnel who will be following this HASP will be collected by the EWMA SSO and filed. Individuals refusing to sign the Form will not be allowed to work on the Site.

3.10 DAILY SITE SAFETY BRIEFINGS

During field operations, site safety briefings will be held at the start of each day by the EWMA SSO to review and plan specific health and safety aspects of scheduled work. All field personnel who are following this HASP are required to attend these briefings. These meetings and their content shall be documented by the EWMA SSO or Project Manager. Potential subjects that may be discussed are presented below:

1. Preliminary
   - Medical clearances.
   - Training requirements.
   - Written HASP availability.
   - Designation of responsibilities for on-site personnel.
   - Identification of on-site personnel trained and certified to administer First Aid.
2. Training topics

   Review of HASP including: types of hazards; pathways of exposure; levels of protection; contamination avoidance; prohibitions; work procedures; confined space entry; work zones; emergency response procedures; and, specific on-site area/work tasks of concern.

   Decontamination.

   Personnel Protective Equipment.

   Air Quality Monitoring Program

   Air sampling with hands on use and calibration of direct reading instruments such as a PID, and pDR-

1000 dust monitors, and LEL,H2S,O2/CO-4-as monitors. Questions and Answers

3.11 UNDERGROUND STRUCTURES

Caution will be exercised whenever the possibility of encountering subsurface obstructions exists. Before beginning intrusive activities, all available sources of information (such as site utility drawings, public utility drawings, construction drawings, and discussions with former employees) will be reviewed. If underground obstructions are unexpectedly encountered, the area will be excavated using manual equipment until the nature of the obstruction is discerned.

- End of Section -

An assessment of the known or suspected chemical, physical and biological hazards have been made for each of the activities specified below.

4.1 APPROVED WORK ACTIVITIES

Work activities which may be performed under this HASP are limited to the following:

Soil excavation
Air monitoring (Dust & VOC)
Possible UST removal
Soil and ground water sampling
Soil borings

This HASP does not cover any site activities beyond those specifically listed above. Work activities not described above may be conducted only after an appropriate Addendum to this HASP has been issued by the EWMA HSO.

4.2 HAZARDS

4.2.1 Chemical Agents

The following chemical hazards have been identified, based on documented prior site uses and/or initial site investigations.

Metals
PAHs

4.2.1.1 Chemical Exposure Controls

Contaminants usually enter the body through the mouth (ingestion), the lung (inhalation) or by absorption through the skin and mucous membranes. Chemical exposure through these routes will be controlled by limiting eating, drinking, and smoking to uncontaminated areas; through the use of hygiene practices and decontamination procedures; and by the use of appropriate engineering controls and personal protective equipment (PPE). There are four levels of personal protection (Levels A, B, C, and D), according to the degree of protection they afford, with Level A providing the greatest degree of protection. The initial level of personal protective equipment to be used while performing activities at the Site will be based on the hazard assessment performed for this project.

Initially, Level D will be used while sampling the environment to determine what hazards are present, and in what quantities, EWMA employees will need to upgrade to Level C if the results of initial sampling (first few minutes of direct read measurements) suggests it is appropriate to do so.

4.2.2 Physical Agents

Physical agents include noise, electro-magnetic fields, ionizing and non-ionizing radiation, and thermal stress. There is also a risk of physical injury when working in the field with sampling tools, and when near heavy equipment, operating machinery and vehicular traffic. Field personnel should be able to recognize these hazards and take steps to avoid injurious contact with them.

Noise Exposure

Work at the site may be conducted with high noise levels from equipment such as excavators, pumps and drill rigs. EWMA standards require that hearing protection be used when noise levels exceed 85 dBA, averaged over an 8-hour day. Hearing protection will be required at this site for noise exposures greater than 85 dBA for **any** length of time. In the absence of a noise meter, an appropriate rule of thumb is that when normal conversation is difficult to hear or understand at a distance of three feet, hearing protection is required. EWMA and subcontractor personnel shall have hearing protection on-site and available for use at all times.

Thermal Stress

Depending on the altitude, geographic location and the season, the use of required PPE may cause heat or cold related stress on the wearer. The Heat Stress Casualty Prevention Plan as specified in Attachment-F will be referred to for dealing with this health hazard during warm weather. The Plan outlines heat stress identification, treatment, prevention and monitoring. Fluids will be provided at all times during work periods, in order to maintain adequate body fluid levels for field personnel. Attachment-F also contains the Cold Exposure Casualty Prevention Plan for this project.

4.2.2.1 Controls for Physical Agents

No physical hazards known or believed to be present. Buried and over-head power lines. Be sure minimum clearance of 10-feet is maintained for drill rig to over-head power lines.

4.2.3 Biological Agents

Biological agents may be viral, fungal, bacterial, or of higher orders: insects (including ticks and stinging insects), wild animals (especially snakes) and domesticated animals. Any mammal encountered on-site should be considered potentially rabid. In many parts of the northeast United States, tick-borne diseases pose a significant health risk during warm months. (see Attachment-J, Ticks and Tick-Borne Diseases). Field personnel are encouraged to use insect repellents before donning PPE. To avoid snake bites, check for snakes before walking through grassy or debris strewn areas. The presence of medical waste suggests the possibility that pathogenic micro-organisms may be present. A fully-stocked first aid kit, insect and tick repellent must be available for use in the field.

4.2.3.1 Biological Agent Controls

No Biological Agent controls to be used.

4.2.4 Safety Hazards

The hazards and appropriate safety procedures associated with drilling and excavation activities are discussed in Attachment-I, Safety Guidelines for Excavations. The physical hazards associated with performing field sampling are described in the safety procedures listed in Attachment-H.

Use of safety-toed work boots, safety glasses or goggles, and hard hats will be required when in an Exclusion Zone. Personnel should be aware that when PPE such as respirators, gloves, and protective clothing are worn, visibility, hearing, and manual dexterity are impaired.

4.2.4.1 Drilling, Pile Driving and Excavation

The hazards involved with the use of drill rigs and excavation equipment are significant and include pinch points, entrapment in machinery, impact from moving parts, electrocution from contact with overhead wires or buried utilities, and improper operations. Use of hand tools, moving the rigs/equipment, and conducting required repairs can increase physical risks. Working with and around a drill rig can involve a high risk of serious injury or death. In order to reduce the risk, proper safety precautions must be observed at all times. Safety procedures are included in Attachment-H.

4.2.4.2 Excavated Drums

a. During the course of excavation activities, a potential exists for buried drums or other types of containers to be uncovered. If, because of labels, the appearance of chemical materials, the size and shape of the container, or for any other reason, there is a likelihood that a hazardous material container has been uncovered, immediately cease operations in the area and inform the Site Safety Officer.

b. Activities may not resume until the container's contents have been sufficiently identified to determine the hazard it poses and to provide the controls necessary to remove or significantly reduce the identified risks.

4.2.4.3 Odors

During the course of excavation, odorous gases may escape from the ground. Most hazardous and/or foul-smelling gases can be controlled or eliminated with an enzyme product available from Nature Plus, 555 Lordship Blvd., Stratford, CT 06497 (203/380-0316): Don Mitchell. The Site Safety Officer will determine the most effective means of applying this material, when needed. An initial supply shall be on hand whenever a project may entail the probable release of noxious gases.

4.2.5 Contaminated Dust

Contaminated surface soils may become a source of dust. Inhaling contaminated dust may result in adverse health effects from exposure to the contaminant(s) on the dust particles.

The M.I.E. company's miniRAM dust monitor may be used to estimate the contaminant concentration in air, by measuring the total dust level.

Soil samples are reported as mg contaminant per kilogram of soil. The miniRAM reads mg of dust per cubic meter of air. To convert from kilograms of soil (dust) to milligrams of dust (from soil), divide kilograms by 1 million (1,000,000 or 10^{-6}). In order to maintain proportions, milligrams of contaminant must also be divided by 1 million (resulting in milligrams of contaminant times 10^{-6} per mg soil (dust).

As an example, assume that soil sampling shows 750 mg aluminum per kilogram of soil. Dust, generated from this soil, was measured to be 3 mg dust (total) per cubic meter of air. Dividing by 1 million, we have 0.00075 mg aluminum for each milligram of dust. Since we have 3 mg dust in each cubic meter of air, we have 3 x 0.00075 mg or 0.00225 mg aluminum per cubic meter of air. The OSHA Time-Weighted Average, Permissible Exposure Limit is 10 mg/m3 micrograms of Aluminum dust per cubic meter of air. Therefore, a sustained, full-shift exposure to this aluminum -contaminated soil will not produce an unacceptable exposure to Aluminum dust.

Appendix I (attached) provides relevant information concerning dust contaminants.

- End of Section -

SECTION 5.0
AIR QUALITY MONITORING AND MEASURES
FOR THE CONTROL OF EMISSIONS

5.1 AIR QUALITY MONITORING INSTRUMENTATION

Air quality will be measured to determine exposure potentials prior to the start of work, and at various times during the course of the project. Instruments which may be used to monitor air quality are discussed below:

- **Photoionization Detector**

  The HNu Systems Model PI-101 Photoionization Detector (PID) or equivalent will be used to detect trace concentrations of certain organic gases and a few inorganic gases in the air. Methane, ethane, and the major components of air are not detected by the HNu PID. PID readings reflect total (readable) vapors in the air. PID readings must be given as "PID units", rather than "ppm". The PID detects mixtures of compounds simultaneously. PID readings do not measure concentrations of any individual compound when a mixture of compounds is present.

  The PID will be calibrated twice each day (before start of work and after the conclusion of work) using an isobutylene standard (molecular weight = 56.2) for calibration. Calibrations will be logged. PID readings should be measured in the breathing zone of the most highly exposed worker (i.e., the person who is closest to the source of known or suspected contamination) at least hourly.

- **Combustible Gas Indicator/Oxygen/Hydrogen Sulfide Meter**

  An approved Combustible Gas Indicator/Oxygen Meter, which may have a separate hydrogen sulfide detector, may be used, at the discretion of the EWMA SSO, to measure the concentration of flammable vapors and gases, oxygen, and hydrogen sulfide in the air during field activities. Flammable gas concentrations are measured as percentages of the Lower Explosive Limit (LEL). Oxygen content is measured as a percentage of air. Hydrogen sulfide concentration (which includes sulfur dioxide) is measured in parts per million.

5.2 AIR QUALITY RESPONSE LEVELS

The Site Safety Officer will decide when to change protection levels in response to air monitoring results. The EWMA HSO will be notified of any upgrades from initial protection levels, as soon as is practical. EWMA Action Levels for this project are described in detail in Table 5-1, at the end of this Section. These Action (Response) Levels apply to the work activities covered by this HASP.

5.3 MONITORING GUIDELINES

5.3.1 Background Organic Vapor Monitoring

Background organic vapor and combustible gas readings (when applicable) will be taken at least twice daily: before the start, and after the conclusion of, work activities. Background levels will be taken at a location which is unaffected by on-site work. Once work at the Site begins, reselection of the original background location may be required.

5.3.2 Air Monitoring Protocol

During intrusive work activities (i.e. drilling, excavation) at least one series (series=Organic Vapor, Toxic gas, Combustible gas, and Oxygen) of readings will be taken every 30 minutes. During non-intrusive work activities, one series will be performed at the start of work, one series at some point during the work, and one near the conclusion of the work. This will be in addition to the background monitoring described in the previous section.

5.3.3 Documenting Monitoring Results

A calibration log will be kept for each of the monitoring instruments used, which describes the calibration method(s) used, and the readouts obtained. Should work at the Site require respiratory protection, the need for a personal exposure monitoring program will be evaluated by the EWMA HSO. Details of this program and any monitoring equipment required for its implementation will be specified in an Addendum to this HASP prepared by the EWMA HSO. Records of exposure measurements will be maintained in the Health and Safety file for this project.

5.4 EMISSION CONTROL MEASURES

Vapor or dust emissions resulting from field operations do not usually exceed either regulatory or EWMA action levels. If the action levels are significantly exceeded, measures to suppress the responsible emissions should be investigated. Appropriate measures would include cessation of operations until the exact cause of the emission is identified and corrected. Vapor control may include the use of vapor suppression foams, covering exposed soil piles with plastic sheeting and/or spraying exposed soil piles and drilling sites with water or enzyme solutions. Fugitive dust emission control may require water spraying. In addition, calcium chloride may be needed.

TABLE 5-1

EWMA RESPONSE ACTIONS

EWMA Air Quality Measurements and Response Actions

Air Quality Measurement[1,2,3,4]	
The primary toxicants of concern are PAHs, and soil particulates that may be contaminated with heavy metals, during soil excavation, air monitoring, possible UST removal, soil and ground water sampling and soil boring activities. Use less than or equal to 10 mg/m^3 above background per ACGIH dust level because of the suspect metals in the soil during the invasive soil tasks. Use less than or equal to 180 ppm PID equivalents above background representing the most toxic compound contaminant as PAH. Note: ppm equivalents already calculated in this table. CGI LEL reading less than 10%. Oxygen meter reading in range of 19.5% to 23.5%.	Level D Protection ensemble or Modified above background (averaged over 15 minutes and/or 8 Hr. TWA). **No respirator needed if levels below the air quality levels.**
PID reading for PAHs greater than background (averaged over one minute) but greater than 181ppm as PID equivalents CGI reading less than 10% LEL Oxygen meter reading in range 19.5% to 23.5% Greater than 10 mg/m^3 of soil dust above background for a 5 minute breathing zone sample	Level C Protection level ensemble, ½ face-piece up to 1800 ppm for PID equivalents representing PAHs, and 100 mg/m^3 for suspect Heavy Metals, then full face-piece with a combination **Organic vapors/P100 combination cartridges** up to 9000 ppm PID equivalents, and 500 mg/m^3 for dust. One-half respirator has an OSHA assigned protection factor of 10 and full face piece is 50. *If LEL is greater than 10%, ensure ignition sources are not present and contact the Project Mgr. for next action steps.
PID Reading is higher than 9000 ppm PID equivalents CGI reading > 10% LEL Oxygen meter reading less than 19.5% Greater than 500 milligrams per cubic meter of dust	**Suspend** all work activities in immediate work zone and notify EWMA Director of Health and Safety and EWMA Project Manager. Continue air monitoring until readings indicate that work may resume.

Footnotes: [1] All Air Quality Measurements, with the exception of CGI measurements for flammable vapors and gases, should be made in the breathing zone of personnel who, in the opinion of the SSO, are most exposed to airborne contaminants. Measurements of flammable vapor and gas levels should be made in the vicinity of the nearest ignition source. [2] The ACGIH denotes American Conference of Governmental Industrial Hygienists (ACGIH) which serves to characterize 8 hour time weighted averages as a threshold level value, short term exposure limits and ceiling limits. The values are based on the most current edition of the ACGIH TLV booklet and OSHA PELs. [3] Be aware that these airborne concentration guidelines are based on assuming that the soil or ground water contaminants are at high levels

to be on conservative due to the uncertainty. This is the case unless it is known about the soil or water concentration profile in advance. [4] Multiply the reading of the PID by 0.53 to convert the reading to PPM when the PID was calibrated with 100 PPM isobutylene. Record the readings as "PPM equivalents". The DR 4000 or equivalent dust meter can be used to monitor dust exposure….Ensure your hands and face are clean prior to leaving the clean or cold zone when entering your vehicle or taking a break.

6.1 DESCRIPTION OF LEVELS OF PROTECTION

The respiratory protection types are dictated by the airborne concentrations measured. The personal protection equipment specified in this HASP will be available to all field personnel. EWMA contractors and sub-contractors are required to provide the specified equipment (or its equivalent) to all of their exposed employees. The following requirements will also be met, in accordance with OSHA regulations:

1. Facial hair may not interfere with the proper fit of respirators;
2. Contact lenses will not be worn on-site; without exception.
3. Eyeglasses that interfere with the proper fit of full-face respirators will not be worn; and,
4. No eating, drinking or smoking will be allowed in any area where respiratory protection is required.

Level D Personal Protective Equipment

- Hard hat
- Safety glasses or goggles
- Safety-toed leather or rubber work boots

Modified Level D Personal Protective Equipment

- Hard hat
- Safety glasses or goggles
- Safety-toed leather work boots
- Rubber overboots, safety-toed rubber boots, or disposable "booties"
- Butly rubber outer gloves for protection against MEK in soil dermal exposure
- Nitrile surgical gloves (to be work underneath outer gloves)
- Polyethylene coated or Saranex impregnated Tyvek coveralls(1) (taped at cuffs)

  (1) Optional, at the discretion of EWMA SSO.

Level C Personal Protective Equipment

- Hard hat
- Half-face Air-Purifying Respirator with applicable chemical cartridge combined with a P-100 filter
- Safety-toed leather work boots
- Rubber overboots, safety-toed rubber boots, or disposable "booties"
- Nitrile-butadiene rubber outer gloves
- Nitrile surgical gloves (to be worn underneath outer gloves)
- Polyethylene coated or Saranex impregnated Tyvek coveralls (taped at cuffs)

Level B Personal Protective Equipment

- Hard hat
- Full-face respirator mask with either a Self Contained Breathing Apparatus (SCBA) or Supplied Air
- Safety-toed leather work boots
- Rubber overboots, safety-toed rubber boots, or disposable "booties"
- Nitrile-butadiene rubber outer gloves
- Nitrile surgical gloves (to be worn underneath outer gloves)
- Appropriate protective clothing such as coated or impregnated Tyvek coveralls, PVC coveralls, or Level-B Suit.

A first aid kit, multi-purpose dry chemical UL Class 10A-10B-C fire extinguisher, eye wash station, appropriate barricades and alarm horns will be present and maintained at the Site.

Selection of the PPE specified for this project is based on a review of known or suspected hazards, routes of potential exposure (inhalation, skin absorption, ingestion, and skin or eye contact) and the effectiveness of personal protective equipment in providing a barrier to these hazards. In addition, PPE has been selected to match the work requirements and task-specific conditions of the job, and to provide adequate protection without causing unnecessary discomfort or physical impairment to the worker.

6.2 INITIAL PPE LEVELS FOR SPECIFIC WORK TASKS

The selection of Initial Levels-of-Protection takes into consideration the physical, biological and chemical hazards posed by the site as well as those posed by the various pieces of personnel protective clothing. Initial Levels-of-Protection are established so as to obtain acceptable levels of protection while not imposing an unacceptable level of physical stress on the wearer.

The following initial PPE levels have been established for the tasks described in Section 4.1, Approved Work Activities:

Work Activity	Level of Protection
Soil excavation	**Level-D***
Air monitoring (Dust & VOC	
Possible UST removal	
Soil & ground water sampling	
Soil borings	

* Once initial air-monitoring has been performed and the readings indicate airborne levels of flammables, toxins and oxygen to be within acceptable limits as described in Table 5-1, personnel may downgrade from a higher initial Level-of-Protection to Level-D, at the discretion of the EWMA-SSO.

- **End of Section –**

SECTION 7.0
DESIGNATION OF WORK ZONES

This section of the Health & Safety Plan applies to excavation projects where contaminated soils are exposed and may release their contaminants to the air, or come in contact with field personnel. To minimize the migration of contaminant from the Site to uncontaminated areas, three work zones will be set up:

Zone 1: Exclusion Zone
Zone 2: Contamination Reduction Zone
Zone 3: Support Zone

The Exclusion Zone is the area where contamination occurs or could occur. Initially, the Exclusion Zone should extend a distance of 25 ft from the edge of intrusive activity unless conditions at the Site warrant either a larger or smaller distance as determined by the EWMA SSO. All persons entering the Exclusion Zone must wear the applicable level of protection as set forth in Section 6.1, Personal Protective Equipment and Section 6.2, Initial PPE Levels for Specific Work Tasks. It is anticipated that work zones will be established at each individual area of intrusive work rather than encompass the entire Site.

The Support Zone is the area of the Site where significant exposure to contamination is not expected to occur during non-intrusive activities. The Support Zone is considered to be the "clean area" of the Site.

Between the Exclusion Zone and Support Zone is the Contamination Reduction Zone, which provides a transition zone between the contaminated and clean areas of the Site. The Contamination Reduction Zone will be located directly outside of the Exclusion Zone. All personnel must decontaminate when leaving the Exclusion Zone. A Contamination Reduction Zone (decontamination area) will be established adjacent to each individual area of intrusive work.

For a detailed map identifying the various work zones, see Attachment A.

- End of Section -

SECTION 8.0
DECONTAMINATION PROCEDURES

Personnel who have been in contact with contaminated materials will decontaminate themselves in the following manner:

- Deposit contaminated equipment on plastic drop cloths.
- Stand in wash tub containing Alconox® and water, wash boots and outer gloves with long handled brush.
- Rinse boots and outer gloves with long handled brush in a wash tub containing clear water or use a sprayer to rinse off boots and gloves.
- Remove ankle and wrist tapes; place in disposal drum.
- Remove outer gloves and place in disposal drum.
- Remove Tyvek® suit and place in disposal drum.
- Remove respirator and place on table to be decontaminated.
- Remove inner gloves and place in disposal drum.
- Wash hands and face.

All tools or equipment which have been in contact with contaminated materials, must be decontaminated after leaving the Exclusion Zone. This decontamination is to be performed using a high pressure/hot water "steam type" cleaner or a spray/rinse decontamination sequence as described in Section 3.6, Respirator Maintenance, Fitting and Decontamination, as appropriate.

Contaminated liquids from the decontamination area and contaminated clothing should be disposed of in accordance with site protocols.

- End of Section -

9.0 EMERGENCY RESPONSE

Emergencies addressed by this plan include:

- Fire;
- Chemical over-exposures; and,
- Physical injuries to site personnel.

The EWMA Health & Safety Officer and Project Manager must be notified as soon as possible of any on-site emergency or potential emergency including fire, explosive conditions or OSHA-recordable physical injury.

9.1 EMERGENCY RECOGNITION AND PREVENTION

9.1.1 Fires

Fires are possible whenever oxygen and flammable gases or vapors are mixed together in proper proportions and an ignition source is present. Construction equipment provides an ignition source. To prevent fires and explosions, a CGI as specified in Section 5.0 will be used to detect flammable or explosive atmospheres. Ignition and other sources which produce electrical sparks will be turned off and the area evacuated if vapors or gases reach 10% of the Lower Explosion Limit (LEL) as measured by the CGI. Work will not resume until the EWMA SSO observes CGI readings below 10% of the LEL for at least 5 consecutive minutes.

9.1.2 Chemical Exposures

Work should always be performed in a manner that minimizes exposure to contaminants through skin or eye contact, inhalation or ingestion. Work practices to reduce the risk of chemical exposure include:

- PPE, as specified in Section 6.0, will be used by all field personnel covered by this HASP. A formal revision to the HASP must be made by the EWMA HSO to modify the PPE specifications.
- Keep hands away from the face during work activities to avoid ingestion.
- Minimize all skin and eye contact with contaminants.

Early recognition of the signs and symptoms of chemical exposure is essential for the prevention of serious chemical exposure incidents. Symptoms of exposure to the compounds present at the Site include the following: fatigue, weakness; eye, nose, and/or throat irritation; dizziness; nausea; vomiting; malaise; tremors; aggressive confusion; cyanosis (blue color to skin); anemia; and muscle spasms. If a person experiences any of these symptoms, or recognizes any of them in a fellow worker, the person experiencing the symptoms will stop work immediately and report to the EWMA SSO. If the symptoms persist or affect performance in any way, the EWMA SSO will arrange for medical treatment. If the symptoms are serious, or affect several people, work activities in the exposure area will

be discontinued until more is known about the cause(s). Incident reporting procedures as specified in Section 3.3 will be initiated.

9.1.3 Physical Injuries

Site personnel should be on the lookout for potential safety hazards such as holes or ditches; improperly positioned objects, such as drums or equipment that may fall; sharp objects, such as nails, metal shards, and broken glass; protruding objects at eye or head level; slippery surfaces; steep grades; unshored steep entrenchments, uneven terrain or unstable surfaces, such as walls that may cave in or flooring that may give way. Site personnel should inform the EWMA SSO of any potential hazards observed so that corrective action can be taken.

9.2 EMERGENCY ALERTING PROCEDURES

The EWMA SSO will alert the appropriate work groups when an emergency occurs. The communication method(s) will be established by the SSO with the approval of the Project Manager. The EWMA SSO and any isolated work group will carry radios if direct contact cannot be maintained. If direct contact cannot be maintained, an air horn will be used to signal workers to stop work and assemble in the Contamination Reduction Zone. If evacuation of the Site is necessary, a pre-arranged signal from the air horn will be sounded.

9.3 EVACUATION PROCEDURES AND ROUTES

Normally, personnel should evacuate through the Contamination Reduction Zone, and from there, to the Support Zone. Evacuation from the Contamination Reduction Zone will proceed in an upwind direction from the emergency. If evacuation to the Support Zone does not provide sufficient protection from the emergency, personnel will be advised to evacuate the Site proper.

9.4 TELEPHONE NUMBERS FOR EMERGENCY SERVICES

The telephone numbers of local emergency services are given below:

Emergency Service	**Telephone Number**
Ambulance	911
Fire Department	911
Police Department	911 or 718-433-2678
NY University Medical Center	**911 or 212-263-7300**
560 1st Avenue, New York, NY	
Poison Control Center	(800) 222-1222
USEPA National Response Center	(800) 424-8802
EWMA Project Manager/Don Richardson	**908-868-7246**

These telephone numbers must be verified by the EWMA SSO before the start of field work.

9.5 EMERGENCY RESPONSE PERSONNEL

The EWMA SSO will have the primary role in responding to all emergencies at the Site. The EWMA SSO, or the Alternate EWMA SSO, will be present at the Site during all work activities. If any emergency such as a fire, chemical exposure, or physical injury occurs, the EWMA SSO shall be notified immediately. The EWMA SSO will direct all site personnel in cases of emergency.

After an emergency has occurred at the Site, the causes and responses to that emergency shall be thoroughly investigated, reviewed and documented by the EWMA Project Manager and EWMA SSO; this documentation is to be submitted to the EWMA HSO within 48 hours of the incident.

9.6 DECONTAMINATION PROCEDURES DURING AN EMERGENCY

Decontamination of an injured or exposed worker or during a site emergency shall be performed only if decontamination does not interfere with essential treatment or evacuation.

If a worker has been injured or exposed and decontamination can be done: Wash, rinse, and/or cut off protective clothing and equipment.

If a worker has been injured or exposed and cannot be decontaminated:

- Wrap the victim in blankets, plastic or rubber to reduce contamination of other personnel;
- Alert emergency and off-site medical personnel to potential contamination; and,
- Have the EWMA SSO or other personnel familiar with the incident and contaminants at the Site accompany the victim to the hospital. If possible, send a copy of the appropriate MSDS(s) with the victim.

9.7 EMERGENCY MEDICAL TREATMENT AND FIRST AID PROCEDURES

Emergency medical treatment or First Aid may be administered at the Site by the EWMA SSO or other personnel who have been certified in First Aid.

General emergency medical and First Aid procedures are as follows:

- Remove the injured or exposed person(s) from immediate danger.

- Render First Aid as needed; decontaminate affected personnel, if necessary.

- Call an ambulance for transport to local hospital immediately. This procedure shall be followed even if there is no apparent serious injury.

- Evacuate other personnel at the Site to safe places until the EWMA SSO determines that it is safe for work to resume.

- Report the accident to the EWMA HSO immediately.

Emergency Medical Treatment and First Aid Procedures are presented in Attachment-G.

9.8 DIRECTIONS TO THE HOSPITAL FROM SITE

The route and/or directions to the hospital from the Site are in Attachment-B.

The directions to the hospital from the Site must be verified by the EWMA SSO prior to the start of field work.

- End of Section -

10.1 PROJECT PERSONNEL

EWMA personnel authorized to enter the Site and work on this project, subject to compliance with provisions of the HASP, are:

EWMA Project Manager	Don Richardson Phone # 908-868-7246
EWMA Site Manager	Richard Arnold 908-334-0976
EWMA Site Safety Officer	Dan DiRocco 973-525-7706
EWMA Health and Safety Officer	Ken Bickerton

Other personnel who meet HASP requirements, including training and participation in a medical surveillance program, may enter and work on the Site subject to compliance with provisions of the HASP.

10.2 PROJECT SAFETY RESPONSIBILITIES

Personnel responsible for implementing this Health and Safety Plan are the EWMA Project Manager and the EWMA Site Safety Officer. Their specific responsibilities and authority are described in the EWMA Health and Safety Manual.

- End of Section -

SECTION 11.0
HEALTH AND SAFETY PLAN APPROVALS

The authorized signatures below verify that this Health and Safety Plan has been read and approved for the work to be performed at the subject site:

EWMA Case Name: Forte Italia LLC/41-10 Crescent Street, Long Island City, Queens, NY

EWMA Case Number: 208094

_____ January 30, 2013

Don Richardson — Date
EWMA Project Manager

_____ January 30, 2013

Ken Bickerton, CIH, CSP — Date
EWMA Health and Safety Officer

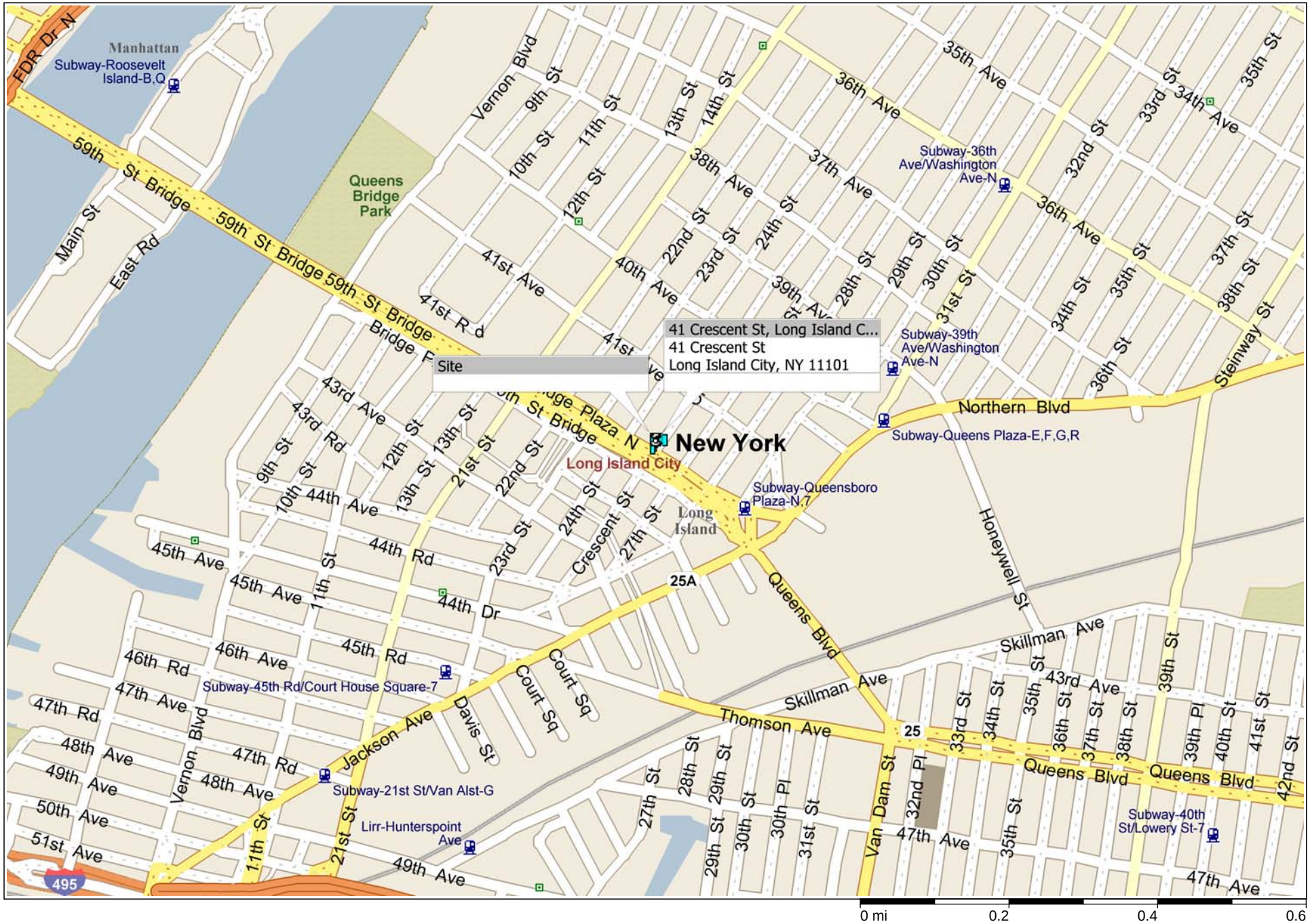
SECTION 12.0

HEALTH AND SAFETY PLAN COMPLIANCE AGREEMENT

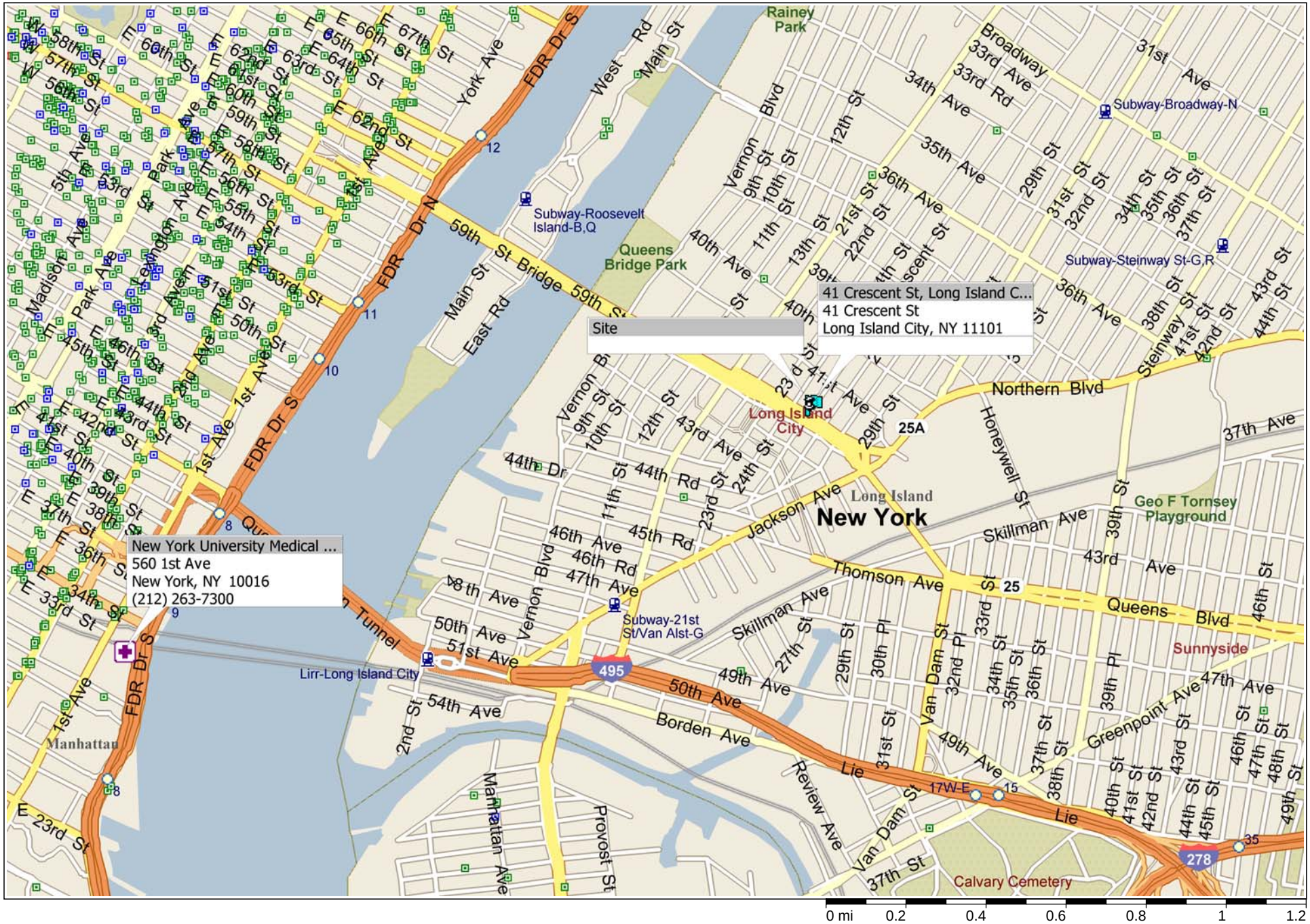
I have reviewed a copy of the Health and Safety Plan for Forte Italia LLC/41-10 Crescent Street, Long Island City, Queens, NY dated January 30, 2013. I have read the HASP, understand it, and agree to comply with all of its provisions. I understand that I could be prohibited from working on the project for violating any of the safety requirements specified in the Health and Safety Plan.

Name	Company
Signature	Date
Name	Company
Signature	Date
Name	Company
Signature	Date
Name	Company
Signature	Date
Name	Company
Signature	Date

Site

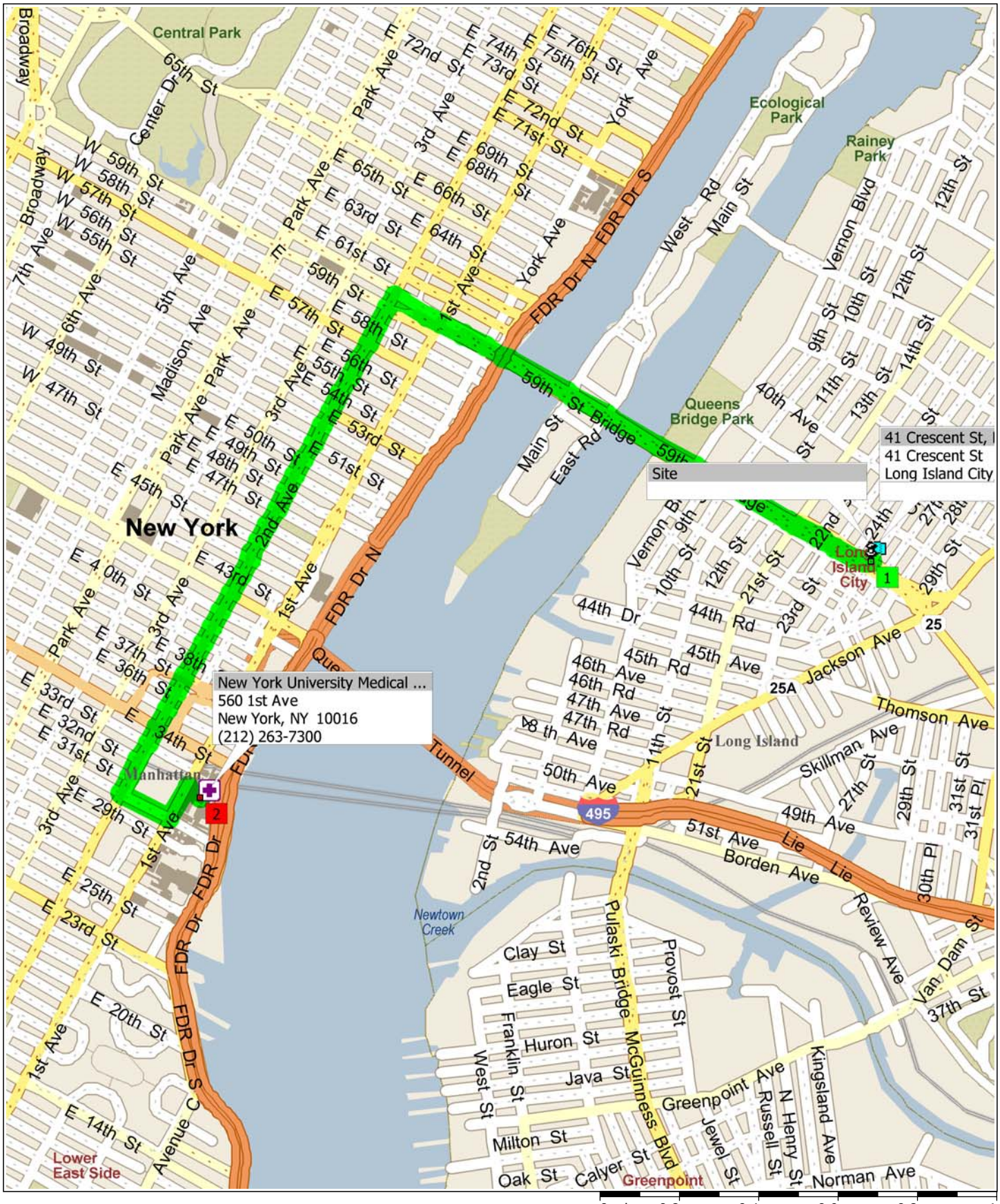


Hospital



Site-Hospital

3.2 miles; 5 minutes



9:00 AM	0.0 mi	1 Depart 41 Crescent St, Long Island City, NY 11101 on Ramp (West) for 32 yds towards Queensboro Br / 59th St Br
9:00 AM	0.1 mi	Keep LEFT to stay on Ramp for 0.1 mi
9:00 AM	0.2 mi	Road name changes to 59th St Bridge [Queensboro Brg-Lower Level] for 1.1 mi
9:01 AM	1.2 mi	Keep STRAIGHT onto Ramp for 0.2 mi towards 2 Ave-South
9:01 AM	1.4 mi	Keep LEFT to stay on Ramp for 43 yds towards 2 Ave South
9:01 AM	1.4 mi	Turn LEFT (South) onto 2nd Ave for 1.5 mi
9:04 AM	2.9 mi	Turn LEFT (East) onto E 30th St for 0.1 mi
9:05 AM	3.1 mi	Turn LEFT (North) onto 1st Ave for 174 yds
9:05 AM	3.2 mi	Turn RIGHT (South-East) onto Local road(s) for 87 yds
9:05 AM	3.2 mi	2 Arrive New York University Medical Center [560 1st Ave, New York, NY 10016, (212) 263-7300]

APPENDIX I

DETERMINING EXPOSURE TO AIRBORNE DUST CONTAMINANTS FROM SOIL DATA

1. Assume the following hypothetical:

   a) Lead (Pb) is found in soil samples to be 18,000 ppm (mg Pb/kg soil).

   b) Dusty conditions will prevail.

   c) 18,000 mg Pb/kg soil = 0.018 mg Pb

   d) The miniRAM reads mg (soil/dust)/m^3 air. Each mg of soil/dust detected will contain 0.018 mg Pb/m^3 air

      Thus, 1mg/m^3 total dust as read by miniRAM represents 0.018 mg Pb/m^3

      The current OSHA PEL is 0.050 mg Pb/m^3 air, as an 8-HR TIME WEIGHTED AVERAGE (TWA-8)

2. Example: 18,000 mg Pb per kilogram of soil

   a) 18,000 mg Pb/kg soil = 0.018 mg Pb/mg soil

   b) miniRAM reads 4.0 mg dust (soil)/m^3 air

   c) $\frac{0.018 \text{ mg Pb}}{\text{mg soil}} \times \frac{4.0 \text{ mg dust (soil)}}{m^3 \text{ air}} = \frac{0.072 \text{ mg Pb}}{m^3 \text{ air}}$

ATTACHMENT A

SITE LOCATION MAP

ATTACHMENT B

EMERGENCY ROUTE MAP

ATTACHMENT C

EWMA HEALTH & SAFETY INCIDENT REPORT

EWMA

HEALTH AND SAFETY INCIDENT REPORT FORM

HEALTH AND SAFETY INCIDENT REPORT

Date of Incident: _____/_____/_____ Time of Incident: _hrs

Location Of Incident_____

DESCRIPTION OF INCIDENT:

Reported by:

_____	_____	_____
Site Safety Officer	Signature	Date

Reviewed by:

_____	_____	_____
Field Supervisor	Signature	Date

Distribution:

___ Project Manager _____
___ Superintendent _____
___ Project CIH _____
___ Owner Representative _____

HEALTH AND SAFETY INCIDENT REPORT

DESCRIPTION OF INCIDENT (continued):

Anyone Injured? If yes, give names, address and social security #'s of all individuals below:

Full Name	Address	Phone	SS#

Of the above, anyone taken to hospital, If yes, where? Who? Diagnosis?

Actions Taken:

What Follow-Up Actions are recommended?

What will be done to prevent this type of incident from happening again (if possible)?

Samples Collected?

Type: ( ) Air; ( ) Soil; ( ) Water ( ) Other

Analysis of samples; what were samples analyzed for?

Laboratory Used: Name/Address

When are results expected:

Results attached? ( ) Yes ( ) No ( ) Pending due on / /

WITNESSES TO INCIDENT, INCLUDE ALL WITNESSES

Name	Address	Phone#

Prepared By:_____ Date:_____

Signature:_____

Witness to Preparer:_____ Date:_____

Signature:_____

Notary: Signed and sealed this_____ day of _____,

SS:

COPY TO PROJECT FILE, MAIN OFFICE, EMPLOYER OF AFFECTED EMPLOYEES

ATTACH MORE PAGES AS NEEDED. ATTACH LAB REPORTS, DOCTORS REPORTS, EMERGENCY ROOM REPORTS AS APPROPRIATE

ATTACHMENT D

EWMA PROJECT SAFETY LOG

ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES, LLC

PROJECT SAFETY LOG

Form HS-106

EWMA SSO: _____ **Date**: _____

Weather: _____

Personnel:

Personnel Present	Affiliation:

Work Activities	Level of Protection

PID (ppm)

reading	time	reading	time	reading	time	reading	time

CGI/O_2 (%LEL)

reading	time	reading	time	reading	time	reading	time

CGI/O_2 (O_2%)

reading	time	reading	time	reading	time	reading	time

Colormetric Tubes (ppm)

reading	time	reading	time	reading	time	reading	time

MiniRam (mg/m^3)

reading	time	reading	time	reading	time	reading	time

Notes and Comments: _____

ATTACHMENT E

OSHA POSTER

JOB SAFETY & HEALTH PROTECTION

The Occupational Safety and Health Act of 1970 provides job safety and health protection for workers by promoting safe and healthful working conditions throughout the Nation. Provisions of the Act include the following:

Employers

All employers must furnish to employees employment and a place of employment free from recognized hazards that are causing or are likely to cause death or serious harm to employees. Employers must comply with occupational safety and health standards issued under the Act.

Employees

Employees must comply with all occupational safety and health standards, rules, regulations and orders issued under the Act that apply to their own actions and conduct on the job.

The Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor has the primary responsibility for administering the Act. OSHA issues occupational safety and health standards and its Compliance Safety and Health Officers conduct jobsite inspections to help ensure compliance with the Act.

Inspection

The Act requires that a representative of the employer and a representative authorized by the employees be given an opportunity to accompany the OSHA inspector for the purpose of aiding the inspection.

Where there is no authorized employee representative, the OSHA Compliance Officer must consult with a reasonable number of employees concerning safety and health conditions in the workplace.

Complaint

Employees or their representatives have the right to file a complaint with the nearest OSHA office requesting an inspection if they believe unsafe or unhealthful conditions exist in their workplace. OSHA will withhold, on request, names of employees complaining.

The Act provides that employees may not be discharged or discriminated against in any way for filing safety and health complaints or for otherwise exercising their rights under the Act.

Employees who believe they have been discriminated against may file a complaint with their nearest OSHA office within 30 days of the alleged discriminatory action.

Citation

If, upon inspection, OSHA believes an employer has violated the Act, a citation alleging such violations will be issued to the employer. Each citation will specify a time period within which the alleged violation must be corrected.

The OSHA citation must be prominently displayed at or near the place of alleged violation for three days, or until it is corrected, whichever is later, to warn employees of dangers that may exist there.

Proposed Penalty

The Act provides for mandatory civil penalties against employers of up to $7,000 for each serious violation and for optional penalties of up to $7,000 for each nonserious violation. Penalties of up to $7,000 per day may be proposed for failure to correct violations within the proposed time period and for each day the violation continues beyond the prescribed abatement date. Also, any employer who willfully or repeatedly violates the Act may be assessed penalties of up to $70,000 for each such violation. A minimum penalty of $5,000 may be imposed for each willful violation. A violation of posting requirements can bring a penalty of up to $7,000.

There are also provisions for criminal penalties. Any willful violation resulting in the death of any employee, upon conviction, is punishable by a fine of up to $250,000 (or $500,000 if the employer is a corporation), or by imprisonment for up to six months, or both. A second conviction of an employer doubles the possible term of imprisonment. Falsifying records, reports, or applications is punishable by a fine of $10,000 or up to six months in jail or both.

Voluntary Activity

While providing penalties for violations, the Act also encourages efforts by labor and management, before an OSHA inspection, to reduce workplace hazards voluntarily and to develop and improve safety and health programs in all workplaces and industries. OSHA's Voluntary Protection Programs recognize outstanding efforts of this nature.

OSHA has published Safety and Health Program Management Guidelines to assist employers in establishing or perfecting programs to prevent or control employee exposure to workplace hazards. There are many public and private organizations that can provide information and assistance in this effort, if requested. Also, your local OSHA office can provide considerable help and advice on solving safety and health problems or can refer you to other sources for help such as training.

Consultation

Free assistance in identifying and correcting hazards and in improving safety and health management is available to employers, without citation or penalty, through OSHA-supported programs in each State. These programs are usually administered by the State Labor or Health department or a State university.

Posting Instructions

Employers in States operating OSHA approved State Plans should obtain and post the State's equivalent poster.

Under provisions of Title 29, Code of Federal Regulations, Part 1903.2(a)(1) employers must post this notice (or facsimile) in a conspicuous place where notices to employees are customarily posted.

More Information

Additional information and copies of the Act, specific OSHA safety and health standards, and other applicable regulations may be obtained from your employer or from the nearest OSHA Regional Office in the following locations:

Atlanta, GA	(404) 347-3573
Boston, MA	(617) 565-7164
Chicago, IL	(312) 353-2220
Dallas, TX	(214) 767-4731
Denver, CO	(303) 391-5858
Kansas City, MO	(816) 426-5861
New York, NY	(212) 337-2378
Philadelphia, PA	(215) 596-1201
San Francisco, CA	(415) 744-6670
Seattle, WA	(206) 553-5930

To report suspected fire hazards, imminent danger safety and health hazards in the workplace, or other job safety and health emergencies, such as toxic waste in the workplace, call OSHA's 24-hour hotline: 1-800-321-OSHA.

Robert B. Reich, Secretary of Labor

U.S. Department of Labor

Occupational Safety and Health Administration

Washington, DC
1995 (Reprinted)
OSHA 2203

This information will be made available to sensory impaired individuals upon request. Voice phone: (202) 219-8615; TDD message referral phone: 1-800-326-2577

GPO : 1995 O - 163-097 QL 3

ATTACHMENT F

THERMAL STRESS GUIDELINES

COLD EXPOSURE CASUALTY PREVENTION PLAN

Persons working outdoors in temperatures at or below freezing may be frostbitten. Extreme cold for a short time may cause severe injury to the surface of the body, or result in profound generalized cooling, causing death. Areas of the body which have high surface area-to-volume ratio such as fingers, toes, and ear, are the most susceptible.

EFFECTS OF COLD EXPOSURE

Two factors influence the development of a cold injury: ambient temperature and the velocity of the wind. Wind chill is used to describe the chilling effect of moving air in combination with low temperature. For instance, 10 degrees Fahrenheit with a wind of 15 mile per hour (mph) is equivalent in chilling effect to still air at -18 degrees Fahrenheit.

As a general rule, the greatest incremental increase in wind chill occurs when a wind of 5 mph increases to 10 mph. Additionally, water conducts heat 240 times faster than air. Thus, the body cools suddenly when chemical-protective equipment is removed if the clothing underneath is perspiration soaked.

Local injury resulting from cold is included in the generic term frostbite. There are severe degrees of damage. Frostbite of the extremities can be categorized into:

- **Frost nip or incipient frostbite:** characterized by suddenly blanching or whitening of skin.
- **Superficial frostbite:** skin has a waxy or white appearance and is firm to the touch, but tissue beneath is resilient.
- **Deep Frostbite:** tissues are cold, pale, and solid; extremely serious injury.

To administer first aid for frostbite, bring the victim indoors and rewarm the areas quickly in water between 102 degrees Fahrenheit and 105 degrees Fahrenheit. Give a warm drink not coffee, tea or alcohol. The victim should not smoke. Keep the frozen parts in warm water or covered with warm clothes for 30 minutes, even though the tissue will be very painful as it thaws. Then elevate the injured area and protect it from injury. Do not allow blisters to be broken. Use sterile, soft, dry material to cover the injured areas. Keep victim warm and get immediate medical care.

After thawing, the victim should try to move the injured areas a little, but no more than can be done alone, without help.

- Do not rub the frostbitten part (this may cause gangrene).
- Do not use ice, snow, gasoline or anything cold on frostbite.

- Do not use heat lamps or hot water bottles to rewarm the part.

- Do not place the part near a hot stove.

Systemic hypothermia is caused by exposure to freezing or rapidly dropping temperature, it symptoms are usually exhibited in five stages; 1) shivering; 2) apathy, listlessness, sleepiness, and (sometimes) rapid cooling of the body to less than 95 degrees Fahrenheit; 3) unconsciousness, glassy stare, slow pulse, and slow respiratory rate; 4) freezing of the extremities; and, finally, 5) death.

As a general rule, field activities should be curtailed if equivalent chill temperature (degrees Fahrenheit) is below zero unless the activity is of an emergency nature. The ultimate responsibility for proposing on delaying work at a site due to inclement weather rests with the EWMA Site Safety Officer.

HEAT STRESS CASUALTY PREVENTION PLAN

Due to the increase in ambient air temperatures and the effects of protective outer wear decreasing body ventilation, there exists an increase in the potential for injury, specifically, heat casualties. Site personnel will be instructed in the identification of a heat stress victim, the first-aid treatment procedures for the victim and the prevention of heat stress casualties.

IDENTIFICATION AND TREATMENT

- **Heat Exhaustion**

  Symptoms: Usually begins with muscular weakness, dizziness, nausea, and a staggering gait. Vomiting is frequent. The bowels may move involuntarily. The victim is very pale, skin is clammy, and may perspire profusely. The pulse is weak and fast, breathing is shallow. The victim may faint unless victim lies down. This may pass, but sometimes it remains and death could occur.

  First Aid: Immediately remove the victim to the Contamination Reduction Zone in a shady or cool area with good air circulation. Remove all protective outer wear. Call a physician. Treat the victim for shock. (Make victim lie down, raise feet 6 to 12 inches and keep victim warm but loosen all clothing). If the victim is conscious, it may be helpful to ingest sips of a salt water solution (1 teaspoon of salt to 1 glass of water). Transport victim to a medical facility as soon as possible.

- **Heat Stroke**

  Symptoms: This is the most serious of heat casualties due to the fact that the body excessively overheats. Body temperatures often are between 107 degrees Fahrenheit to 110 degrees Fahrenheit. First there is often pain in the head, dizziness, nausea, oppression, and the skin is dry, red and hot. Unconsciousness follows quickly and death is imminent if exposure continues. The attack will usually occur suddenly.

  First Aid: Immediately evacuate the victim to a cool and shady area in the Contamination Reduction Zone. Remove all protective outer wear and all personal clothing. Lay victim on back with the head and shoulders slightly elevated. It is imperative that the body temperature be lowered immediately. This can be accomplished by applying cold wet towels, ice bags, etc., to the head. Sponge off the bare skin with cool water or rubbing alcohol, if available, or even place victim in a tub of cool water. The main objective is to cool victim without chilling. Give no stimulants. Transport the victim to a medical facility as soon as possible.

PREVENTION OF HEAT STRESS

- One of the major causes of heat casualties is the depletion of body fluids. On the site there will be plenty of fluids available. Personnel should replace water and salts loss from sweating. Salts can be replaced by either a 0.1% salt solution, more heavily salted foods, or commercial mixes such as Gatorade. The commercial mixes are advised for personnel on low sodium diets.

- A work schedule should be established so that the majority of the work day will be during the morning hours of the day before ambient air temperature levels reach their highs.

- A work/rest guideline will be implemented for personnel required to wear Level B protection. This guideline is as follows:

Ambient Temperatures	Maximum Wearing Time
Above 90°F	1/2 hour
80° to 90°F	1 hour
70° to 80°F	2 hours
60° to 70°F	3 hours
<60°F	4 hours

A sufficient period will be allowed for personnel to "cool down." This may require shifts of workers during operations.

HEAT STRESS MONITORING

For monitoring the body's recuperative ability to excess heat, one or more of the following techniques should be used as a screening mechanism. Monitoring of personnel wearing protective clothing should commence when the ambient temperature is 70 degrees Fahrenheit or above. Frequency of monitoring should increase as the ambient temperature increases or if slow recovery rates are indicated. When temperatures exceed 80 degrees Fahrenheit, workers must be monitored for heat stress after every work period.

- Heart rate (HR) should be measured by the radial pulse for 30 seconds as early as possible in the resting period. The HR at the beginning of the rest period should not exceed 110 beats per minute. If the HR is higher, the next work period should be shortened by 10 minutes (or 33%), while the length of the rest period stays the same. If the pulse rate is 100 beats per minute at the beginning of the next rest period, the following work cycle should be shortened by 33%.

- Body temperature should be measured orally with a clinical thermometer as early as possible in the resting period. Oral temperature (OT) at the beginning of the rest period should not exceed 99 degrees Fahrenheit. If it does, the next work period should be shortened by 10 minutes (or 33%), while the length of the rest period stays the same. However, if the OT exceeds 99.7 degrees Fahrenheit at the beginning of the next period, the following work cycle should be further shortened by 33%. OT should be measured again at the end of the rest period to make sure that it has dropped below 99 degrees Fahrenheit.

- Body water loss (BWL) due to sweating should be measured by weighing the worker in the morning and in the evening. The clothing worn should be similar at both weighings; preferably the worker should be nude. The scale should be accurate to plus or minus 1/4 pound. BWL should not exceed 1.5% of the total body weight. If it does, workers should be instructed to increase their daily intake of fluids by the weight lost.

Ideally, body fluids should be maintained at a constant level during the work day. This requires replacement of salt lost in sweat as well.

Good hygienic standards must be maintained by frequent change of clothing and daily showering. Clothing should be permitted to dry during rest periods. Persons who notice skin problems should immediately consult medical personnel.

TABLE 202-1

WINDCHILL INDEX[1]

Wind Speed in MPH	ACTUAL THERMOMETER READING (degrees F)									
	50	40	30	20	10	0	-10	-20	-30	-40
	EQUIVALENT TEMPERATURE (degrees F)									
calm	50	40	30	20	10	0	-10	-20	-30	-40
5	48	37	27	16	6	-5	-15	-26	-36	-47
10	40	28	16	4	-9	-21	-33	-46	-58	-70
15	36	22	9	-5	-18	-36	-45	-58	-72	-85
20	32	18	4	-10	-25	-39	-53	-67	-82	-96
25	30	16	0	-15	-29	-44	-59	-74	-88	-104
30	28	13	-2	-18	-33	-48	-63	-79	-94	-109
35	27	11	-4	-20	-35	-49	-67	-82	-98	-113
40	26	10	-6	-21	-37	-53	-69	-85	-100	-116
over 40 (little added effect)	Little Danger (for properly clothed person)				Increasing Danger (Danger from freezing of exposed flesh)			Great Danger		

[1] Source: Fundementals of Industrial Hygiene, Third Edition, National Safety Council

ATTACHMENT G

EMERGENCY PROCEDURES

EMERGENCY MEDICAL TREATMENT AND FIRST AID PROCEDURES

If an employee working at the Site is physically injured, emergency medical treatment and/or First Aid procedures will be followed. Depending on the severity of the injury, emergency medical response may be sought. If the employee can be moved, they will be taken to the edge of the work area (on a stretcher, if needed) where contaminated clothing will be removed (if possible), emergency first aid administered, and transportation to local emergency medical facility awaited.

If the injury to the worker is chemical in nature (e.g., overexposure), the following procedures are to be instituted as soon as possible:

- Eye Exposure - If contaminated solid or liquid gets into the eyes, wash eyes immediately at the emergency eyewash stations using large amounts of water and lifting the lower and upper lids occasionally. Obtain medical attention immediately. (Contact lenses are not permitted in the Exclusion Areas.)

- Skin Exposure - If contaminated solid or liquid gets on the skin, promptly wash contaminated skin using soap or mild detergent and water. If solids or liquid penetrate through the clothing, remove the clothing immediately and wash the skin using soap or mild detergent and water. Obtain medical attention immediately if symptoms warrant.

- Breathing - If a person breathes in large amounts of organic vapor, move the exposed person to fresh air at once. If breathing has stopped, perform artificial respiration. Keep the affected person warm and at rest. Obtain medical attention as soon as possible.

- Swallowing - If contaminated solid or liquid has been swallowed and the person is conscious, feed the person large quantities of salt water immediately and induce vomiting (unless the person is unconscious). Obtain medical attention immediately.

<u>First Aid Procedures</u>

- Remove the injured or exposed person(s) from immediate danger.

- Render first aid if necessary, decontaminate affected personnel, if necessary.

- Call an ambulance for transport to local hospital immediately. <u>This procedure should be followed even if there is no apparent serious injury</u>.

- Evacuate other personnel on-site to a safe place until the EWMA Site Safety Officer determines that it is safe for work to resume.

- Report the accident to the EWMA Director of Health and Safety immediately.

ATTACHMENT H

SAFETY GUIDELINES FOR DRILLING

ATTACHMENT H

SAFETY GUIDELINES FOR DRILLING

Drill rig maintenance and safety is the responsibility of the drill rig operator. The following is provided as a general guideline for safe drilling practices on-site.

OFF-ROAD MOVEMENT OF DRILL RIGS

The following safety guidelines related to off-road movement:

- Before moving a drill rig, first walk the route of travel, inspecting for depressions, slumps, gullys, ruts and similar obstacles.
- Always check the brakes of a drill rig carrier before traveling, particularly on rough, uneven or hilly ground.
- Discharge all passengers before moving a drill rig on rough or hilly terrain.
- Engage the front axle (for 4x4, 6x6, etc., vehicles or carriers) when traveling off highway on hilly terrain.
- Use caution when traveling side-hill. Conservatively evaluate side-hill capability of drill rigs, because the arbitrary addition of drilling tools may raise the center of mass. When possible, travel directly uphill or downhill.
- Attempt to cross obstacles such as small logs and small erosion channel or ditches squarely, not at an angle.
- Use the assistance of someone on the ground as a guide when lateral or overhead clearance is close.
- After the drill rig has been moved to a new drilling site, set all brakes and/or locks. When grades are steep, block the wheels.
- Never travel off-road with the mast (derrick) of the drill rig in the raised or partially raised position.
- Tie down loads on the drill rig and support trucks during transport.

OVERHEAD AND BURIED UTILITIES

The use of a drill rig near electrical power lines and other utilities requires that special precautions be taken by both supervisors and members of the exploration crew. electricity can shock, it can burn, and it can cause death.

Overhead and buried utilities should be located, noted and emphasized on all boring location plans and boring assignment sheets.

Before raising the drill rig mast (derrick) on a site in the vicinity of power lines, walk completely around the drill rig. Determine what the minimum distance from any point on the drill rig to the nearest power line will be when the mast is raised and/or being raised. In general, the distance between the overhead power line and the boom should be no less than the height of the boom.

Keep in mind that both hoist and overhead power lines can be moved toward each other by the wind.
Keep in mind that electricity from high-voltage lines can “arc” to the rig, completing a circuit.
Keep in mind that rubber tires may not fully insulate the rig.
Keep in mind that the drill itself, and the metal outriggers used to balance the truck, may complete a circuit.

Drilling personnel should double-check any side underground electrical and piping drawings prior to initiating drilling. If an obstruction is encountered during drilling, proceed with extreme caution until the possibility of an exposed electrical line or combustible product pipeline is excluded.

CLEARING THE WORK AREA

Prior to drilling, adequate site cleaning and leveling should be performed to accommodate the drill rig and supplies and provide a safe working area. Drilling should not be commenced when tree limbs, protruding objects, unstable ground or site obstructions or debris cause unsafe tool handling conditions and/or limited, awkward work spaces. An area clear of obstructions or debris should be maintained 180 degrees around the drilling or sampling activities, where practical.

NOTE: In coordination with the drilling crew, the Site Safety Officer will review the precautions taken to insure that the drill rig is leveled and stabilized.

HOUSEKEEPING ON AND AROUND THE DRILL RIG

The first requirement for safe field operations is that the drilling crew safety supervisor understands and fulfills the responsibility for maintenance and "housekeeping" on and the drill rig.

Suitable storage locations should be provided for all tools, materials and supplies so that they can be conveniently and safety handled without hitting or falling on a member of the drill crew or a visitor, without creating tripping hazards, and without protruding at eye or head level.

Avoid storing or transporting tools, materials or supplies within or on the mast (derrick) of the drill rig.

Pipe, drill rods, bit casings, augers and similar drilling tools should be orderly stacked on racks or sills to prevent spreading, rolling or sliding.

Penetration of other driving hammers should be placed at a safe location on the ground or be secured to prevent movement when not in use.

Work areas, platforms, walkways, scaffolding and other access ways should be kept free of materials, obstructions and substances such as ice, excess grease or oil that could cause a surface to become slick or otherwise hazardous.

Keep all controls, control linkages, warning and operation lights and lenses free of oil, grease and/or ice.
Do not store gasoline in any portable container other than a non-sparking, red container with a flame arrester in the fill spout and having the word "gasoline" easily visible.

Welding gas cylinders should be stored in an upright position to avoid gas leaks.

SAFE USE OF HAND TOOLS

There are almost an infinite number of hand tools that can be used on or around a drill rig. "Use the tool for its intended purpose" is the most important rule. The following are a few specific and some general suggestions which apply to safe use of several hand tools that are often used on and around drill rigs.

- When a tool becomes damaged, either repair it before using it again or get rid of it.

- When using a hammer, any kind of hammer, for any purpose, wear safety glasses and require all others near you to wear safety glasses.

- When using a chisel, any kind of chisel, for any purpose, wear safety glasses and require all others around you to wear safety glasses.

- Keep all tools cleaned and orderly stored when not in use.

- Replace hook and heel jaws when they become visibly worn.

- When breaking tool joints on the ground or on a drilling platform, position your hands so that your fingers will not be smashed between the wrench handle and the ground or the platform, should the wrench slip or the joint suddenly let go.

SAFE USE OF WIRE LINE HOISTS, WIRE ROPE AND HOISTING HARDWARE

The use of wire line hoists, wire rope and hoisting hardware should be as stipulated by the American Iron and Steel Institute's Wire Rope User's Manual.

All wire ropes and fittings should be visually inspected during use and thoroughly inspected at least once a week for: abrasion, broken wires, wear, reduction in rope diameter, reduction in wire diameter, fatigue, corrosion, damage from heat, improper weaving, jamming, crushing, bird caging, kinking, core protrusion and damage to lifting hardware and any other feature that would lead to failure. Wire ropes should be replaced when inspection indicates excessive damage according to the wire rope users manual.

If a ball-bearing type hoisting swivel is used to hoist drill rods, swivel bearings should be inspected and lubricated daily to assure that the swivel freely rotates under load.

If a rod slipping device is used to hoist drill rods, do not drill through or rotate drill rods through the slipping device, do not hoist more than 1 ft of the drill rod column above the top of the mast (derrick), do not hoist a rod column with loose tool joints and do not make up, tighten or loosen tool joints while the rod column is being supported by a slipping device. If drill rods should slip back into the borehole, do not attempt to brake the fall of the rods with your hands.

Most sheaves on drill rigs are stationary with a single part line. The number of parts of line should not ever be increased without first consulting with the manufacturer of the drill rig. Wire ropes must be properly matched with each sheave.

The following procedures and precautions must be understood and implemented for safe use of wire ropes and rigging hardware.

Use tool handling hoists only for vertical lifting of tools (except when angle hole drilling). Do not use tool handling hoists to pull on objects away from the drill rig; however, drills may be moved using the main hoist as the wire rope is pulled through proper sheaves according to the manufacturer's recommendations.

When stuck tools or similar loads cannot be raised with a hoist, disconnect the hoist line and connect the stuck tools directly to the feed mechanisms of the drill. Do not use hydraulic leveling jacks for added pull to the hoist line or the feed mechanisms of the drill.
When attempting to pull out a mired down vehicle or drill rig carrier, only use a winch or the front or rear of the vehicle or drill rig carrier and stay as far as possible away from the wire rope. Do not attempt to use tool hoists to pull out a mired down vehicle or drill rig carrier.

Minimize shock loading of a wire rope - apply loads smoothly and steadily.

- Protect wire rope from sharp corners or edges.

- Replace faulty guides and rollers.
- Replace worn sheaves or worn sheave bearings.
- Replace damaged safety latches on safety hooks before using.
- Know the safe working load of the equipment and tackle being used. Never exceed this limit.
- Clutches and brakes of hoists should be periodically inspected and tested.
- Know and do not exceed the rated capacity of hooks, rings, links, swivels, shackles and other lifting aids.
- Always wear gloves when handling wire ropes.
- Do not guide wire ropes or hoist drums with your hands.
- Follow the installation of a new wire rope, first lift a light load to allow the wire rope to adjust.
- Never carry out any hoisting operations when the weather conditions are such that hazards to personnel, the public, or property are created.
- Never leave a load suspended in the air when the hoist is unattended.
- Keep your hands away from hoists, wire rope, hoisting hooks, sheaves and pinch points as slack is being taken up and when the load is being hoisted.
- Safety rules described in OSHA Regulations 29 CFR 1926.552 and guidelines contained in the Wire Rope User's Manual published by the American Iron and Steel Institute shall be used whenever wire line hoists, wire rope, or hoisting hardware are used.
- Never hoist loads over anyone's head.
- The operator and tool handler should establish a system of responsibility for the series of various activities required for auger drilling, such as connecting and disconnecting auger sections, and inserting and removing the auger fork. The operator must insure that the tool handler is well away from the auger column and that the auger fork is removed before starting rotation.
- Only use the manufacturer's recommended method of securing the auger to the power coupling. Do not touch the coupling or the auger with your hands, a wrench or any other tool during rotation.
- Whenever possible, use tool hoists to handle auger sections.
- Never place hands or fingers under the bottom of an auger section when hoisting the auger over the top of the auger section in the ground or other hard surfaces such as the drill rig platform.
- Never allow feet to get under the auger section that is being hoisted.
- When rotating augers, stay clear of the rotating auger and other rotating components of the drill rig. Never reach behind or around a rotating auger for any reason whatsoever.
- Never place your hands between the drill rig and an auger, even when attempting to free a damaged or bound Shelby tube from the auger.

- Never use your hands or feet to move cuttings away from the auger.

- Augers should be cleaned only when the drill rig is in neutral and the augers are stopped from rotating.

SAFETY DURING ROTARY AND CORE DRILLING

Rotary drilling tools should be safety checked prior to drilling:

- Water swivels and hoisting plugs should be lubricated and checked for "frozen" bearings before use.

- Drill rod chuck jaws should be checked periodically and replaced when necessary.

- The capacities of hoists and sheaves should be checked against the anticipated weight of the drill rod string plus other expected hoisting loads. All cables should be inspected daily.

Special precautions that should be taken for safety rotary or core drilling involve chucking, joint break, hoisting and lowering of drill rods:

- Drill rods should not be braked during lowering into the hole with drill rod chuck jaws.

- Drill rods should not be held or lowered into the hole with pipe wrenches.

- If a string of drill rods are accidentally or inadvertently released into the hole, do not attempt to grab the falling rods with your hands or a wrench.

- In the event of a plugged bit or other circulations blockage, the high pressure in the piping and hose between the pump and the obstruction should be relieved or bled down before breaking the first tool joint.

- When drill rods are hoisted from the hole, they should be cleaned for safe handling with a rubber or other suitable rod wiper. Do not use your hands to clean drilling fluids from drill rods.

- If work must progress over a portable drilling fluid (mud) pit, do not attempt to stand on narrow sides or cross members. The mud pit should be equipped with a rough surface, fitted cover panels of adequate strength to hold drill rig personnel.

- Drill rods should not be lifted and leaned unsecured against the mast. Either provide some method of securing the upper ends of the drill rod sections for safe vertical storage or lay the rods down.

- All hydraulic lines should be periodically inspected for integrity and replaced as needed.

START UP

All drill rig personnel and visitors should be instructed to "stand clear" of the drill rig immediately prior to and during starting of an engine.

Make sure all gear boxes are in neutral, all hoist levers are disengaged, all hydraulic levers are in the correct non-actuating positions and the cathead rope is not on the cathead before starting a drill rig engine.

GENERAL SAFETY DURING DRILLING OPERATIONS

Safety requires the attention and cooperation of every worker and site visitor.

Do not drive the drill rig from hole to hole with the mast (derrick) in the raised position.

Before raising the mast (derrick) look up to check for overhead obstructions. (Refer to previous Section on overhead and buried utilities).

Before raising the mast (derrick), all drill rig personnel and visitors (with exception of the operator) should be cleared from the areas immediately to the rear and the sides of the mast. All drill rig personnel and visitors should be informed that the mast is being raised prior to raising it.

Before the mast (derrick) of a drill rig is raised and drilling is commenced, the drill rig must be first leveled and stabilized with leveling jacks and/or solid cribbing. The drill rig should be re-leveled if it settles after initial set up. Lower the mast (derrick) only when leveling jacks are down and do not raise the leveling jack pads until the mast (derrick) is lowered completely.

Before starting drilling operations, secure and/or lock the mast (derrick) if required according to the drill manufacturer's recommendations.

The operator of a drill rig should only operate a drill rig from the position of the controls. The operator should shut down the drill engine before leaving the vicinity of the drill rig.

Do not consume alcoholic beverages or other depressants or chemical stimulants prior to starting work on a drill rig or while on the job.

Watch for slippery ground when mounting and dismounting from the platform.

All unattended boreholes must be adequately covered or otherwise protected to prevent drill rig personnel, site visitors or animals from stepping or falling into the hole. All open boreholes should be covered, protected or backfilled adequately and according to local or state regulations on completion of the drilling project.

"Horsing around" within the vicinity of the drill rig and tool and supply storage areas should never be allowed, even when the drill rig is shut down.

Be careful when lifting heavy objects. Before lifting a relatively heavy object, approach the object by bending at the knees, keeping your back vertical and unarched while obtaining a firm footing. Grasp the object firmly with both hands and stand slowly and squarely while keeping your back vertical and unarched. In other words, perform the lifting with the muscles in your legs, not the muscles in your lower back.

Drilling operations should be terminated during an electrical storm.

The minimum number of personnel necessary to achieve the objectives shall be within 25 ft of the drilling or sampling activity. Back-up personnel should remain at least 25 ft from the drilling or sampling activity, where practical.

Hardhats and steel boots are to be worn by all personnel in the vicinity of the drilling activities. Drilling personnel should not wear loose-fitting or baggy clothing which may be awkward or get caught on equipment. Jewelry, including rings and necklaces, should not be worn around electrical wires or rotating equipment.

ATTACHMENT I

SAFETY GUIDELINES FOR EXCAVATIONS

SAFETY GUIDELINES FOR EXCAVATIONS

This procedure contains general safety requirements for excavating and trenching operations and work performed therein. The requirements are consistent with standards established by the Occupational Safety and Health Administration (OSHA) and described in OSHA Regulations 29 CFR 1926, Subpart P. The latter should be consulted for additional information.

RESPONSIBILITY AND APPLICABILITY

The EWMA Project Manager is responsible for ensuring that employees of EWMA and of firms contracted by EWMA comply with these requirements.

These procedures are applicable to all EWMA projects in which trenching or other excavating operations, exclusive of borings, are performed by firms under contract to EWMA. It is also applicable to EWMA projects requiring EWMA personnel or firms under contract to EWMA to enter trenches and other types of excavations.

REQUIREMENTS

When planning any excavating operation, obtain a permit, if required, from the proper authority.

Before digging, determine if underground installations, such as sewer, water, fuel, or electrical lines may be encountered and, if so, determine the exact locations of the lines. Information can be obtained by contacting Underground Service Alert (consult local telephone directory for toll-free number), local utility companies and the owner of the property on which the excavating operations are planned.

Trees, boulders, and other surface encumbrances, located so as to pose a potential hazard to employees must be removed or made safe before the operation begins.

Excavated materials must be placed at least 2 ft from the edge of the excavation and precautions must be taken to prevent the materials from falling into the excavation.

SHORING AND SLOPING

Excavations in which personnel are required to work must be shored or sloped to an angle of repose if the depth of the excavation is 5 ft or more. When a shoring system is used, it shall consist of hydraulic shores or the equivalent, with sheathing or sheet piling as needed. The shoring system must be properly designed and installed to sustain all existing and expected loads. For details on shoring and sloping, consult OSHA Regulations 29 CFR, Subpart P, Section 1926.650 to 1926.653.

ACCESS

When work is to be performed in an excavation, safe access to the excavation must be provided by means of ladders, stairs, or ramps. Trenches greater than 4 ft in depth must have ladders spaced no less than 25 ft apart, and the ladders must extend at least 3 ft above the ground surface.

HAZARDOUS ATMOSPHERES

At sites where oxygen deficiency or hazardous concentrations of flammable or toxic vapors or gases may be encountered in excavations, the atmosphere in the excavations must be tested by the EWMA Site Safety Officer or other qualified person before work in the excavation begins and at appropriate intervals afterward.

INSPECTION OF EXCAVATIONS

Excavations must be inspected daily by the EWMA Site Manager or EWMA Site Safety Officer. If evidence of potential caveins or slides is observed, all work in the excavation must be suspended until necessary steps have been taken to safeguard employees.

OPERATION OF VEHICLES NEAR EXCAVATIONS

When vehicles or heavy equipment must operate near an excavation, the sides of the excavation must be shored or braced as necessary to withstand forces exerted by the superimposed load. Stop logs or other types of secure barriers must be installed at the edges of the excavations.

BARRICADES AND FENCES

Excavated areas must be completely guarded on all sides with barricades or fences, as appropriate. If barricades are used, they must be spaced no more than 20 ft apart and shall not be less than 3 ft high when erected. A yellow or yellow and black tape, at least 1 inch wide, shall be stretched between the barricades.

BACKFILLING

Excavated areas must be backfilled and all associated equipment must be removed from the area as soon as practical after work is completed.

ATTACHMENT J

TICKS AND TICK-BORNE DISEASES

TICKS AND TICK-BORNE DISEASES

Field personnel should be aware of an increased occurrence of tick-borne disease in the United States. In the northeast, the most likely carriers are the whitefooted mouse and the white-tailed deer. These animals are most prevalent in areas where suburban environments about open fields or woodlands. Although exposure is increased in these areas, other carriers, such as dogs and horses, can be found in a variety of environments.

All field personnel should take proper precautions to limit exposure to ticks and tick-borne diseases. These include:

- Cinching and taping clothing at the ankles and wrists, especially the ankles. Ticks lie low on grass blades and shrubs. They encounter your feet, ankles or lower legs and then crawl upward.

- Wear light-colored clothing to facilitate spotting the ticks, and check your clothing periodically. Be especially careful in terrain with tall grass, bushes or woods.

- Use a tick repellant on skin or clothing. Always read the labels before using. Clothing repellents should never be used on the skin.

- Recognize the signs of a bite or an infection. It takes several hours for a tick to attach and feed; removing it promptly lessens the chance of being infected.

Pregnant women should be particularly careful since the effects of the most common tick-borne disease in the northeast, Lyme disease, upon the fetus is unknown.

If a tick is discovered on the skin, it is important to remove the entire insect as soon as possible. The most effective method is to grasp the tick as close as possible to the mouth with tweezers or thin, curved forceps. Then, without jerking, pull it upward steadily (a small amount of skin may be removed in the process).

After removing the tick, disinfect the bite with rubbing alcohol or povidone iodine (Betadine). Don't handle the tick; spirochetes could enter the body through breaks in the skin. Dispose of it in alcohol or flush it down the drain. And check the bite occasionally for at least two weeks to see if a rash forms. If it does, you've been infected and should seek treatment promptly.

The rash appears at the bite location from two days to a few weeks after the bite. It usually starts as a small red spot that expands as the spirochetes spread beyond the bite. Most commonly, the rash develops into a reddish circle or oval about two to three inches in diameter. It fades with or without treatment after a few weeks.

Much larger rashes - anywhere from 6 to 20 inches in diameter - may also occur, especially on the back. Despite their size, large rashes may be easy to miss because they're often very faint.

Other variants include a rash with a red perimeter and a clear center and the so-called bull's-eye rash, which consists of several concentric red rings. Rashes may vary in shape, depending on where they occur on the body. Frequent sites are the thigh, groin, and armpits. People often develop a rash in more than one place.

Early symptoms may include profound fatigue, a stiff neck, and flu-like symptoms such as headache, chills, fever, and muscle aches. Since tick bites don't always produce a rash, those symptoms alone may warrant a medical check for possible Lyme infection - especially if they occur in summer and you live in an area that is endemic for Lyme disease.

Without treatment, the spirochetes usually multiply and the disease progressively worsens. The second stage, occurring within weeks to months of the bite, may affect the heart and nervous system. Third is the chronic arthritic stage, which begins up to a year or more after the bite.

ATTACHMENT K

MATERIAL SAFETY DATA SHEETS

ALCONOX

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Chemical family: Detergent.

Product name: Alconox

Manufacturer: Alconox, Inc.
30 Glenn St. Suite 309
White Plains, NY 10603.

Manufacturer emergency phone number: 800-255-3924
813-248-0573 (outside of the United States)

Supplier: Same as manufacturer.

Section 2: INGREDIENT INFORMATION

CAS	CONCENTRATION %	Ingredient Name	T.L.V.	LD/50	LC/50
25155-30-0	10-30	SODIUM DODECYLBENZENESULFONATE	NOT AVAILABLE	438 MG/KG RAT ORAL 1330 MG/KG MOUSE ORAL	NOT AVAILABLE
497-19-8	7-13	SODIUM CARBONATE	NOT AVAILABLE	4090 MG/KG RAT ORAL 6600 MG/KG MOUSE ORAL	2300 MG/M3/2H RAT INHALATION 1200 MG/M3/2H MOUSE INHALATION
7722-88-5	10-30	TETRASODIUM PYROPHOSPHATE	5 MG/M3	4000 MG/KG RAT ORAL 2980 MG/KG MOUSE ORAL	NOT AVAILABLE
7758-29-4	10-30	SODIUM PHOSPHATE	NOT AVAILABLE	3120 MG/KG RAT ORAL 3100 MG/KG MOUSE ORAL >4640 MG/KG RABBIT DERMAL	NOT AVAILABLE

Section 2A: ADDITIONAL INGREDIENT INFORMATION

Note: (supplier).
CAS# 497-19-8: LD50 4020 mg/kg – rat oral.
CAS# 7758-29-4: LD50 3100 mg/kg – rat oral.

Section 3 : HAZARD IDENTIFICATION

Route of entry: Skin contact, eye contact, inhalation and ingestion.

Effects of acute exposure

Eye contact: May cause irritation.

Skin contact: Prolonged contact may cause irritation.

Inhalation: Airborne particles may cause irritation.

Ingestion: May cause vomiting and diarrhea.
May cause abdominal pain.
May cause gastric distress.

Effects of chronic exposure: Contains an ingredient which may be corrosive.

Section 4 : FIRST AID MEASURES

Skin contact: Remove contaminated clothing.
Wash thoroughly with soap and water.
Seek medical attention if irritation persists.

Eye contact: Check for and remove contact lenses.
Flush eyes with clear, running water for 15 minutes while holding eyelids open; if irritation persists, consult a physician.

Inhalation: Remove victim to fresh air.
Seek medical attention if symptoms persist.

Ingestion: Dilute with two glasses of water.
Never give anything by mouth to an unconscious person.
Do not induce vomiting; seek immediate medical attention.

Additional information: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any inaccuracies.

Section 5 : FIRE FIGHTING MEASURES

Flammability: Not flammable.

Conditions of flammability: Surrounding fire.

Extinguishing media: Carbon dioxide, dry chemical, foam.
Water
Water fog.

Special procedures: Self-contained breathing apparatus required.
Firefighters should wear the usual protective gear.

Auto-ignition temperature: Not available.

Flash point (°C), method: None

Lower flammability limit (% vol): Not applicable.

Upper flammability limit (% vol): Not applicable.

Explosion Data

Sensitivity to static discharge: Not available

Sensitivity to mechanical impact: Not applicable.

Hazardous combustion products: Oxides of carbon (COx).
Hydrocarbons.

Rate of burning: Not available.

Explosive power: None.

Section 6: ACCIDENTAL RELEASE MEASURES

Leak/Spill: Contain the spill.
Recover uncontaminated material for re–use.
Wear appropriate protective equipment.
Contaminated material should be swept or shoveled into appropriate waste container for disposal.

Section 7: HANDLING AND STORAGE

Handling procedures and equipment: Protect against physical damage.
Avoid breathing dust.
Wash thoroughly after handling.
Keep out of reach of children.
Avoid contact with skin, eyes and clothing.
Launder contaminated clothing prior to reuse.

Storage requirements: Keep containers closed when not in use.
Store away from strong acids or oxidizers.
Store in a cool, dry and well ventilated area.

Section 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

Precautionary Measures

Gloves/Type:

Neoprene or rubber gloves.

Respiratory/Type:

If exposure limit is exceeded, wear a NIOSH approved respirator.

Eye/Type:

Safety glasses with side–shields.

Footwear/Type: Safety shoes per local regulations.

Clothing/Type: As required to prevent skin contact.

Other/Type: Eye wash facility should be in close proximity.
Emergency shower should be in close proximity.

Ventilation requirements: Local exhaust at points of emission.

Exposure limit of material: Not available for mixture, see the ingredients section.

Section 9 : PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Solid
Appearance & odor:	Almost odourless White granular powder
Odor threshold (ppm):	Not available.
Vapour pressure (mmHg):	Not applicable.
Vapour density (air=1):	Not applicable.
By weight:	Not available.
Evaporation rate (butyl acetate = 1):	Not applicable.
Boiling point (°C):	Not applicable.
Freezing point (°C):	Not applicable.
pH:	(1% aqueous solution) 9.5
Specific gravity @ 20 °C:	(water = 1). 0.85 – 1.10
Solubility in water (%):	100 – > 10% w/w
Coefficient of water\oil dist.:	Not available.
VOC:	None
Chemical family:	Detergent.

Section 10 : STABILITY AND REACTIVITY

Chemical stability:	Stable under normal conditions.
Conditions of instability:	None known.
Hazardous polymerization:	Will not occur.
Incompatible substances:	Strong acids. Strong oxidizers.
Hazardous decomposition products:	See hazardous combustion products.

Section 11 : TOXICOLOGICAL INFORMATION

LD50 of product, species & route:	> 5000 mg/kg – rat oral.
LC50 of product, species & route:	Not available for mixture, see the ingredients section.
Sensitization to product:	Not available.
Carcinogenic effects:	Not listed as a carcinogen.
Reproductive effects:	Not available.
Teratogenicity:	Not available.
Mutagenicity:	Not available.

Synergistic materials: Not available.

Section 12 : ECOLOGICAL INFORMATION

Environmental toxicity: No data at this time.

Environmental fate: No data at this time.

Section 13 : DISPOSAL CONSIDERATIONS

Waste disposal: In accordance with municipal, provincial and federal regulations.

Section 14 : TRANSPORT INFORMATION

D.O.T. CLASSIFICATION:

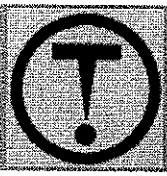
Not regulated.

Special shipping information: Not regulated.

Section 15 : REGULATORY INFORMATION

Canadian Regulatory Information

WHMIS classification: D2B



DSL status: The supplier has certified that all substances in this product appear on the domestic substances list.

USA Regulatory Information

SARA hazard catagories sections 311/312:
Immediate (Acute) Health Hazard: Yes.
Delayed (Chronic) Health Hazard: No.
Fire Hazard: No.
Sudden Release of Pressure: No.
Reactive: No.

SARA Section 313: None

TSCA inventory: All components of this product are listed on the TSCA inventory.

NFPA

Health Hazard: 1

Flammability: 0

Reactivity: 0

Section 16 : OTHER INFORMATION

Supplier MSDS date: 2008/01/07

Data prepared by:
Conform-Action Data Systems
A division of 2843471 Canada inc.
1975 Hymus Blvd, suite 230
Dorval, QC H9P 1J8
Tel: (514) 683-2060 Fax: (514) 683-1445
24 hr. 1-800-990-5093 support@netmsds.com

General note: This material safety data sheet was prepared from information obtained from various sources, including product suppliers and the Canadian Center for Occupational Health and Safety.

SIGMA-ALDRICH

Material Safety Data Sheet

Version 3.0
Revision Date 07/13/2007
Print Date 02/11/2008

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : L-Ascorbic acid

Product Number : 255564
Brand : Sigma-Aldrich

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-3832
Fax : +1 800-325-5052
Emergency Phone # : (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : L-Threoascorbic acid
Antiscorbutic factor
Ascorbic acid
Vitamin C

Formula : C6H8O6
Molecular Weight : 176.12 g/mol

CAS-No.	EC-No.	Index-No.	Concentration [%]
Ascorbic acid			
50-81-7	200-066-2	-	

3. HAZARDS IDENTIFICATION

Emergency Overview
OSHA Hazards
No OSHA Hazards

HMIS Classification
Health Hazard: 0
Flammability: 0
Physical hazards: 0

NFPA Rating
Health Hazard: 0
Fire : 0
Reactivity Hazard 0

Potential Health Effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.
Ingestion	May be harmful if swallowed.

4. FIRST AID MEASURES

If inhaled
If breathed in, move person into fresh air. If not breathing give artificial respiration

In case of skin contact
Wash off with soap and plenty of water.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water.

5. FIRE-FIGHTING MEASURES

Flammable properties
Flash point no data available

Ignition temperature no data available
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Avoid dust formation.

Environmental precautions
Do not let product enter drains

Methods for cleaning up
Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling
Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection

Storage
Keep container tightly closed in a dry and well-ventilated place.

Light sensitive.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection
Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
No SARA Hazards

Massachusetts Right To Know Components
No Components Listed

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Ascorbic acid	50-81-7	

New Jersey Right To Know Components

	CAS-No.	Revision Date
Ascorbic acid	50-81-7	

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

16. OTHER INFORMATION

Further Information
 The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

P5010004

Bio-Dechlor INOCULUM™
MATERIAL SAFETY DATA SHEET (MSDS)

Last Revised: February 10, 2004

Section 1 - Material Identification

Supplier:

REGENESIS

1011 Calle Sombra
San Clemente, CA 92673

Phone: 949.366.8000

Fax: 949.366.8090

E-mail: info@regenesis.com

Chemical Name:	**Soil Born Bacteria Extract Solution**
Chemical Family:	**Organic Chemical**
Trade Name:	**Bio-Dechlor INOCULUM™**
Product Use:	**Used in the remediation of contaminated groundwater (environmental applications)**

Section 2 – Chemical Information

CAS#	Chemical
Not Available (NA)	Soil Bacteria
50-21-5	Lactic Acid
8013-01-2	Yeast Extract

Section 3 - Physical Data

Physcial State:	**Liquid**
Boiling Point:	**Not Determined (ND)**
Flash Point:	**ND**
Density:	**1.0-1.1 g/cc**
Solubility:	**Water**
Appearance:	**Yellow Liquid**
Odor:	**Very Strong Rancid Odor**

Section 4 - Fire and Explosion Hazard Data

Extinguishing Media: **Carbon Dioxide, Dry Chemical Powder or Appropriate Foam.**

Water may be used to keep exposed containers cool.

For large quantities involved in a fire, one should wear full protective clothing and a NIOSH approved self contained breathing apparatus with full face piece operated in the pressure demand or positive pressure mode as for a situation where lack of oxygen and excess heat are present.

Section 5 - Health Hazard Data

Handling: **Avoid contact with skin. Avoid contact with eyes.**

In any case of any exposure which elicits a response, a physician should be consulted immediately.

First Aid Procedures

Inhalation:	**Remove to fresh air. If not breathing give artificial respiration. In case of labored breathing give oxygen. Call a physician.**

Section 5 - Health Hazard Data (cont)

Ingestion:	**No effects expected. Do not give anything to an unconscious person. Call a physician immediately.**
Skin Contact:	**Flush with plenty of water. Contaminated clothing may be washed or dry cleaned normally.**
Eye contact:	**Wash eyes with plenty of water for at least 15 minutes, lifting both upper and lower lids. Call a physician.**

Section 6 - Toxicological Information

Acute Effects:	**May be harmful by inhalation, ingestion, or skin absorption. May cause irritation. To the best of our knowledge, the chemical, physical, and toxicological properties of Bio-Dechlor INOCULUM have not been investigated.**

Section 7 - Reactivity Data

Conditions to Avoid:	**Strong oxidizing agents, bases and acids**
Hazardous Polymerization:	**None known**

Section 8 - Spill, Leak or Accident Procedures

After Spillage or Leakage:	**Neutralization is not required. The area should be disinfected with a 5% bleach solution**
Disposal:	**Laws and regulations for disposal vary widely by locality. Observe all applicable regulations and laws. This material, may be disposed of in a solid waste landfill. Material is readily degradable and hydrolyses in several hours.**

No requirement for a reportable quantity (CERCLA) of a spill is known.

Section 9 - Special Protection or Handling

Should be stored in plastic lined steel, plastic, glass, aluminum, stainless steel, or reinforced fiberglass containers.

Protective Gloves:	**Vinyl or Rubber**
Eyes:	**Splash Goggles or Full Face Shield. Area should have approved means of washing eyes.**
Ventilation:	**General exhaust.**
Storage:	**Store in cool, dry, ventilated area. Protect from incompatible materials.**

Section 10 - Shipping Information

D.O.T Shipping Name	**No limitations on shipping this material.**

Section 11 - Other Information

This material will degrade in the environment. Materials containing reactive chemicals should be used only by personnel with appropriate chemical training.

The information contained in this document is the best available to the supplier as of the time of writing. Some possible hazards have been determined by analogy to similar classes of material. No separate tests have been performed on the toxicity of this material. The items in this document are subject to change and clarification as more information becomes available.

BOC GASES

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: HELIUM, GAS

1. Chemical Product and Company Identification

BOC Gases,
Division of,
The BOC Group, Inc
575 Mountain Avenue
Murray Hill, NJ 07974

TELEPHONE NUMBER: (908) 464-8100
24-HOUR EMERGENCY TELEPHONE NUMBER: CHEMTREC (800) 424-9300

BOC Gases
Division of
BOC Canada Limited
5975 Falbourne Street, Unit 2
Mississauga, Ontario L5R 3W6

TELEPHONE NUMBER: (905) 501-1700
24-HOUR EMERGENCY TELEPHONE NUMBER: (905) 501-0802
EMERGENCY RESPONSE PLAN NO: 2-0101

PRODUCT NAME: HELIUM, GAS
CHEMICAL NAME: Helium
COMMON NAMES/SYNONYMS: Helium; Helium, compressed; Helium-4
TDG (Canada) CLASSIFICATION: 2.2
WHMIS CLASSIFICATION: A

PREPARED BY: Loss Control (908)464-8100/(905)501-1700
PREPARATION DATE: 6/1/95
REVIEW DATES: 6/1/99

2. Composition, Information on Ingredients

EXPOSURE LIMITS[1]:

INGREDIENT	% VOLUME	PEL-OSHA[2]	TLV-ACGIH[3]	LD_{50} or LC_{50} Route/Species
Helium FORMULA: He CAS: 7440-59-7 RTECS #: MH6520000	99.995 to 99.9999	None Established	Simple Asphyxiant	Not Available

[1] Refer to individual state of provincial regulations, as applicable, for limits which may be more stringent than those listed here.
[2] As stated in 29 CFR 1910, Subpart Z (revised July 1, 1993)
[3] As stated in the ACGIH 1998-1999 Threshold Limit Values for Chemical Substances and Physical Agents.

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

3. Hazards Identification

EMERGENCY OVERVIEW

Odorless, colorless, non-flammable gas. Simple Asphyxiant - This product does not contain oxygen and may cause asphyxia if released in a confined area. Intentional misuse of this product can cause serious lung damage or death. Maintain oxygen levels above 19.5%. Contents under pressure. Use and store below 125 °F.

ROUTE OF ENTRY:

Skin Contact	Skin Absorption	Eye Contact	Inhalation	Ingestion
No	No	No	Yes	No

HEALTH EFFECTS:

Exposure Limits	Irritant	Sensitization
No	No	No
Teratogen	Reproductive Hazard	Mutagen
No	No	No
Synergistic Effects		
None reported		

Carcinogenicity: --NTP: No IARC: No OSHA: No

EYE EFFECTS:
No adverse effects anticipated.

SKIN EFFECTS:
No adverse effects anticipated.

INGESTION EFFECTS:
No adverse effects anticipated.

INHALATION EFFECTS:
Product is a non-toxic simple asphyxiant. Effects of oxygen deficiency resulting from simple asphyxiants may include: rapid breathing, diminished mental alertness, impaired muscular coordination, faulty judgement, depression of all sensations, emotional instability, and fatigue. As asphyxiation progresses, nausea, vomiting, prostration, and loss of consciousness may result, eventually leading to convulsions, coma, and death.

Intentional inhalation of helium balloon gas can cause asphyxiation, lung damage, and death.

Oxygen deficiency during pregnancy has produced developmental abnormalities in humans and experimental animals.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

NFPA HAZARD CODES	HMIS HAZARD CODES	RATINGS SYSTEM
Health: 0	Health: 0	0 = No Hazard
Flammability: 0	Flammability: 0	1 = Slight Hazard
Instability: 0	Reactivity: 0	2 = Moderate Hazard
		3 = Serious Hazard
		4 = Severe Hazard

4. First Aid Measures

EYES:
None required.

SKIN:
None required.

INGESTION:
Ingestion is not anticipated.

INHALATION:
PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS. Victims should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. Unconscious persons should be moved to an uncontaminated area, and if breathing has stopped, administer artificial resuscitation and supplemental oxygen. Further treatment should be symptomatic and supportive.

5. Fire Fighting Measures

Conditions of Flammability: Nonflammable		
Flash point: None	Method: Not Applicable	Autoignition Temperature: None
LEL(%): None	UEL(%): None	
Hazardous combustion products: None		
Sensitivity to mechanical shock: None		
Sensitivity to static discharge: None		

FIRE AND EXPLOSION HAZARDS:
Nonflammable. Cylinder may rupture violently from pressure when involved in a fire situation.

EXTINGUISHING MEDIA:
None required. Use as appropriate for surrounding materials.

FIRE FIGHTING INSTRUCTIONS: Firefighters should wear respiratory protection (SCBA) and full turnout or Bunker gear. Continue to cool fire-exposed containers until well after flames are extinguished.

6. Accidental Release Measures

Evacuate all personnel from affected area. Use appropriate protective equipment. If leak is in container or container valve, contact the appropriate emergency telephone number listed in Section 1 or call your closest BOC location.

7. Handling and Storage

Electrical classification:
Non-hazardous.

This gas mixture is noncorrosive and may be used with all common structural materials.

Use only in well-ventilated areas. Valve protection caps must remain in place unless container is secured with valve protection outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure reducing regulator when connecting cylinder to lower pressure (<3000 psig) piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous back flow into the cylinder.

Protect cylinders from physical damage. Store in cool, dry, well-ventilated area of non-combustible construction away from heavily trafficked areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 125 °F (52 °C). Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Use a "first in-first out" inventory system to prevent full cylinders being stored for excessive periods of time.

Proper handling, storage and operation of regulating equipment and cylinders is required to safely fill helium balloons. DO NOT ALLOW CHILDREN or unqualified people to operate balloon filling equipment. INTENTIONAL INHALATION OF HELIUM CAN CAUSE SERIOUS LUNG DAMAGE OR DEATH. A balloon filling helium regulator must be attached to the valve before it is opened. Close cylinder valve after each use and when empty. Do not use in poorly ventilated area or attempt to remove stuck or jammed protective caps. Check for leaks and do not use leaky equipment. Do not use helium unless cylinder is properly labeled. Do not attempt to transfer helium from cylinder into any other container. Do not substitute hydrogen (a highly flammable gas) for helium.

For additional recommendations, consult Compressed Gas Association Pamphlets P-1, P-9, P-9.1, P-18, SB-14, and Safety Bulletin SB-2.

Never carry a compressed gas cylinder or a container of a gas in cryogenic liquid form in an enclosed space such as a car trunk, van or station wagon. A leak can result in a fire, explosion, asphyxiation or a toxic exposure.

8. Exposure Controls, Personal Protection

ENGINEERING CONTROLS:
Local exhaust to prevent accumulation of high concentrations and maintain air oxygen levels at or above 19.5%.

EYE/FACE PROTECTION:
Safety goggles or glasses as appropriate for the job.

SKIN PROTECTION:
Protective gloves of material appropriate for the job.

RESPIRATORY PROTECTION:
Positive pressure air line with full-face mask and escape bottle or self-contained breathing apparatus should be available for emergency use.

OTHER/GENERAL PROTECTION:
Safety shoes or other footwear as appropriate for the job.

9. Physical and Chemical Properties

PARAMETER	VALUE	UNITS
Physical state (gas, liquid, solid)	: Gas	
Vapor pressure	: Not Available	
Vapor density (Air = 1)	: 0.14 (Gas)	
Evaporation point	: Not Available	
Boiling point	: -452.1	°F
	: -268.9	°C
Freezing point	: Not Available	
	: Not Available	
PH	: Not Applicable	
Specific gravity	: Not Available	
Oil/water partition coefficient	: Not Available	
Solubility (H_20)	: Negligible	
Odor threshold	: Not Applicable	
Odor and appearance	: Colorless, odorless gas	

10. Stability and Reactivity

STABILITY:
Stable

INCOMPATIBLE MATERIALS:
None

HAZARDOUS POLYMERIZATION:
Does not occur.

11. Toxicological Information

Oxygen deficiency during pregnancy has produced developmental abnormalities in humans and experimental animals.

No data given in the Registry of Toxic Effects of Chemical Substances (RTECS) or Sax, Dangerous Properties of Industrial Materials, 7th ed.

12. Ecological Information

No data given.

13. Disposal Considerations

Do not attempt to dispose of residual waste or unused quantities. Return in the shipping container PROPERLY LABELED, WITH ANY VALVE OUTLET PLUGS OR CAPS SECURED AND VALVE PROTECTION CAP IN PLACE to BOC Gases or authorized distributor for proper disposal.

14. Transport Information

PARAMETER	United States DOT	Canada TDG
PROPER SHIPPING NAME:	Helium, compressed	Helium, compressed
HAZARD CLASS:	2.2	2.2
IDENTIFICATION NUMBER:	UN 1046	UN 1046
SHIPPING LABEL:	NONFLAMMABLE GAS	NONFLAMMABLE GAS

15. Regulatory Information

SARA TITLE III NOTIFICATIONS AND INFORMATION

SARA TITLE III - HAZARD CLASSES:
Sudden Release of Pressure Hazard

16. Other Information

ACGIH	American Conference of Governmental Industrial Hygienists
DOT	Department of Transportation
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
SARA	Superfund Amendments and Reauthorization Act
STEL	Short Term Exposure Limit
TDG	Transportation of Dangerous Goods
TLV	Threshold Limit Value
WHMIS	Workplace Hazardous Materials Information System

Compressed gas cylinders shall not be refilled without the express written permission of the owner. Shipment of a compressed gas cylinder which has not been filled by the owner or with his/her (written) consent is a violation of transportation regulations.

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES:
Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

Hydrogen Release Compound (HRC®)
MATERIAL SAFETY DATA SHEET (MSDS)

Last Revised: February 10, 2004

Section 1 - Material Identification

Supplier:

REGENESIS

1011 Calle Sombra
San Clemente, CA 92673

Phone: 949.366.8000

Fax: 949.366.8090

E-mail: info@regenesis.com

Chemical Name:	Propanoic acid, 2-[2-[2-(2-hydroxy-1-oxopropoxy)-1-oxopropoxy]-1-oxopropoxy]-1,2,3-propanetriyl ester
Chemical Family:	Organic Chemical
Trade Name:	Hydrogen Release Compound® (HRC®) Glycerol tripolylactate and Glycerol
Product Use:	Used to remediate contaminated soil and groundwater (environmental applications)

Section 2 – Chemical Identification

CAS#	Chemical
201167-72-8	Glycerol Tripolylactate
56-81-5	Glycerol
50-21-5	Lactic Acid

Section 3 - Physical Data

Melting Point:	Not Available (NA)
Boiling Point:	Not Determined (ND)
Flash Point:	ND
Density:	1.3 g/cc

Section 3 – Physical Data (cont)

Solubility:	**Acetone and DMSO**
Appearance:	**Viscous amber gel/liquid**
Odor:	**Not detectable**
Vapor Pressure:	**None**

Section 4 - Fire and Explosion Hazard Data

Extinguishing Media: **Carbon Dioxide, Dry Chemical Powder or Appropriate Foam.**

Water may be used to keep exposed containers cool.

For large quantities involved in a fire, one should wear full protective clothing and a NIOSH approved self contained breathing apparatus with full face piece operated in the pressure demand or positive pressure mode as for a situation where lack of oxygen and excess heat are present.

Section 5 - Toxicological Information

Acute Effects: **May be harmful by inhalation, ingestion, or skin absorption. May cause irritation. To the best of our knowledge, the chemical, physical, and toxicological properties of the glycerol tripolylactate have not been investigated. Listed below are the toxicological information for glycerol and lactic acid.**

RTECS#: **MA8050000**
Glycerol

Irritation data:

SKN-RBT 500 MG/24H MLD	BIOFX* 9-4/1970
85JCAE-,207,1986	85JCAE-,207,1986
EYE-RBT 126 MG MLD	85JCAE -,656,86
EYE-RBT 500 MG/24H MLD	AJOPAA 29,1363,46
SKN-RBT 5MG/24H SEV	
EYE-RBT 750 UG SEV	

Section 5 – Toxicological Information (cont)

Toxicity data:	ORL-MUS LD50:4090 MG/KG	NIIRDN 6,215,1982
	FRZKAP (6),56,1977	FEPRA7 4,142,1945
	SCU-RBT LD50:100 MG/KG	RCOCB8 56,125,1987
	ORL-RAT LD50:12600 MG/KG	ARZNAD 26,1581,1976
	IHL-RATLC50:>570MG/M3/1HBIO	ARZNAD 26,1579,1978
	FX*9-4/1970 IPR-RAT LD50: 4420 MG/KG	NIIRDN 6,215,1982
	IVN-RAT LD50: 5566 MG/KG	JAPMA8 39,583,1950
	IPR-MUS LD50: 8700 MG/KG	DMDJAP 31,276,1959
	SCU-MUS LD50: 91 MG/KG	BIOFX* 9-4/1970
	IVN-MUS LD50: 4250 MG/KG	NIIRDN 6,215,1982
	ORL-RBT LD50: 27 GM/KG	FMCHA2-,C252,91
	SKN-RBT LD50:>10GM/KG	FMCHA2-,C252,91
	IVN-RBT LD50: 53 GM/KG	FAONAU 40,144,67
	ORL-GPG LD50: 7750 MG/KG	JIHTAB 23,259,41
	ORL-RAT LD50:3543 MG/KG	FMCHA2-,C252,91
	SKN-RBT LD50:>2 GM/KG	JIHTAB 23,259,1941
	ORL-MUS LD50: 4875 MG/KG	
	ORL-GPG LD50: 1810 MG/KG	
	ORL-QAL LD50: >2250 MG/KG	
Target Organ data:	Behavioral (headache), gastrointestinal (nausea or vomiting), Paternal effects (spermatogenesis, testes, epididymis, sperm duct), effects of fertility (male fertility index, post-implantation mortality).	
RTECS#:	OD2800000 Lactic acid	

Only selected registry of toxic effects of chemical substances (RTECS) data is presented here. See actual entry in RTECS for complete information on lactic acid and glycerol.

Section 6 - Health Hazard Data

Handling:	**Avoid continued contact with skin. Avoid contact with eyes.**

In any case of any exposure which elicits a response, a physician should be consulted immediately.

First Aid Procedures

Inhalation:	**Remove to fresh air. If not breathing give artificial respiration. In case of labored breathing give oxygen. Call a physician.**
Ingestion:	**No effects expected. Do not give anything to an unconscious person. Call a physician immediately.**
Skin Contact:	**Flush with plenty of water. Contaminated clothing may be washed or dry cleaned normally.**
Eye contact:	**Wash eyes with plenty of water for at least 15 minutes lifting both upper and lower lids. Call a physician.**

Section 7 - Reactivity Data

Conditions to Avoid:	**Strong oxidizing agents, bases and acids**
Hazardous Polymerization:	**None known**
Further Information:	**Hydrolyses in water to form Lactic Acid and Glycerol.**

Section 8 - Spill, Leak or Accident Procedures

After Spillage or Leakage:	**Neutralization is not required. This material may be burned in a chemical incinerator equipped with an afterburner and scrubber.**
Disposal:	**Laws and regulations for disposal vary widely by locality. Observe all applicable regulations and laws. This material, may be disposed of in solid waste. Material is readily degradable and hydrolyses in several hours.**

No requirement for a reportable quantity (CERCLA) of a spill is known.

Section 9 - Special Protection or Handling

Should be stored in plastic lined, steel, plastic, glass, aluminum, stainless steel, or reinforced fiberglass containers.

Protective Gloves:	**Vinyl or Rubber**
Eyes:	**Splash Goggles or Full Face Shield** **Area should have approved means of washing eyes.**
Ventilation:	**General exhaust.**
Storage:	**Store in cool, dry, ventilated area. Protect from incompatible materials.**

Section 10 - Other Information

This material will degrade in the environment by hydrolysis to lactic acid and glycerol. Materials containing reactive chemicals should be used only by personnel with appropriate chemical training.

The information contained in this document is the best available to the supplier as of the time of writing. Some possible hazards have been determined by analogy to similar classes of material. No separate tests have been performed on the toxicity of this material. The items in this document are subject to change and clarification as more information becomes available.

eXtended release formula Hydrogen Release Compound (HRC-X™)
MATERIAL SAFETY DATA SHEET (MSDS)

Last Revised: March 24, 2004

Section 1 - Material Identification

Supplier:

REGENESIS
1011 Calle Sombra
San Clemente, CA 92673

Phone: 949.366.8000

Fax: 949.366.8090

E-mail: info@regenesis.com

Chemical Name:	Propanoic acid, 2-[2-[2-(2-hydroxy-1-oxopropoxy)-1-oxopropoxy]-1-oxopropoxy]-1,2,3-propanetriyl ester
Chemical Family:	Organic Chemical
Trade Name:	*eXtended release formula* Hydrogen Release Compound (HRC-X™), Glycerol tripolylactate and Glycerol
Product Use:	Used to remediate contaminated soil and groundwater (environmental applications)

Section 2 – Chemical Identification

CAS#	Chemical
201167-72-8	Glycerol Tripolylactate
56-81-5	Glycerol
50-21-5	Lactic Acid

Section 3 - Physical Data

Melting Point:	**Not Available (NA)**
Boiling Point:	**Not Determined (ND)**
Flash Point:	**ND**
Density:	**1.3 g/cc**
Solubility:	**Acetone and DMSO**
Appearance:	**Viscous amber gel/liquid**
Odor:	**Not detectable**
Vapor Pressure:	**None**

Section 4 - Fire and Explosion Hazard Data

Extinguishing Media: **Carbon Dioxide, Dry Chemical Powder or Appropriate Foam.**

Water may be used to keep exposed containers cool.

For large quantities involved in a fire, one should wear full protective clothing and a NIOSH approved self contained breathing apparatus with full face piece operated in the pressure demand or positive pressure mode as for a situation where lack of oxygen and excess heat are present.

Section 5 - Toxicological Information

Acute Effects:	**May be harmful by inhalation, ingestion, or skin absorption. May cause irritation. To the best of our knowledge, the chemical, physical, and toxicological properties of the glycerol tripolylactate have not been investigated. Listed below are the toxicological information for glycerol and lactic acid.**
RTECS#:	**MA8050000** **Glycerol**

Section 5 - Toxicological Information (cont)

Irritation data:	SKN-RBT 500 MG/24H MLD 85JCAE-,207,1986 EYE-RBT 126 MG MLD EYE-RBT 500 MG/24H MLD SKN-RBT 5MG/24H SEV EYE-RBT 750 UG SEV	BIOFX* 9-4/1970 85JCAE-,207,1986 85JCAE -,656,86 AJOPAA 29,1363,46
Toxicity data:	ORL-MUS LD50:4090 MG/KG FRZKAP (6),56,1977 SCU-RBT LD50:100 MG/KG ORL-RAT LD50:12600 MG/KG IHL- RATLC50:>570MG/M3/1HBIOFX*9- 4/1970 IPR-RAT LD50: 4420 MG/KG IVN-RAT LD50: 5566 MG/KG SCU-MUS LD50: 91 MG/KG IPR-MUS LD50: 8700 MG/KG IVN-MUS LD50: 4250 MG/KG ORL-RBT LD50: 27 GM/KG SKN-RBT LD50:>10GM/KG IVN-RBT LD50: 53 GM/KG ORL-GPG LD50: 7750 MG/KG ORL-RAT LD50:3543 MG/KG SKN-RBT LD50:>2 GM/KG ORL-MUS LD50: 4875 MG/KG ORL-GPG LD50: 1810 MG/KG ORL-QAL LD50: >2250 MG/KG	NIIRDN 6,215,1982 FEPRA7 4,142,1945 RCOCB8 56,125,1987 ARZNAD 26,1581,1976 NIIRDN 6,215,1982 ARZNAD 26,1579,1978 JAPMA8 39,583,1950 DMDJAP 31,276,1959 BIOFX* 9-4/1970 NIIRDN 6,215,1982 JIHTAB 23,259,1941 FMCHA2-,C252,91 FMCHA2-,C252,91 FAONAU 40,144,67 JIHTAB 23,259,41 FMCHA2-,C252,91
Target Organ data:	Behavioral (headache), gastrointestinal (nausea or vomiting), Paternal effects (spermatogenesis, testes, epididymis, sperm duct), effects of fertility (male fertility index, post-implantation mortality).	
RTECS#:	OD2800000	
	Lactic acid	

Only selected registry of toxic effects of chemical substances (RTECS) data is presented here. See actual entry in RTECS for complete information on lactic acid and glycerol.

Section 6 - Health Hazard Data

Handling: Avoid continued contact with skin. Avoid contact with eyes.

In any case of any exposure which elicits a response, a physician should be consulted immediately.

First Aid Procedures

Inhalation:	Remove to fresh air. If not breathing give artificial respiration. In case of labored breathing give oxygen. Call a physician.
Ingestion:	No effects expected. Do not give anything to an unconscious person. Call a physician immediately.
Skin Contact:	Flush with plenty of water. Contaminated clothing may be washed or dry cleaned normally.
Eye contact:	Wash eyes with plenty of water for at least 15 minutes lifting both upper and lower lids. Call a physician.

Section 7 - Reactivity Data

Conditions to Avoid:	Strong oxidizing agents, bases and acids
Hazardous Polymerization:	None known
Further Information:	Hydrolyses in water to form Lactic Acid and Glycerol.

Section 8 - Spill, Leak or Accident Procedures

After Spillage or Leakage:	Neutralization is not required. This material may be burned in a chemical incinerator equipped with an afterburner and scrubber.
Disposal:	Laws and regulations for disposal vary widely by locality. Observe all applicable regulations and laws. This material, may be disposed of in solid waste. Material is readily degradable and hydrolyses in several hours.

No requirement for a reportable quantity (CERCLA) of a spill is known.

Section 9 - Special Protection or Handling

Should be stored in plastic lined steel, plastic, glass, aluminum, stainless steel, or reinforced fiberglass containers.

Protective Gloves:	**Vinyl or Rubber**
Eyes:	**Splash Goggles or Full Face Shield Area should have approved means of washing eyes.**
Ventilation:	**General exhaust.**
Storage:	**Store in cool, dry, ventilated area. Protect from incompatible materials.**

Section 10 - Other Information

This material will degrade in the environment by hydrolysis to lactic acid and glycerol. Materials containing reactive chemicals should be used only by personnel with appropriate chemical training.

The information contained in this document is the best available to the supplier as of the time of writing. Some possible hazards have been determined by analogy to similar classes of material. No separate tests have been performed on the toxicity of this material. The items in this document are subject to change and clarification as more information becomes available.

Sigma Chemical Co.
P.O. Box 14508
St. Louis, MO 63178 USA
Tel: 314-771-5765

M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1. - - - - - - - - - CHEMICAL IDENTIFICATION- - - - - - - - - -
CATALOG #: H1758
NAME: HYDROCHLORIC ACID
SECTION 2. - - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - - -
CAS #: 7647-01-0
MF: HCL
EC NO: 231-595-7
SYNONYMS
ACIDE CHLORHYDRIQUE (FRENCH) * ACIDO CLORIDRICO (ITALIAN) * ANHYDROUS HYDROCHLORIC ACID * CHLOORWATERSTOF (DUTCH) * CHLOROHYDRIC ACID * CHLOROWODOR (POLISH) * CHLORWASSERSTOFF (GERMAN) * HYDROCHLORIDE * HYDROGEN CHLORIDE (ACGIH:OSHA) * MURIATIC ACID * SPIRITS OF SALT *
SECTION 3. - - - - - - - - - - HAZARDS IDENTIFICATION - - - - - - - - -
LABEL PRECAUTIONARY STATEMENTS
CORROSIVE
CAUSES BURNS.
TOXIC BY INHALATION AND IF SWALLOWED.
REACTS VIOLENTLY WITH WATER.
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING.
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.
DO NOT BREATHE VAPOR.
SECTION 4. - - - - - - - - - - FIRST-AID MEASURES- - - - - - - - - -
IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.
CALL A PHYSICIAN.
DO NOT INDUCE VOMITING.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
IN CASE OF SKIN CONTACT, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. CALL A PHYSICIAN.
IN CASE OF CONTACT WITH EYES, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. ASSURE ADEQUATE FLUSHING BY SEPARATING THE EYELIDS WITH FINGERS. CALL A PHYSICIAN.
SECTION 5. - - - - - - - - - FIRE FIGHTING MEASURES - - - - - - - - - -
EXTINGUISHING MEDIA
CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.
SPECIAL FIREFIGHTING PROCEDURES
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.
USE WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS.
UNUSUAL FIRE AND EXPLOSIONS HAZARDS
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.
SECTION 6. - - - - - - - - - ACCIDENTAL RELEASE MEASURES- - - - - - - - -
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY RUBBER GLOVES.
COVER WITH DRY LIME OR SODA ASH, PICK UP, KEEP IN A CLOSED CONTAINER AND HOLD FOR WASTE DISPOSAL.

VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.
EVACUATE AREA.

SECTION 7. - - - - - - - - - - HANDLING AND STORAGE- - - - - - - - - - -
REFER TO SECTION 8.

SECTION 8. - - - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION- - - - - -
SAFETY SHOWER AND EYE BATH.
USE ONLY IN A CHEMICAL FUME HOOD.
WASH CONTAMINATED CLOTHING BEFORE REUSE.
DISCARD CONTAMINATED SHOES.
WASH THOROUGHLY AFTER HANDLING.
DO NOT BREATHE VAPOR.
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
NIOSH/MSHA-APPROVED RESPIRATOR.
COMPATIBLE CHEMICAL-RESISTANT GLOVES.
CHEMICAL SAFETY GOGGLES.
FACESHIELD (8-INCH MINIMUM).
KEEP TIGHTLY CLOSED.
STORE IN A COOL DRY PLACE.
REACTS VIOLENTLY WITH WATER.
MAY DEVELOP PRESSURE.

SECTION 9. - - - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - - - -
APPEARANCE AND ODOR
LIQUID.
PHYSICAL PROPERTIES
VAPOR PRESSURE: 409.981 MMHG
SPECIFIC GRAVITY: 1.19
VAPOR DENSITY: 1.3 G/L

SECTION 10. - - - - - - - - - -STABILITY AND REACTIVITY - - - - - - - - -
STABILITY
STABLE.
INCOMPATIBILITIES
DO NOT ALLOW WATER TO ENTER CONTAINER BECAUSE OF VIOLENT REACTION.
BASES
AMINES
ALKALI METALS
COPPER, COPPER ALLOYS
ALUMINUM
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
HYDROGEN CHLORIDE GAS
HAZARDOUS POLYMERIZATION
WILL NOT OCCUR.

SECTION 11. - - - - - - - - - - TOXICOLOGICAL INFORMATION - - - - - - - -
ACUTE EFFECTS
MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.
MAY BE HARMFUL IF SWALLOWED.
MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES AND SKIN.
INHALATION MAY RESULT IN SPASM, INFLAMMATION AND EDEMA OF THE LARYNX AND BRONCHI, CHEMICAL PNEUMONITIS AND PULMONARY EDEMA.
SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND VOMITING.
CAUSES BURNS.
MATERIAL IS EXTREMELY DESTRUCTIVE TO THE TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.
MAY BE FATAL IF INHALED, SWALLOWED, OR ABSORBED THROUGH SKIN.
RTECS #: MW4025000
HYDROCHLORIC ACID
IRRITATION DATA
EYE-RBT 5 MG/30S RINSE MLD TXCYAC 23,281,1982
TOXICITY DATA
ORL-MAN LDLO:2857 UG/KG MJAUAJ 58,28,1993
ORL-WMN LDLO:420 UL/KG JJTOEX 9,351,1996

IHL-HMN LCLO:1300 PPM/30M 29ZWAE -,207,1968
IHL-HMN LCLO:3000 PPM/5M TABIA2 3,231,1933
UNR-MAN LDLO:81 MG/KG 85DCAI 2,73,1970
IHL-RAT LC50:3124 PPM/1H AMRL** TR-74-78,1974
IHL-MUS LC50:1108 PPM/1H JCTODH 3,61,1976
IPR-MUS LD50:40142 UG/KG COREAF 256,1043,1963
ORL-RBT LD50:900 MG/KG BIZEA2 134,437,1923

TARGET ORGAN DATA
SENSE ORGANS AND SPECIAL SENSES (OTHER EYE EFFECTS)
VASCULAR (BP LOWERING NOT CHARACTERIZED IN AUTONOMIC SECTION)
LUNGS, THORAX OR RESPIRATION (RESPIRATORY DEPRESSION)
LUNGS, THORAX OR RESPIRATION (RESPIRATORY STIMULATION)
GASTROINTESTINAL (CHANGES IN STRUCTURE OR FUNCTION OF ESOPHAGUS)
SKIN AND APPENDAGES (AFTER SYSTEMIC EXPOSURE: DERMATITIS, OTHER)
ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE INFORMATION.

SECTION 12. - - - - - - - - - - ECOLOGICAL INFORMATION - - - - - - - - - -

DATA NOT YET AVAILABLE.

SECTION 13. - - - - - - - - - - DISPOSAL CONSIDERATIONS - - - - - - - - - -

CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL.

OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. - - - - - - - - - - TRANSPORT INFORMATION - - - - - - - - - -

CONTACT SIGMA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

SECTION 15. - - - - - - - - - - REGULATORY INFORMATION - - - - - - - - - -

EUROPEAN INFORMATION

EC INDEX NO: 017-002-00-2

CORROSIVE

R 23

TOXIC BY INHALATION.

R 35

CAUSES SEVERE BURNS.

S 9

KEEP CONTAINER IN A WELL-VENTILATED PLACE.

S 26

IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.

S 36/37/39

WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.

S 45

IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK

ACGIH TLV-CL 5 PPM DTLVS* TLV/BEI,1999
IARC CANCER REVIEW:HUMAN INADEQUATE EVIDENCE IMEMDT 54,199,1992
IARC CANCER REVIEW:ANIMAL INADEQUATE EVIDENCE IMEMDT 54,189,1992
IARC CANCER REVIEW:GROUP 3 IMEMDT 54,189,1992
EPA FIFRA 1988 PESTICIDE SUBJECT TO REGISTRATION OR RE-REGISTRATION FEREAC 54,7740,1989
MSHA STANDARD:AIR-CL 5 PPM (7 MG/M3) DTLVS* 3,129,1971
OSHA PEL (GEN INDU):CL 5 PPM (7 MG/M3) CFRGBR 29,1910.1000,1994
OSHA PEL (CONSTRUC):CL 5 PPM (7 MG/M3) CFRGBR 29,1926.55,1994
OSHA PEL (SHIPYARD):CL 5 PPM (7 MG/M3) CFRGBR 29,1915.1000,1993
OSHA PEL (FED CONT):CL 5 PPM (7 MG/M3) CFRGBR 41,50-204.50,1994
OEL-AUSTRALIA: TWA 5 PPM (7 MG/M3), JAN1993
OEL-AUSTRIA: MAK 5 PPM (7 MG/M3), JAN1999

OEL-BELGIUM: STEL 5 PPM (7.7 MG/M3), JAN1993
OEL-DENMARK: TWA 5 PPM (7 MG/M3), JAN1999
OEL-FINLAND: STEL 5 PPM (7 MG/M3), SKIN, JAN1999
OEL-FRANCE: VLE 5 PPM (7.5 MG/M3), JAN1999
OEL-GERMANY: MAK 5 PPM (7 MG/M3), JAN1999
OEL-HUNGARY: STEL 5 MG/M3, JAN1993
OEL-JAPAN: STEL 5 PPM (7.5 MG/M3), JAN1999
OEL-NORWAY: TWA 5 PPM (7 MG/M3), JAN1999
OEL-THE PHILIPPINES: TWA 5 PPM (7 MG/M3), JAN1993
OEL-POLAND: MAC(TWA) 5 MG/M3, CEILING 7 MG/M3, JAN1999
OEL-RUSSIA: STEL 5 PPM (5 MG/M3), JAN1993
OEL-SWEDEN: STEL 5 PPM (8 MG/M3) JAN1999
OEL-SWITZERLAND: MAK-W 5 PPM (7.5 MG/M3), KZG-W 10 PPM (15 MG/M3), JAN1999
OEL-THAILAND: TWA 5 PPM (7 MG/M3), JAN1993
OEL-TURKEY: TWA 5 PPM (7 MG/M3), JAN1993
OEL-UNITED KINGDOM: LTEL 5 PPM (7 MG/M3), STEL 5 PPM (7 MG/M3), JAN1993
OEL IN ARGENTINA, BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV;
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV
NIOSH REL TO HYDROGEN CHLORIDE-AIR:CL 5 PPM
NIOSH* DHHS #92-100,1992
NOHS 1974: HZD 38580; NIS 360; TNF 87434; NOS 156; TNE 824985
NOES 1983: HZD 38580; NIS 321; TNF 60309; NOS 183; TNN 1238572; TFE 388130
EPA GENETOX PROGRAM 1988, NEGATIVE: CELL TRANSFORM.-SA7/SHE
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY
EPA TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES
EPA TSCA SECTION 8(E) RISK NOTIFICATION, 8EHQ-0892-9246
ON EPA IRIS DATABASE
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, OCTOBER 2000
NIOSH ANALYTICAL METHOD, 1994: ACIDS, INORGANIC, 7903

U.S. INFORMATION

THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.

SECTION 16. - - - - - - - - - - - OTHER INFORMATION- - - - - - - - - - - -

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. SIGMA, ALDRICH, FLUKA SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT. SEE REVERSE SIDE OF INVOICE OR PACKING SLIP FOR ADDITIONAL TERMS AND CONDITIONS OF SALE.

Material Safety Data Sheet

Isobutylene

Section 1. Chemical product and company identification

Product Name : Isobutylene

Supplier : AIRGAS INC., on behalf of its subsidiaries
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253

Product use : Synthetic/Analytical chemistry.

MSDS# : 001031

Date of Preparation/Revision : **4/3/2007.**

In case of emergency : 1-866-734-3438

Section 2. Hazards identification

Physical state : Gas. (COLORLESS LIQUEFIED COMPRESSED GAS WITH A SWEET GASOLINE-LIKE ODOR)

Emergency overview : Warning!

FLAMMABLE GAS.
CONTENTS UNDER PRESSURE.
VAPOR MAY CAUSE FLASH FIRE.

Keep away from heat, sparks and flame. Do not puncture or incinerate container. Keep container closed. Use only with adequate ventilation.

Contact with rapidly expanding gases can cause frostbite.

Routes of entry : Inhalation

Potential acute health effects

Eyes : No known significant effects or critical hazards.

Skin : No known significant effects or critical hazards.

Inhalation : Acts as a simple asphyxiant.

Ingestion : Ingestion is not a normal route of exposure for gases

Potential chronic health effects : **CARCINOGENIC EFFECTS** Not available.
MUTAGENIC EFFECTS Not available.
TERATOGENIC EFFECTS Not available.

Medical conditions aggravated by overexposure : Acute or chronic respiratory conditions may be aggravated by overexposure to this gas.

See toxicological Information (section 11)

Section 3. Composition, Information on Ingredients

Name	CAS number	% Volume	Exposure limits
Isobutylene	115-11-7	100	**Del Lietuvos Higienos Normos (Lithuania, 12/2001).** TWA: 100 mg/m³ 8 hour(s). Form: All forms

Section 4. First aid measures

No action shall be taken involving any personal risk or without suitable training.If fumes are still suspected to be present, the rescuer should wear an appropriate mask or a self-contained breathing apparatus.It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Isobutylene	
Frostbite	: Try to warm up the frozen tissues and seek medical attention.
Inhalation	: If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Ingestion	: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.

Section 5. Fire fighting measures

Flammability of the product	: Flammable.
Auto-ignition temperature	: 465°C (869°F)
Flammable limits	: Lower: 1.8% Upper: 9.6%
Products of combustion	: These products are carbon oxides (CO, CO_2).
Fire hazards in presence of various substances	: Extremely flammable in presence of open flames, sparks and static discharge, of oxidizing materials.
Fire fighting media and instructions	: In case of fire, use water spray (fog), foam, dry chemicals, or CO_2. If involved in fire, shut off flow immediately if it can be done without risk. Apply water from a safe distance to cool container and protect surrounding area. Extremely flammable. Gas may accumulate in confined areas, travel considerable distance to source of ignition and flash back causing fire or explosion.
Special protective equipment for fire-fighters	: Fire fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full facepiece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions	: Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (Section 8). Shut off gas supply if this can be done safely. Isolate area until gas has dispersed.
Environmental precautions	: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 7. Handling and storage

Handling	: Keep container closed. Use only with adequate ventilation. Keep away from heat, sparks and flame. To avoid fire, minimize ignition sources. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Do not puncture or incinerate container. High pressure gas. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.
Storage	: Keep container tightly closed. Keep container in a cool, well-ventilated area. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

Section 8. Exposure Controls, Personal Protection

Engineering controls	: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. The engineering controls also need to keep gas, vapor or dust concentrations below any explosive limits. Use explosion-proof ventilation equipment.

Personal protection

Eyes	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
Skin	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Isobutylene

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

The applicable standards are (US) 29 CFR 1910.134 and (Canada) Z94.4-93

Hands : Chemical-resistant, impervious gloves or gauntlets complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Personal protection in case of a large spill : A self-contained breathing apparatus should be used to avoid inhalation of the product.

Consult local authorities for acceptable exposure limits.

Section 9. Physical and chemical properties

Molecular weight : 56.12 g/mole

Molecular formula : C4-H8

Boiling/condensation point : -6.89°C (19.6°F)

Melting/freezing point : -139.99°C (-220°F)

Critical temperature : 144.8°C (292.6°F)

Vapor pressure : 24.3 psig

Vapor density : 1.9 (Air = 1)

Specific Volume (ft^3/lb) : 6.68449

Gas Density (lb/ft^3) : 0.1496

Section 10. Stability and reactivity

Stability and reactivity : The product is stable.

Incompatibility with various substances : Extremely reactive or incompatible with oxidizing agents.

Section 11. Toxicological information

Other toxic effects on humans : No specific information is available in our database regarding the other toxic effects of this material for humans.

Specific effects

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Reproduction toxicity : No known significant effects or critical hazards.

Section 12. Ecological information

Products of degradation : These products are carbon oxides (CO, CO_2) and water.

Toxicity of the products of biodegradation : The product itself and its products of degradation are not toxic.

Environmental fate : Not available.

Environmental hazards : No known significant effects or critical hazards.

Toxicity to the environment : Not available.

Section 13. Disposal considerations

Product removed from the cylinder must be disposed of in accordance with appropriate Federal, State, local regulation.Return cylinders with residual product to Airgas, Inc.Do not dispose of locally.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	UN1055	ISOBUTYLENE SEE ALSO PETROLEUM GASES, LIQUEFIED	2.1	Not applicable (gas).		**Limited quantity** Yes. **Packaging instruction** **Passenger Aircraft** Quantity limitation: Forbidden. **Cargo Aircraft** Quantity limitation: 150 kg **Special provisions** 19, T50
TDG Classification	UN1055	ISOBUTYLENE	2.1	Not applicable (gas).		**Explosive Limit and Limited Quantity Index** 0.125 **ERAP Index** 3000 **Passenger Carrying Ship Index** Forbidden **Passenger Carrying Road or Rail Index** Forbidden **Special provisions** 29
Mexico Classification	UN1055	ISOBUTYLENE SEE ALSO PETROLEUM GASES, LIQUEFIED	2.1	Not applicable (gas).		-

Section 15. Regulatory information

United States

U.S. Federal regulations : TSCA 8(b) inventory: 2-Methylpropene(Isobutylene)

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: 2-Methylpropene(Isobutylene)
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: 2-Methylpropene(Isobutylene): Fire hazard, Sudden Release of Pressure

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean air act (CAA) 112 accidental release prevention: 2-Methylpropene(Isobutylene)

Clean air act (CAA) 112 regulated flammable substances: 2-Methylpropene(Isobutylene)

Clean air act (CAA) 112 regulated toxic substances: No products were found.

State regulations : Pennsylvania RTK: 2-Methylpropene(Isobutylene): (generic environmental hazard)
Massachusetts RTK: 2-Methylpropene(Isobutylene)
New Jersey: 2-Methylpropene(Isobutylene)

Canada

WHMIS (Canada) : Class A: Compressed gas.
Class B-1: Flammable gas.

CEPA DSL: 2-Methylpropene(Isobutylene)

Section 16. Other information

United States

Label Requirements : FLAMMABLE GAS.
CONTENTS UNDER PRESSURE.
VAPOR MAY CAUSE FLASH FIRE.

Canada

Label Requirements : Class A: Compressed gas.
Class B-1: Flammable gas.

Hazardous Material Information System (U.S.A.) :

Health	1
Fire hazard	4
Reactivity	0
Personal protection	C

National Fire Protection Association (U.S.A.) :

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

LIQUINOX MSDS

Section 1 : PRODUCT AND COMPANY IDENTIFICATION

Chemical family: Detergent.

Manufacturer: Alconox, Inc.
30 Glenn St.
Suite 309
White Plains, NY 10603.

Manufacturer emergency phone number: 800-255-3924.
813-248-0585 (outside of the United States).

Supplier: Same as manufacturer.

Product name: Liquinox

Section 2 : INGREDIENT INFORMATION

C.A.S.	CONCENTRATION %	Ingredient Name	T.L.V.	LD/50	LC/50
25155-30-0	10-30	SODIUM DODECYLBENZENESULFONATE	NOT AVAILABLE	438 MG/KG RAT ORAL 1330 MG/KG MOUSE ORAL	NOT AVAILABLE

Section 3 : HAZARD IDENTIFICATION

Route of entry: Skin contact, eye contact, inhalation and ingestion.

Effects of acute exposure

Eye contact: May cause irritation.

Skin contact: Prolonged and repeated contact may cause irritation.

Inhalation: May cause headache and nausea.

Ingestion: May cause vomiting and diarrhea.
May cause gastric distress.

Effects of chronic exposure: See effects of acute exposure.

Section 4 : FIRST AID MEASURES

Skin contact: Remove contaminated clothing.
Wash thoroughly with soap and water.
Seek medical attention if irritation persists.

Eye contact: Check for and remove contact lenses.
Flush eyes with clear, running water for 15 minutes while holding eyelids open: if irritation persists, consult a physician.

Inhalation: Remove victim to fresh air.
If irritation persists, seek medical attention.

Ingestion: Do not induce vomiting, seek medical attention.
Dilute with two glasses of water.
Never give anything by mouth to an unconscious person.

Section 5 : FIRE FIGHTING MEASURES

Flammability: Not flammable.

Conditions of flammability: Surrounding fire.

Extinguishing media: Carbon dioxide, dry chemical, foam.
Water
Water fog.

Special procedures: Self-contained breathing apparatus required.
Firefighters should wear the usual protective gear.
Use water spray to cool fire exposed containers.

Auto-ignition temperature: Not available.

Flash point (°C), method: None

Lower flammability limit (% vol): Not applicable.

Upper flammability limit (% vol): Not applicable.

Explosion Data

Sensitivity to static discharge: Not available.

Sensitivity to mechanical impact: Not available.

Hazardous combustion products: Oxides of carbon (COx).
Hydrocarbons.

Rate of burning: Not available.

Explosive power: Containers may rupture if exposed to heat or fire.

Section 6 : ACCIDENTAL RELEASE MEASURES

Leak/Spill: Contain the spill.
Prevent entry into drains, sewers, and other waterways.
Wear appropriate protective equipment.
Small amounts may be flushed to sewer with water.
Soak up with an absorbent material.
Place in appropriate container for disposal.
Notify the appropriate authorities as required.

Section 7 : HANDLING AND STORAGE

Handling procedures and equipment: Protect against physical damage.
Avoid breathing vapors/mists.
Wear personal protective equipment appropriate to task.
Wash thoroughly after handling.
Keep out of reach of children.
Avoid contact with skin, eyes and clothing.
Avoid extreme temperatures.
Launder contaminated clothing prior to reuse.

Storage requirements: Store away from incompatible materials.
Keep containers closed when not in use.

Section 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

Precautionary Measures

Gloves/Type:

Wear appropriate gloves.

Respiratory/Type: None required under normal use.

Eye/Type:

Safety glasses recommended.

Footwear/Type: Safety shoes per local regulations.

Clothing/Type: As required to prevent skin contact.

Other/Type: Eye wash facility should be in close proximity.
Emergency shower should be in close proximity.

Ventilation requirements: Local exhaust at points of emission.

Exposure limit of material: Not available.

Section 9 : PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.

Appearance & odor: Odourless.
Pale yellow.

Odor threshold (ppm): Not available.

Vapour pressure (mmHg): @ 20°C (68°F).
17

Vapour density (air=1): >1

Volatiles (%)

By volume: Not available.

Evaporation rate (butyl acetate = 1): < 1.

Boiling point (°C): 100 (212F)

Freezing point (°C): Not available.

pH: 8.5

Specific gravity @ 20 °C: (water = 1).
1.083

Solubility in water (%): Complete.

Coefficient of water\oil dist.: Not available.

VOC: None

Chemical family: Detergent.

Section 10 : STABILITY AND REACTIVITY

Chemical stability: Product is stable under normal handling and storage conditions.

Conditions of instability: Extreme temperatures.

Hazardous polymerization: Will not occur.

Incompatible substances: Strong acids.
Strong oxidizing agents.

Hazardous decomposition products: See hazardous combustion products.

Section 11 : TOXICOLOGICAL INFORMATION

LD50 of product, species & route: > 5000 mg/kg rat oral.

LC50 of product, species & route: Not available.

Sensitization to product: Not available.

Carcinogenic effects: Not listed as a carcinogen.

Reproductive effects: Not available.

Teratogenicity: Not available.

Mutagenicity: Not available.

Synergistic materials: Not available.

Section 12 : ECOLOGICAL INFORMATION

Environmental toxicity: No data at this time.

Environmental fate: No data at this time.

Section 13 : DISPOSAL CONSIDERATIONS

Waste disposal: In accordance with local and federal regulations.

Section 14 : TRANSPORT INFORMATION

D.O.T. CLASSIFICATION: Not regulated.

Special shipping information: Not regulated.

Section 15 : REGULATORY INFORMATION

Canadian Regulatory Information

WHMIS classification: Not controlled.

DSL status: Not available.

USA Regulatory Information

SARA hazard catagories sections 311/312: Immediate (Acute) Health Hazard: No.
Delayed (Chronic) Health Hazard: No.
Fire Hazard: No.
Sudden Release of Pressure: No.
Reactive: No.

SARA Section 313: None

TSCA inventory: All components of this product are listed on the TSCA inventory.

NFPA

Health Hazard: 1

Flammability: 0

Reactivity: 0

HMIS

Health Hazard: 1

Flammability: 0

Physical hazard: 0

PPE: A

Section 16 : OTHER INFORMATION

Supplier MSDS date: 2006/07/14

Data prepared by: Global Safety Management
3340 Peachtree Road, #1800
Atlanta, GA 30326

Phone: 877-683-7460
Fax: (877) 683-7462

Web: www.globalsafetynet.com
Email: info@globalsafetynet.com.

General note: This material safety data sheet was prepared from information obtained from various sources, including product suppliers and the Canadian Center for Occupational Health and Safety.

SIGMA-ALDRICH

Material Safety Data Sheet

Date Printed: 01/18/2001
Date Updated: 08/15/2000
Version 1.30

Section 1 - Product and Company Information

Product Name	METHYL ALCOHOL, ANHYDROUS, 99.8%
Product Number	322415
Brand	Aldrich Chemical

Company	Sigma-Aldrich		
Street Address	3050 Spruce Street		
City, State, Zip, Country	St. Louis, MO 63103 US		
Technical Phone:	314 771 5765	**Emergency Phone:**	414 273 3850 Ext.5996
Fax:	800 325 5052		

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
METHANOL	67-56-1	Yes

Formula	CH4O
Synonyms	Alcool methylique (French), Alcool metilico (Italian), Bieleski's solution, Carbinol, Colonial Spirit, Columbian Spirit, Metanolo (Italian), Methanol (ACGIH), Methyl alcohol (DOT:OSHA), Methylol, Methylalkohol (German), Methyl hydrate, Methyl hydroxide, Metylowy alkohol (Polish), Monohydroxymethane, Pyroxylic Spirit, RCRA waste number U154, Wood alcohol, Wood naphtha, Wood Spirit

Section 3 - Hazards Identification

Emergency Overview
Flammable (USA) Highly Flammable (EU). Toxic.
Toxic by inhalation and if swallowed. Irritating to eyes and skin.
Target organ(s): Eyes. Kidneys.

HMIS Rating
Health: 2* Flammability: 3 Reactivity: 0

NFPA Ratings
Health: 2 Flammability: 3 Reactivity: 0

*Chronic hazards present. For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

Inhalation Exposure
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure
In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

Eye
Chemical safety goggles.

General Hygiene Measures
Wash contaminated clothing before reuse. Wash thoroughly after handling.

Exposure Limits, RTECS

Country	Source	Type	Value	Remarks
USA	ACGIH	STEL	328 MG/M3 (250 PPM)	Skin
USA	ACGIH	TWA	262 MG/M3 (200 PPM)	
USA	MSHA Standard-air	TWA	200 PPM (260 MG/M3) (SKIN)	
USA	OSHA	PEL	8H TWA 200 PPM (260 MG/M3)	
New Zealand	OEL			check ACGIH TLV
USA	NIOSH	TWA STEL	200 PPM (SK) 250 PPM (SK)	

Section 9 - Physical/Chemical Properties

Appearance
Physical State
Liquid

Molecular Weight: 32.04 AMU

Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	64.6 - 64.7 °C	760 mmHg
MP/MP Range	-98 °C	
Freezing Point	N/A	
Vapor Pressure	97.68 mmHg	20 °C
Vapor Density	1.1 g/l	
Saturated Vapor Conc.	N/A	
SG/Density	0.791 g/cm3	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point °F	52 °F	
Flash Point °C	11 °C	
Explosion Limits	Lower: 6 % Upper: 36 %	
Autoignition Temp	385 °C	
Refractive Index	1.329	
Solubility	N/A	

Section 10 - Stability and Reactivity

Stability
Stable
Stable.
Conditions to Avoid
Protect from moisture.

Behavioral:Ataxia.
Behavioral:Coma.

Oral - Rabbit: 14,200 mg/kg (LD50)

Skin - Rabbit: 15,800 mg/kg (LD50)

Intraperitoneal - Rabbit: 1826 MG/KG (LD50)

Intravenous - Rabbit: 8907 MG/KG (LD50)

Intraperitoneal - Guinea pig: 3556 MG/KG (LD50)

Intraperitoneal - Hamster: 8555 MG/KG (LD50)

Irritation Data

Skin - Rabbit: 20 mg 24H
Remarks: Moderate irritation effect

Eyes - Rabbit: 40 mg
Remarks: Moderate irritation effect

Eyes - Rabbit: 100 mg 24H
Remarks: Moderate irritation effect

Chronic Exposure - Teratogen

Species	*Dose*	*Route of Application*	*Exposure Time*
Rat	35295 MG/KG	Oral	(1-15D PREG)
	Result:Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Newborn: Biochemical and metabolic.		
Rat	20000 PPM/7H	Inhalation	(1-22D PREG)
	Result:Specific Developmental Abnormalities: Musculoskeletal system. Specific Developmental Abnormalities: Cardiovascular (circulatory) system. Specific Developmental Abnormalities: Urogenital system.		
Rat	20000 PPM/7H	Inhalation	(7-15D PREG)
	Result:Specific Developmental Abnormalities: Musculoskeletal system. Specific Developmental Abnormalities: Endocrine system.		
Rat	10000 PPM/7H	Inhalation	(7-15D PREG)
	Result:Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).		
Rat	5200 UL/KG	Oral	(10D PREG)
	Result:Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Eye, ear. Specific Developmental Abnormalities: Urogenital system.		
Mouse	40 GM/KG	Oral	(6-15D PREG)
	Result:Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Craniofacial (including nose and tongue).		
Mouse	4 GM/KG	Oral	(7D PREG)
	Result:Specific Developmental Abnormalities: Craniofacial (including nose and tongue). Specific Developmental Abnormalities: Musculoskeletal system.		
Mouse	1500 PPM/6H	Inhalation	(7-9D PREG)
	Result:Specific Developmental Abnormalities: Central nervous system.		
Mouse	5000 PPM/7H	Inhalation	(6-15D PREG)
	Result:Specific Developmental Abnormalities: Central nervous system. Specific Developmental Abnormalities: Craniofacial (including nose and tongue).		
Mouse	2000 PPM/7H	Inhalation	(6-15D PREG)
	Result:Specific Developmental Abnormalities: Musculoskeletal system.		

Chronic Exposure - Mutagen

Species	*Dose*	*Route*	*Cell Type*	*Mutation test*
Human	300 MMOL/L		lymphocyte	DNA inhibition
Rat	10 UMOL/KG	Oral		DNA damage
Mouse	7900 MG/L (+S9)		lymphocyte	Mutation in microorganisms
Mouse	1 GM/KG	Oral		Cytogenetic analysis
Mouse	75 MG/KG	Intraperitoneal		Cytogenetic analysis

US Classification and Label Text

Indication of Danger

Flammable (USA) Highly Flammable (EU). Toxic.

Risk Statements

Toxic by inhalation and if swallowed. Irritating to eyes and skin.

Safety Statements

Keep container tightly closed. Keep away from sources of ignition - no smoking. Take precautionary measures against static discharges. Avoid contact with skin. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US Statements

Target organ(s): Eyes. Kidneys.

United States Regulatory Information

SARA 313 Listed: Yes

Deminimis: 1 %

Notes: This product is subject to SARA section 313 reporting requirements.

TSCA Inventory Item: Yes

Section 16 - Other Information

Warranty

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Riedel-de Haen
3050 Spruce St.
St. Louis, MO 63178 USA
Tel: 314-289-6000

M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1. - - - - - - - - - CHEMICAL IDENTIFICATION- - - - - - - - - -

CATALOG #: 07006
NAME: NITRIC ACID 65%, EXTRA PURE
ASSAY: 64-66%

SECTION 2. - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - - -

CAS #: 7697-37-2
EC NO: 231-714-2

SYNONYMS

ACIDE NITRIQUE (FRENCH) * ACIDO NITRICO (ITALIAN) * AQUA FORTIS * AZOTIC ACID * AZOTOWY KWAS (POLISH) * HYDROGEN NITRATE * KYSELINA DUSICNE (CZECH) * NITRIC ACID (ACGIH:OSHA) * SALPETERSAURE (GERMAN) * SALPETERZUUROPLOSSINGEN (DUTCH) *

SECTION 3. - - - - - - - - - - HAZARDS IDENTIFICATION - - - - - - - - -

LABEL PRECAUTIONARY STATEMENTS

OXIDIZING
CORROSIVE
CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE.
TOXIC IF SWALLOWED.
VERY TOXIC BY INHALATION.
CAUSES SEVERE BURNS.
TARGET ORGAN(S):
LUNGS
TEETH
DO NOT BREATHE VAPOR.
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
WEAR SUITABLE PROTECTIVE CLOTHING.
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).

SECTION 4. - - - - - - - - - - FIRST-AID MEASURES- - - - - - - - - - -

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES.
ASSURE ADEQUATE FLUSHING OF THE EYES BY SEPARATING THE EYELIDS WITH FINGERS.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN IMMEDIATELY.
WASH CONTAMINATED CLOTHING BEFORE REUSE.
DISCARD CONTAMINATED SHOES.

SECTION 5. - - - - - - - - - - FIRE FIGHTING MEASURES - - - - - - - - - -

EXTINGUISHING MEDIA

NONCOMBUSTIBLE.
USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.

SPECIAL FIREFIGHTING PROCEDURES

WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS

EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION 6. - - - - - - - - - ACCIDENTAL RELEASE MEASURES- - - - - - - - -
EVACUATE AREA.
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY RUBBER GLOVES.
COVER WITH DRY-LIME, SAND, OR SODA ASH. PLACE IN COVERED CONTAINERS USING NON-SPARKING TOOLS AND TRANSPORT OUTDOORS.
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.
SECTION 7. - - - - - - - - - - - HANDLING AND STORAGE- - - - - - - - - - -
REFER TO SECTION 8.
SECTION 8. - - - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION- - - - - -
CHEMICAL SAFETY GOGGLES.
SAFETY SHOWER AND EYE BATH.
NIOSH/MSHA-APPROVED RESPIRATOR IN NONVENTILATED AREAS AND/OR FOR EXPOSURE ABOVE THE ACGIH TLV.
MECHANICAL EXHAUST REQUIRED.
RUBBER GLOVES.
AVOID BREATHING VAPOR.
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
WASH THOROUGHLY AFTER HANDLING.
CORROSIVE.
TOXIC.
KEEP TIGHTLY CLOSED.
PROTECT FROM LIGHT.
STORE IN A COOL DRY PLACE.
SECTION 9. - - - - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - - - -
APPEARANCE AND ODOR
LIQUID.
SECTION 10. - - - - - - - - - -STABILITY AND REACTIVITY - - - - - - - - -
INCOMPATIBILITIES
BASES
AMINES
ALKALI METALS
COPPER, COPPER ALLOYS
ALUMINUM
CORRODES STEEL
SENSITIVE TO LIGHT
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
TOXIC FUMES OF:
NITROGEN OXIDES
SECTION 11. - - - - - - - - - - TOXICOLOGICAL INFORMATION - - - - - - - -
ACUTE EFFECTS
HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.
CAUSES BURNS.
MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES AND SKIN.
INHALATION MAY RESULT IN SPASM, INFLAMMATION AND EDEMA OF THE LARYNX AND BRONCHI, CHEMICAL PNEUMONITIS AND PULMONARY EDEMA.
SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND VOMITING.
RTECS #: QU5775000
NITRIC ACID
TOXICITY DATA
ORL-HMN LDLO:430 MG/KG YAKUDS 22,651,1980
UNR-MAN LDLO:110 MG/KG 85DCAI 2,73,1970
ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE INFORMATION.
SECTION 12. - - - - - - - - - - ECOLOGICAL INFORMATION - - - - - - - - - -
DATA NOT YET AVAILABLE.
SECTION 13. - - - - - - - - - - DISPOSAL CONSIDERATIONS - - - - - - - - -
FOR SMALL QUANTITIES: CAUTIOUSLY ADD TO A LARGE STIRRED EXCESS OF WATER. ADJUST THE PH TO NEUTRAL, SEPARATE ANY INSOLUBLE SOLIDS OR

LIQUIDS AND PACKAGE THEM FOR HAZARDOUS-WASTE DISPOSAL. FLUSH THE AQUEOUS SOLUTION DOWN THE DRAIN WITH PLENTY OF WATER. THE HYDROLYSIS AND NEUTRALIZATION REACTIONS MAY GENERATE HEAT AND FUMES WHICH CAN BE CONTROLLED BY THE RATE OF ADDITION.
OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. - - - - - - - - - - TRANSPORT INFORMATION - - - - - - - - - -
CONTACT SIGMA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

SECTION 15. - - - - - - - - - REGULATORY INFORMATION - - - - - - - - - -

EUROPEAN INFORMATION
EC INDEX NO: 007-004-00-1
OXIDIZING
CORROSIVE
R 35
CAUSES SEVERE BURNS.
S 23
DO NOT BREATHE VAPOR.
S 26
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
S 36
WEAR SUITABLE PROTECTIVE CLOTHING.
S 45
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).

REVIEWS, STANDARDS, AND REGULATIONS
OEL=MAK
ACGIH TLV-STEL 4 PPM DTLVS* TLV/BEI,1999
ACGIH TLV-TWA 2 PPM DTLVS* TLV/BEI,1999
MSHA STANDARD-AIR:TWA 2 PPM (5 MG/M3)
DTLVS* 3,181,1971
OSHA PEL (GEN INDU):8H TWA 2 PPM (5 MG/M3)
CFRGBR 29,1910.1000,1994
OSHA PEL (CONSTRUC):8H TWA 2 PPM (5 MG/M3)
CFRGBR 29,1926.55,1994
OSHA PEL (SHIPYARD):8H TWA 2 PPM (5 MG/M3)
CFRGBR 29,1915.1000,1993
OSHA PEL (FED CONT):8H TWA 2 PPM (5 MG/M3)
CFRGBR 41,50-204.50,1994
OEL-ARAB REPUBLIC OF EGYPT: TWA 2 PPM (5 MG/M3), JAN1993
OEL-AUSTRALIA: TWA 2 PPM (5 MG/M3), STEL 4 PPM, JAN1993
OEL-AUSTRIA: MAK 2 PPM (5 MG/M3), JAN1999
OEL-BELGIUM: TWA 2 PPM (5.2 MG/M3), STEL 4 PPM (10 MG/M3), JAN1993
OEL-DENMARK: TWA 2 PPM (5 MG/M3), JAN1999
OEL-FINLAND: TWA 2 PPM (5 MG/M3), STEL 5 PPM (13 MG/M3), SKIN, JAN1999
OEL-FRANCE: VME 2 PPM (5 MG/M3), VLE 5 PPM (10 MG/M3), JAN1999
OEL-GERMANY: MAK 2 PPM (5 MG/M3), JAN1999
OEL-HUNGARY: STEL 5 MG/M3, JAN1993
OEL-JAPAN: OEL 2 PPM (5.2 MG/M3), JAN1999
OEL-NORWAY: TWA 2 PPM (5 MG/M3), JAN1999
OEL-THE PHILIPPINES: TWA 2 PPM (5 MG/M3), JAN1993
OEL-POLAND: MAC(TWA) 5 MG/M3, MAC(STEL) 10 MG/M3, JAN1999
OEL-RUSSIA: TWA 2 PPM, STEL 2 MG/M3, SKIN, JAN1993
OEL-SWEDEN: NGV 2 PPM (5 MG/M3), KTV 5 PPM (13 MG/M3), JAN1999
OEL-THAILAND: TWA 2 PPM (5 MG/M3), JAN1993
OEL-TURKEY: TWA 2 PPM (5 MG/M3), JAN1993
OEL-UNITED KINGDOM: LTEL 2 PPM (5 MG/M3), STEL 4 PPM (10 MG/M3), JAN1993
OEL IN ARGENTINA, BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV;
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV
NIOSH REL TO NITRIC ACID-AIR:10H TWA 2 PPM;STEL 4 PPM
NIOSH* DHHS #92-100,1992
NOHS 1974: HZD 50742; NIS 197; TNF 18088; NOS 101; TNE 132401
NOES 1983: HZD 50742; NIS 201; TNF 18239; NOS 120; TNE 297627; TFE 76316

EPA GENETOX PROGRAM 1988, NEGATIVE: CELL TRANSFORM.-SA7/SHE
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY
EPA TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, OCTOBER 2000
NIOSH ANALYTICAL METHOD, 1994: ACIDS, INORGANIC, 7903
OSHA ANALYTICAL METHOD #ID-127

U.S. INFORMATION

THIS PRODUCT IS OR CONTAINS A COMPONENT THAT IS SUBJECT TO SARA313 REPORTING REQUIREMENTS.

SECTION 16. - - - - - - - - - - - OTHER INFORMATION- - - - - - - - - - - -

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. SIGMA, ALDRICH, FLUKA SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT. SEE REVERSE SIDE OF INVOICE OR PACKING SLIP FOR ADDITIONAL TERMS AND CONDITIONS OF SALE.

Oxygen Release Compound – Advanced (ORC *Advanced*™)
MATERIAL SAFETY DATA SHEET (MSDS)

Last Revised: March 13, 2007

Section 1 - Material Identification

Supplier:

REGENESIS

1011 Calle Sombra
San Clemente, CA 92673

Phone:	**949.366.8000**
Fax:	**949.366.8090**
E-mail:	**info@regenesis.com**

Chemical Description:	A mixture of Calcium OxyHydroxide [$CaO(OH)_2$] and Calcium Hydroxide [$Ca(OH)_2$].
Chemical Family:	Inorganic Chemical
Trade Name:	Advanced Formula Oxygen Release Compound (ORC *Advanced*™)
Chemical Synonyms	Calcium Hydroxide Oxide; Calcium Oxide Peroxide
Product Use:	Used to remediate contaminated soil and groundwater (environmental applications)

Section 2 – Composition

CAS No.	Chemical
682334-66-3	**Calcium Hydroxide Oxide [$CaO(OH)_2$]**
1305-62-0	**Calcium Hydroxide [$Ca(OH)_2$]**
7758-11-4	**Dipotassium Phosphate (HK_2O_4P)**
7778-77-0	**Monopotassium Phosphate (H_2KO_4P)**

Section 3 – Physical Data	
Form:	Powder
Color:	White to Pale Yellow
Odor:	Odorless
Melting Point:	527 °F (275 °C) – Decomposes
Boiling Point:	Not Applicable (NA)
Flammability/Flash Point:	NA
Auto- Flammability:	NA
Vapor Pressure:	NA
Self-Ignition Temperature:	NA
Thermal Decomposition:	527 °F (275 °C) – Decomposes
Bulk Density:	0.5 – 0.65 g/ml (Loose Method)
Solubility:	1.65 g/L @ 68° F (20° C) for calcium hydroxide.
Viscosity:	NA
pH:	11-13 (saturated solution)
Explosion Limits % by Volume:	Non-explosive
Hazardous Decomposition Products:	Oxygen, Hydrogen Peroxide, Steam, and Heat
Hazardous Reactions:	None

Section 4 – Reactivity Data

Stability:	Stable under certain conditions (see below).
Conditions to Avoid:	Heat and moisture.
Incompatibility:	Acids, bases, salts of heavy metals, reducing agents, and flammable substances.
Hazardous Polymerization:	Does not occur.

Section 5 – Regulations

TSCA Inventory List:	Listed

CERCLA Hazardous Substance (40 CFR Part 302)

Listed Substance:	No
Unlisted Substance:	Yes
Reportable Quantity (RQ):	100 pounds
Characteristic(s):	Ignitibility
RCRA Waste Number:	D001

SARA, Title III, Sections 302/303 (40 CFR Part 355 – Emergency Planning and Notification)

Extremely Hazardous Substance:	No

SARA, Title III, Sections 311/312 (40 CFR Part 370 – Hazardous Chemical Reporting: Community Right-To-Know

Hazard Category:	Immediate Health Hazard Fire Hazard
Threshold Planning Quantity:	10,000 pounds

Section 5 – Regulations (cont)

SARA, Title III, Section 313 (40 CFR Part 372 – Toxic Chemical Release Reporting: Community Right-To-Know

Extremely Hazardous Substance:	No	
WHMIS Classification:	C	Oxidizing Material
		Poisonous and Infectious Material
	D	Material Causing Other Toxic Effects – Eye and Skin Irritant
Canadian Domestic Substance List:	Not Listed	

Section 6 – Protective Measures, Storage and Handling

Technical Protective Measures

Storage:	Keep in tightly closed container. Store in dry area, protected from heat sources and direct sunlight.
Handling:	Clean and dry processing pipes and equipment before operation. Never return unused product to the storage container. Keep away from incompatible products. Containers and equipment used to handle this product should be used exclusively for this material. Avoid contact with water or humidity.

Section 6 – Protective Measures, Storage and Handling (cont)

Personal Protective Equipment (PPE)

Engineering Controls:	Calcium Hydroxide ACGIH® TLV® (2000) 5 mg/m^3 TWA OSHA PEL Total dust–15 mg/m^3 TWA Respirable fraction– 5 mg/m^3 TWA NIOSH REL (1994) 5 mg/m^3
Respiratory Protection:	For many conditions, no respiratory protection may be needed; however, in dusty or unknown atmospheres use a NIOSH approved dust respirator.
Hand Protection:	Impervious protective gloves made of nitrile, natural rubbber or neoprene.
Eye Protection:	Use chemical safety goggles (dust proof).
Skin Protection:	For brief contact, few precautions other than clean clothing are needed. Full body clothing impervious to this material should be used during prolonged exposure.
Other:	Safety shower and eyewash stations should be present. Consultation with an industrial hygienist or safety manager for the selection of PPE suitable for working conditions is suggested.
Industrial Hygiene:	Avoid contact with skin and eyes.
Protection Against Fire & Explosion:	NA

Section 7 – Hazards Identification

Emergency Overview:	Oxidizer – Contact with combustibles may cause a fire. This material decomposes and releases oxygen in a fire. The additional oxygen may intensify the fire.
Potential Health Effects:	Irritating to the mucous membrane and eyes. If the product splashes in ones face and eyes, treat the eyes first. Do not dry soiled clothing close to an open flame or heat source. Any

	clothing that has been contaminated with this product should be submerged in water prior to drying.
Inhalation:	High concentrations may cause slight nose and throat irritation with a cough. There is risk of sore throat and nose bleeds if one is exposed to this material for an extended period of time.
Eye Contact:	Severe eye irritation with watering and redness. There is also the risk of serious and/or permanent eye lesions.
Skin Contact:	Irritation may occur if one is exposed to this material for extended periods.
Ingestion:	Irritation of the mouth and throat with nausea and vomiting.

Section 8 – Measures in Case of Accidents and Fire

After Spillage/Leakage/Gas Leakage:	Collect in suitable containers. Wash remainder with copious quantities of water.
Extinguishing Media:	See next.
Suitable:	Large quantities of water or water spray. In case of fire in close proximity, all means of extinguishing are acceptable.
Further Information:	Self contained breathing apparatus or approved gas mask should be worn due to small particle size. Use extinguishing media appropriate for surrounding fire. Apply cooling water to sides of transport or storage vessels that are exposed to flames until the fire is extinguished. Do not approach hot vessels that contain this product.
First Aid:	After contact with skin, wash immediately with plenty of water and soap. In case of contact with eyes, rinse immediately with plenty of water and seek medical attention. Consult an opthalmologist in all cases.

Section 8 – Measures in Case of Accidents and Fire

Eye Contact:	Flush eyes with running water for 15 minutes, while keeping the eyelids wide open. Consult with an ophthalmologist in all cases.
Inhalation:	Remove subject from dusty environment. Consult with a physician in case of respiratory symptoms.

Ingestion:	If the victim is conscious, rinse mouth and admnister fresh water. DO NOT induce vomiting. Consult a physician in all cases.
Skin Contact:	Wash affected skin with running water. Remove and clean clothing. Consult with a physician in case of persistent pain or redness.
Special Precautions:	Evacuate all non-essential personnel. Intervention should only be done by capable personnel that are trained and aware of the hazards associated with this product. When it is safe, unaffected product should be moved to safe area.
Specific Hazards:	Oxidizing substance. Oxygen released on exothermic decomposition may support combustion. Confined spaces and/or containers may be subject to increased pressure. If product comes into contact with flammables, fire or explosion may occur.

Section 9 – Accidental Release Measures

Precautions:	Observe the protection methods cited in Section 3. Avoid materials and products that are incompatible with product. Immediately notify the appropriate authorities in case of reportable discharge (> 100 lbs).
Cleanup Methods:	Collect the product with a suitable means of avoiding dust formation. All receiving equipment should be clean, vented, dry, labeled and made of material that this product is compatible with. Because of the contamination risk, the collected material should be kept in a safe isolated place. Use large quantities of water to clean the impacted area. See Section 12 for disposal methods.

Section 10 – Information on Toxicology

Toxicity Data

Acute Toxicity:	Oral Route, LD_{50}, rat, > 2,000 mg/kg (powder 50%) Dermal Route, LD_{50}, rat, > 2,000 mg/kg (powder 50%) Inhalation, LD_{50}, rat, > 5,000 mg/m^3 (powder 35%)
Irritation:	Rabbit (eyes), severe irritant

Sensitization:	No data
Chronic Toxicity:	In vitro, no mutagenic effect (Powder 50%)
Target Organ Effects:	Eyes and respiratory passages.

Section 11 – Information on Ecology

Ecology Data	
	10 mg $Ca(OH)_2$/L: pH = 9.0
	100 mg $Ca(OH)_2$/L: pH = 10.6
Acute Exotoxicity:	Fishes, Cyprinus carpio, LC_{50}, 48 hrs, 160 mg/L
	Crustaceans, Daphnia sp., EC_{50}, 24 hours, 25.6 mg/L
	(Powder 16%)
Mobility:	Low Solubility and Mobility
	Water – Slow Hydrolysis.
	Degradation Products: Calcium Hydroxide
Abiotic Degradation:	Water/soil – complexation/precipitation. Carbonates/sulfates present at environmental concentrations.
	Degradation products: carbonates/sulfates sparingly soluble
Biotic Degradation:	NA (inorganic compound)
Potential for Bioaccumulation:	NA (ionizable inorganic compound)

Section 11 – Information on Ecology (cont)

Comments:

Observed effects are related to alkaline properties of the product. Hazard for the environment is limited due to the product properties of:

- No bioaccumulation
- Weak solubility and precipatation as carbonate or sulfate in an aquatic environment.

Diluted product is rapidly neutralized at environmental pH.

Further Information: NA

Section 12 – Disposal Considerations

Waste Disposal Method:	Consult current federal, state and local regulations regarding the proper disposal of this material and its emptied containers.

Section 13 – Shipping/Transport Information

D.O.T Shipping Name:	Oxidizing Solid, N.O.S [A mixture of Calcium OxyHydroxide [$CaO(OH)_2$] and Calcium Hydroxide [$Ca(OH)_2$].
UN Number:	1479
Hazard Class:	5.1
Label(s):	5.1 (Oxidizer)
Packaging Group:	II
STCC Number:	4918717

Section 14 – Other Information

HMIS® Rating	Health – 2 Flammability – 0	Reactivity – 1 PPE - Required

HMIS® is a registered trademark of the National Painting and Coating Association.

NFPA® Rating	Health – 2 Flammability – 0	Reactivity – 1 OX

NFPA® is a registered trademark of the National Fire Protection Association.

Reason for Issue: Update toxicological and ecological data

Section 15 – Further Information

The information contained in this document is the best available to the supplier at the time of writing, but is provided without warranty of any kind. Some possible hazards have been determined by analogy to similar classes of material. The items in this document are subject to change and clarification as more information become available.

Oxygen Release Compound (ORC®)
MATERIAL SAFETY DATA SHEET (MSDS)

Last Revised: October 18, 2005

Section 1 - Material Identification

Supplier:

REGENESIS
1011 Calle Sombra
San Clemente, CA 92673
Phone: 949.366.8000
Fax: 949.366.8090
E-mail: info@regenesis.com

Chemical Description:	**A mixture of Magnesium Peroxide (MgO_2), Magnesium Oxide (MgO), and Magnesium Hydroxide [$Mg(OH)_2$]**
Chemical Family:	**Inorganic Chemical**
Trade Name:	**Oxygen Release Compound (ORC®)**
Product Use:	**Used to remediate contaminated soil and groundwater (environmental applications)**

Section 2 – Chemical Identification

CAS#	Chemical
14452-57-4	Magnesium Peroxide (MgO_2)
1309-48-4	Magnesium Oxide (MgO)
1309-42-8	Magnesium Hydroxide [$Mg(OH)_2$]
7758-11-4	Dipotassium Phosphate (HK_2O_4P)
7778-77-0	Monopotassium Phosphate (H_2KO_4P)
Assay:	25-35% Magnesium Peroxide (MgO_2)

Section 3 - Physical Data

Melting Point:	**Not Determined (ND)**
Boiling Point:	**ND**
Flash Point:	**Not Applicable (NA)**
Self-Ignition Temperature:	**NA**
Thermal Decomposition:	**Spontaneous Combustion possible at ≈ 150°C**
Density:	**0.6 – 0.8 g/cc**
Solubility:	**Reacts with Water**
pH:	**Approximately 10 in saturated solution**
Appearance:	**White Powder**
Odor:	**None**
Vapor Pressure:	**None**
Hazardous Decomposition Products:	**Not Known**
Hazardous Reactions:	**Hazardous Polymerization will not occur**
Further Information:	**Non-combustible, but will support combustion**

Section 4 – Reactivity Data

Stability:	**Product is stable unless heated above 150 °C. Magnesium Peroxide reacts with water to slowly release oxygen. Reaction by product is Magnesium Hydroxide**
Conditions to Avoid:	**Heat above 150 °C. Open Flames.**
Incompatibility:	**Strong Acids. Strong Chemical Agents.**
Hazardous Polymerization:	**None known.**

Section 5 - Regulations

Permissible Exposure Limits in Air	**Not Established. Should be treated as a nuisance dust.**

Section 6 – Protective Measures, Storage and Handling

Technical Protective Measures

Storage:	**Keep in tightly closed container. Keep away from combustible material.**
Handling:	**Use only in well ventilated areas.**

Personal Protective Equipment (PPE)

Respiratory Protection:	**Recommended (HEPA Filters)**
Hand Protection:	**Wear suitable gloves.**
Eye Protection:	**Use chemical safety goggles.**
Other:	**NA**
Industrial Hygiene:	**Avoid contact with skin and eyes**
Protection Against Fire & Explosion:	**NA**
Disposal:	**Dispose via sanitary landfill per state/local authority**
Further Information:	**Not flammable, but may intensify a fire**
After Spillage/Leakage/Gas Leakage:	**Collect in suitable containers. Wash remainder with copious quantities of water.**
Extinguishing Media:	**NA**
Suitable:	**Carbon Dioxide, dry chemicals, foam**
Further Information:	**Self contained breathing apparatus or approved gas mask should be worn due to small particle size. Use extinguishing media appropriate for surrounding fire.**
First Aid:	**After contact with skin, wash immediately with plenty of water and soap. In case of contact with eyes, rinse immediately with plenty of water and seek medical attention.**

Section 7 – Information on Toxicology

Toxicity Data:	**Not Available**

Section 8 – Information on Ecology

Water Pollution Hazard Raging (WGK):	**0**

Section 9 – Further Information

After the reaction of magnesium peroxide with water to form oxygen, the resulting material, magnesium hydroxide, is mildly basic. The amounts of magnesium oxide (magnesia) and magnesium hydroxide in the initial product have an effect similar to lime, but with lower alkalinity.

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Regen OX – Part A (Oxidizer Complex)

Material Safety Data Sheet (MSDS)

Last Revised: November 7, 2005

Section 1 – Supplier Information and Material Identification

Supplier:

REGENESIS
1011 Calle Sombra
San Clemente, CA 92673
Telephone: 949.366.8000
Fax: 949.366.8090
E-mail: info@regenesis.com

Chemical Description:	A mixture of sodium percarbonate [$2Na_2CO_3 \cdot 3H_2O_2$], sodium carbonate [Na_2CO_3], sodium silicate and silica gel.
Chemical Family:	Inorganic Chemicals
Trade Name:	Regen Ox – Part A (Oxidizer Complex)
Product Use:	Used to remediate contaminated soil and groundwater (environmental applications)

Section 2 – Chemical Information/Other Designations

CAS No.	Chemical
15630-89-4	Sodium Percarbonate
5968-11-6	Sodium Carbonate Monohydrate
1344-09-8	Silicic Acid, Sodium Salt, Sodium Silicate
63231-67-4	Silica Gel

Section 3 – Physical Data

Form:	Powder
Color:	White
Odor:	Odorless
Melting Point:	NA
Boiling Point:	NA

Section 3 – Physical Data (cont)

Flammability/Flash Point:	NA
Vapor Pressure:	NA
Bulk Density:	0.9 – 1.2 g/cm^3
Solubility:	Min 14.5g/100g water @ 20 °C
Viscosity:	NA
pH (3% solution):	~ 10.5
Decomposition Temperature:	Self-accelerating decomposition with oxygen release starts at 50 °C.

Section 4 – Reactivity Data

Stability:	Stable under normal conditions
Conditions to Avoid/Incompatibility:	Acids, bases, salts of heavy metals, reducing agents, and flammable substances
Hazardous Decomposition Products:	Oxygen. Contamination with many substances will cause decomposition. The rate of decomposition increases with increasing temperature and may be very vigorous with rapid generation of oxygen and steam.

Section 5 – Regulations

TSCA Inventory Listed:	Yes

CERCLA Hazardous Substance (40 CFR Part 302)

Listed Substance:	*No*
Unlisted Substance:	*Yes*

SARA, Title III, Sections 313 (40 CFR Part 372) – Toxic Chemical Release Reporting: Community Right-To-Know

Extremely Hazardous Substance:	No
WHMIS Classification:	C, D2B
Canadian Domestic Substance List:	Appears

Section 6 – Protective Measures, Storage and Handling

Technical Protective Measures

Storage:	Oxidizer. Store in a cool, well ventilated area away from all sources of ignition and out of the direct sunlight. Store in a dry location away from heat and in temperatures less than 40 ?C.
	Keep away from incompatible materials and keep lids tightly closed. Do not store in improperly labeled containers.
	Protect from moisture. Do not store near combustible materials. Keep containers well sealed.
	Store separately from reducing materials. Avoid contamination which may lead to decomposition.
Handling:	Avoid contact with eyes, skin and clothing. Use with adequate ventilation.
	Do not swallow. Avoid breathing vapors, mists or dust. Do not eat, drink or smoke in the work area.
	Label containers and keep them tightly closed when not in use.
	Wash hands thoroughly after handling.

Personal Protective Equipment (PPE)

Engineering Controls:	General room ventilation is required if used indoors. Local exhaust ventilation, process enclosures or other engineering controls may be needed to maintain airborne levels below recommended exposure limits. Avoid creating dust or mists. Maintain adequate ventilation at all times. Do not use in confined areas. Keep levels below recommended exposure limits. To determine actual exposure limits, monitoring should be performed on a routine basis.
Respiratory Protection:	For many conditions, no respiratory protection is necessary; however, in dusty or unknown conditions or when exposures exceed limit values a NIOSH approved respirator should be used.
Hand Protection:	Wear chemical resistant gloves (neoprene, rubber, or PVC).

Section 6 – Protective Measures, Storage and Handling (cont)

Eye Protection:	Wear chemical safety goggles. A full face shield may be worn in lieu of safety goggles.
Skin Protection:	Try to avoid skin contact with this product. Chemical resistant gloves (neoprene, PVC or rubber) and protective clothing should be worn during use.
Other:	Eye wash station.
Protection Against Fire & Explosion:	Product is non-explosive. In case of fire, evacuate all non-essential personnel, wear protective clothing and a self-contained breathing apparatus, stay upwind of fire, and use water to spray cool fire-exposed containers.

Section 7 – Hazards Identification

Potential Health Effects

Inhalation:	Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath, and irritations to mucous membranes, nose and throat.
Eye Contact:	Causes irritation, redness and pain.
Skin Contact:	Causes slight irritation.
Ingestion:	May be harmful if swallowed (vomiting and diarrhea).

Section 8 – Measures in Case of Accidents and Fire

After Spillage/Leakage:	Eliminate all ignition sources. Evacuate unprotected personnel and never exceed any occupational exposure limit. Shovel or sweep spilt material into plastic bags or vented containers for disposal. Do not return spilled or contaminated material to the inventory.
Extinguishing Media:	Water

First Aid

Eye Contact:	Flush eyes with running water for at least 15 minutes with eyelids held open. Seek a specialist.
Inhalation:	Remove affected person to fresh air. Seek medical attention if the effects persist.
Ingestion:	If the individual is conscious and not convulsing, give two-four cups of water to dilute the chemical and seek medical attention immediately. **Do Not** induce vomiting.

Section 8 – Measures in Case of Accidents and Fire (cont)

Skin Contact:	Wash affected areas with soap and a mild detergent and large amounts of water.

Section 9 – Accidental Release Measures

Precautions:

Cleanup Methods:	Shovel or sweep spilt material into plastic bags or vented containers for disposal. Do not return spilled or contaminated material to the inventory.

Section 10 – Information on Toxicology

Toxicity Data

LD50 Oral (rat):	2,400 mg/kg
LD50 Dermal (rabbit):	Min 2,000 mg/kg
LD50 Inhalation (rat):	Min 4,580 mg/kg

Section 11 – Information on Ecology

Ecology Data

Ecotoxicological Information:	NA

Section 12 – Disposal Considerations

Waste Disposal Method

Waste Treatment:	Dispose of in an approved waste facility operated by an authorized contactor in compliance with local regulations.
Package (Pail) Treatment:	The empty and clean containers are to be recycled or disposed of in conformity with local regulations.

Section 13 – Shipping/Transport Information

D.O.T. Shipping Name:	Oxidizing Solid, N.O.S. [A mixture of sodium percarbonate [$2Na_2CO_3 \cdot 3H2O_2$], sodium carbonate [Na_2CO_3], sodium silicate and silica gel.]
UN Number:	1479
Hazard Class:	5.1
Labels:	5.1 (Oxidizer)
Packaging Group:	III

Section 14 – Other Information

HMIS® Rating	Health – 1 (slight)	Reactivity – 1 (slight)
	Flammability – 0 (none)	Lab PPE – goggles, gloves, and lab coat

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Section 15 – Further Information

The information contained in this document is the best available to the supplier at the time of writing, but is provided without warranty of any kind. Some possible hazards have been determined by analogy to similar classes of material. The items in this document are subject to change and clarification as more information become available. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose.

Regen OX – Part B (Activator Complex)

Material Safety Data Sheet (MSDS)

Last Revised: November 7, 2005

Section 1 – Supplier Information and Material Identification

Supplier:

REGENESIS

1011 Calle Sombra
San Clemente, CA 92673
Telephone: 949.366.8000
Fax: 949.366.8090
E-mail: info@regenesis.com

Chemical Description:	A mixture of sodium silicate solution, silica gel and ferrous sulfate
Chemical Family:	Inorganic Chemicals
Trade Name:	Regen Ox – Part B (Activator Complex)
Product Use:	Used for environmental remediation of contaminated soils and groundwater

Section 2 – Chemical Information/Other Designations

CAS No.	Chemical
1344-09-8	Silicic Acid, Sodium Salt, Sodium Silicate
63231-67-4	Silica Gel
7720-78-7	Ferrous Sulfate
7732-18-5	Water

Section 3 – Physical Data

Form:	Liquid
Color:	Blue/Green
Odor:	Odorless
Melting Point:	NA
Boiling Point:	NA
Flammability/Flash Point:	NA
Vapor Pressure:	NA

Section 3 – Physical Data (cont)

Specific Gravity	1.39 g/cm^3
Solubility:	Miscible
Viscosity:	NA
pH (3% solution):	11
Hazardous Decomposition Products:	Oxides of carbon and silicon may be formed when heated to decomposition.

Section 4 – Reactivity Data

Stability:	Stable under normal conditions.
Conditions to Avoid:	None.
Incompatibility:	Avoid hydrogen fluoride, fluorine, oxygen difluoride, chlorine trifluoride, strong acids, strong bases, oxidizers, aluminum, fiberglass, copper, brass, zinc, and galvanized containers.

Section 5 – Regulations

TSCA Inventory Listed: Yes

CERCLA Hazardous Substance (40 CFR Part 302)

Listed Substance: *No*

Unlisted Substance: *Yes*

SARA, Title III, Sections 302/303 (40 CFR Part 355) – Emergency Planning and Notification

Extremely Hazardous Substance: No

SARA, Title III, Sections 311/312 (40 CFR Part 370) – Hazardous Chemical Reporting: Community Right-To-Know

Hazard Category: Acute

SARA, Title III, Sections 313 (40 CFR Part 372) – Toxic Chemical Release Reporting: Community Right-To-Know

Extremely Hazardous Substance: No

Section 6 – Protective Measures, Storage and Handling

Technical Protective Measures

Storage:	Keep in a tightly closed container (steel or plastic) and store in a cool, well ventilated area away from all incompatible materials (acids, reactive metals, and ammonium salts). Store in a dry location away from heat and in temperatures less than 24 °C. Do not store in aluminum, fiberglass, copper, brass, zinc or galvanized containers.
Handling:	Avoid contact with eyes, skin and clothing. Avoid breathing spray mist. Use with adequate ventilation. Do not use product if it is brownish-yellow in color.

Personal Protective Equipment (PPE)

Engineering Controls:	General room ventilation is required if used indoors. Local exhaust ventilation, process enclosures or other engineering controls may be needed to maintain airborne levels below recommended exposure limits. Safety shower and eyewash station should be within direct access.
Respiratory Protection:	Use NIOSH-approved dust and mist respirator where spray mist exists. Respirators should be used in accordance with 29 CFR 1910.134.
Hand Protection:	Wear chemical resistant gloves.
Eye Protection:	Wear chemical safety goggles. A full face shield may be worn in lieu of safety goggles.
Skin Protection:	Try to avoid skin contact with this product. Gloves and protective clothing should be worn during use.

Other:

Protection Against Fire & Explosion:	Product is non-explosive and non-combustible.

Section 7 – Hazards Identification

Potential Health Effects	
Inhalation:	Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath, and irritations to mucous membranes, nose and throat.
Eye Contact:	Causes irritation, redness and pain.
Skin Contact:	Causes irritation. Symptoms include redness, itching and pain.
Ingestion:	May cause irritation to mouth, esophagus, and stomach.

Section 8 – Measures in Case of Accidents and Fire

After Spillage/Leakage (small):	Mop up and neutralize liquid, then discharge to sewer in accordance with local, state and federal regulations.
After Spillage/Leakage (large):	Keep unnecessary personnel away; isolate hazard area and do not allow entrance into the affected area. Do not touch or walk through spilled material. Stop leak if possible without risking injury. Prevent runoff from entering into storm sewers and ditches that lead to natural waterways. Isolate the material if at all possible. Sand or earth may be used to contain the spill. If containment is not possible, neutralize the contaminated area and flush with large quantities of water.
Extinguishing Media:	Material is compatible with all extinguishing media.
Further Information:	
First Aid	
Eye Contact:	Flush eyes with running water for at least 15 minutes with eyelids held open. Seek a specialist.
Inhalation:	Remove affected person to fresh air. Give artificial respiration if individual is not breathing. If breathing is difficult, give oxygen. Seek medical attention if the effects persist.
Ingestion:	If the individual is conscious and not convulsing, give two-four cups of water to dilute the chemical and seek medical attention immediately. **DO NOT** induce vomiting.
Skin Contact:	Wash affected areas with soap and a mild detergent and large amounts of water. Remove contaminated clothing and shoes.

Section 9 – Accidental Release Measures

Precautions:

PPE: Wear chemical goggles, body-covering protective clothing, chemical resistant gloves, and rubber boots (see Section 6).

Environmental Hazards: Sinks and mixes with water. High pH of this material may be harmful to aquatic life. Only water will evaporate from a spill of this material.

Cleanup Methods: Pick-up and place in an appropriate container for reclamation or disposal. US regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities.

Section 10 – Information on Toxicology

Toxicity Data

Sodium Silicate: When tested for primary eye irritation potential according to OECD Guidelines, Section 405, a similar sodium silicate solution produced corneal, iridal and conjunctival irritation. Some eye irritation was still present 14 days after treatment, although the average primary irritation score has declined from 29.7 after 1 day to 4.0 after 14 days. When tested for primary skin irritation potential, a similar sodium silicate solution produced irritation with a primary irritation index of 3 to abraded skin and 0 to intact skin. Human experience confirms that irritation occurs when sodium silicates get on clothes at the collar, cuffs, or other areas where abrasion may exist.

The acute oral toxicity of this product has not been tested.

Ferrous Sulfate: LD50 Oral (rat): 319 mg/kg not a suspected carcinogen.

Section 11 – Information on Ecology

Ecology Data

Ecotoxicological Information:	Based on 100% solid sodium silicate, a 96 hour median tolerance for fish of 2,320 mg/l; a 96 hour median tolerance for water fleas of 247 mg/L; a 96 hour median tolerance for snail eggs of 632 mg/L; and a 96 hour median tolerance for Amphipoda of 160 mg/L.

Section 12 – Disposal Considerations

Waste Disposal Method

Waste Treatment:	Neutralize and landfill solids in an approved waste facility operated by an authorized contactor in compliance with local regulations.
Package (Pail) Treatment:	The empty and clean containers are to be recycled or disposed of in conformity with local regulations.

Section 13 – Shipping/Transport Information

D.O.T.	This product is not regulated as a hazardous material so there are no restrictions.

Section 14 – Other Information

HMIS® Rating	Health – 2 (moderate)	Reactivity – 0 (none)
	Flammability – 0 (none)	Lab PPE – goggles, gloves, and lab coat
	Contact – 1 (slight)	

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Section 15 – Further Information

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Material Safety Data Sheet

Sodium Hydroxide Solution 0.4 - 0.04%

MSDS# 02032

Section 1 - Chemical Product and Company Identification

MSDS Name:
Sodium Hydroxide Solution 0.4 - 0.04%.

Catalog Numbers:
AC124190000, AC12419C01C, SS278-1, SS282-1, SS282-4, SS284-1, SS284-4

Synonyms:
Caustic soda; Lye; Soda lye; Sodium hydrate.

Company Identification:
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call:
201-796-7100

Emergency Number US:201-796-7100

CHEMTREC Phone Number, US:
800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#: 1310-73-2
Chemical Name: Sodium hydroxide
%: .04-0.4
EINECS#: 215-185-5
Hazard Symbols: C
Risk Phrases: 35

CAS#: 7732-18-5
Chemical Name: Water
%: >99.6
EINECS#: 231-791-2
Hazard Symbols:
Risk Phrases:

Text for R-phrases: see Section 16
Hazard Symbols:
None listed
Risk Phrases:
None listed

Section 3 - Hazards Identification
EMERGENCY OVERVIEW

Caution! Corrosive to metal. May cause eye, skin, and respiratory tract irritation.
Target Organs: No data found.
Potential Health Effects
Eye:
May cause eye irritation.
Skin:
May cause skin irritation.
Ingestion:
May cause irritation of the digestive tract.
Inhalation:
May cause respiratory tract irritation.
Chronic:
Prolonged or repeated skin contact may cause dermatitis. Effects may be delayed.

Section 4 - First Aid Measures

Eyes:
Get medical aid. Immediately flush eyes with plenty of water for at least 15 minutes.
Skin:
Get medical aid. Flush skin with plenty of soap and water.
Ingestion:
Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.
Inhalation:
Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Notes to Physician:
Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Use water with caution and in flooding amounts. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated. Non-combustible, substance itself does not burn but may decompose upon heating to produce irritating, corrosive and/or toxic fumes.
Extinguishing Media:
Substance is noncombustible; use agent most appropriate to extinguish surrounding fire. Cool containers with flooding quantities

of water until well after fire is out.
Autoignition Temperature:Not applicable.
Flash Point:Not applicable.
Explosion Limits: Lower:Not available
Explosion Limits: Upper:Not available
NFPA Rating:
Health: 2; Flammability: 0; Instability: 0;

Section 6 - Accidental Release Measures

General Information:
Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks:
Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

Section 7 - Handling and Storage

Handling:
Wash thoroughly after handling. Use only in a well-ventilated area. Do not breathe dust, mist, or vapor. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Discard contaminated shoes.
Storage:
Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from strong acids. Keep away from metals. Keep away from flammable liquids. Keep away from organic halogens.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.
Exposure Limits:

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Sodium hydroxide	2 mg/m3 Ceiling	10 mg/m3 IDLH	2 mg/m3 TWA
Water	none listed	none listed	none listed

OSHA Vacated PELs:
Sodium hydroxide:
None listed
Water:
None listed
Personal Protective Equipment:
Eyes:
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin:
Wear appropriate protective gloves to prevent skin exposure.
Clothing:
Wear appropriate protective clothing to prevent skin exposure.
Respirators:
A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Color: colorless
Odor: practically odorless
pH: Not available
Vapor Pressure: Not available
Vapor Density: >1.0
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: > 100 deg C (> 212.00F)
Freezing/Melting Point: > 0 deg C (> 32.0C&F)
Decomposition Temperature: Not available
Solubility in water: Slightly soluble
Specific Gravity/Density: >1.0
Molecular Formula: Solution
Molecular Weight: 0

Section 10 - Stability and Reactivity

Chemical Stability:
Stable.
Conditions to Avoid:
Prolonged exposure to air.
Incompatibilities with Other Materials
Metals, acids.
Hazardous Decomposition Products
Toxic fumes of sodium oxide.
Hazardous Polymerization
Will not occur.

Section 11 - Toxicological Information

RTECS#:
CAS# 1310-73-2: WB4900000
CAS# 7732-18-5: ZC0110000
LD50/LC50:
RTECS: CAS# 1310-73-2: Draize test, rabbit, eye: 400 ug Mild; Draize test, rabbit, eye: 1% Severe; Draize test, rabbit, eye: 50 mg/24H Severe; Draize test, rabbit, eye: 1 mg/24H Severe; Draize test, rabbit, skin: 500 mg/24H Severe;.
RTECS: CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg;.
Carcinogenicity:
Sodium hydroxide -
Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Water -
Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Epidemiology:
No information found
Teratogenicity:
No information found
Reproductive:
No information found
Neurotoxicity:
No information found
Mutagenicity:
No information found
Other:
See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity:
Fish: Carp: 180ppm (LC100); 24H
Other:
For more information, see "HANDBOOK OF ENVIRONMENTAL FATE AND EXPOSURE DATA."

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste.
US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

US DOT
Shipping Name: SODIUM HYDROXIDE SOLUTION
Hazard Class: 8
UN Number: UN1824
Packing Group: II
Canada TDG
Shipping Name: SODIUM HYDROXIDE SOLUTION
Hazard Class: 8
UN Number: UN1824
Packing Group: II
USA RQ: CAS# 1310-73-2: 1000 lb final RQ; 454 kg final RQ

Section 15 - Regulatory Information

US Federal
TSCA
CAS# 1310-73-2 is listed on the TSCA Inventory.
CAS# 7732-18-5 is listed on the TSCA Inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs
CAS# 1310-73-2: 1000 lb final RQ; 454 kg final RQ
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 1310-73-2: acute, reactive.
Section 313
No chemicals are reportable under Section 313.
Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
CAS# 1310-73-2 is listed as a Hazardous Substance under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
STATE

Sodium hydroxide can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.
Water is not present on state lists from CA, PA, NJ, MA, FL, or MJ.
California Prop 65
California No Significant Risk Level:
None of the chemicals in this product are listed.
European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols:Not available
Risk Phrases:
Safety Phrases:
S 24/25 Avoid contact with skin and eyes.
WGK (Water Danger/Protection)
CAS# 1310-73-2: 1
CAS# 7732-18-5: Not available
Canada
CAS# 1310-73-2 is listed on Canada's DSL List
CAS# 7732-18-5 is listed on Canada's DSL List
Canadian WHMIS Classifications: E
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.
CAS# 1310-73-2 is listed on Canada's Ingredient Disclosure List
CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date:
9/02/1997
Revision #6 Date
3/05/2007
Revisions were made in Sections:
3, 4
The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

SIGMA-ALDRICH

ALDRICH CHEMICAL COMPANY, INC.
P.O. BOX 355
MILWAUKEE, WISCONSIN 53201, USA

ATTN: SAFETY DIRECTOR
INTEGRATED ANALYTICAL LABS INC
P.O. BOX 8026
PARSIPPANY NJ 07054

EMERGENCY PHONE 1-414-273-3850

DATE 01/18/00
CUST#: 049498329
PO#: 4206

M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1. - - - - - - - - CHEMICAL IDENTIFICATION- - - - - - - - -

CATALOG #: 25555-6
NAME: SODIUM METABISULFITE, 97+%, A.C.S. REAGENT

SECTION 2. - - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - - -

CAS #: 7681-57-4
MF: NA2O5S2
EC NO: 231-673-0

SYNONYMS
DISODIUM DISULFITE * DISODIUM METABISULFITE * DISODIUM PYROSULFITE * DISULFUROUS ACID, DISODIUM SALT * SODIUM DISULFITE * SODIUM METABISULFITE (ACGIH) * SODIUM METABISULPHITE * SODIUM PYROSULFITE *

SECTION 3. - - - - - - - - - - - - HAZARDS IDENTIFICATION - - - - - - - - -

LABEL PRECAUTIONARY STATEMENTS
TOXIC (USA).
HARMFUL (EU)
HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
CAUSES SEVERE IRRITATION.
POSSIBLE SENSITIZER.
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
WEAR SUITABLE PROTECTIVE CLOTHING.

SECTION 4. - - - - - - - - - - - - FIRST AID MEASURES - - - - - - - - - - -

IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
IN CASE OF SKIN CONTACT, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. CALL A PHYSICIAN.
IN CASE OF CONTACT WITH EYES, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. ASSURE ADEQUATE FLUSHING BY SEPARATING THE EYELIDS WITH FINGERS. CALL A PHYSICIAN.

SECTION 5. - - - - - - - - - - FIRE FIGHTING MEASURES - - - - - - - - - -

EXTINGUISHING MEDIA
DRY CHEMICAL POWDER.

SPECIAL FIREFIGHTING PROCEDURES
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS

CONTINUED ON NEXT PAGE

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MILWAUKEE, WISCONSIN 53201, USA

CUST#: 049498329
PO#: 4206

M A T E R I A L S A F E T Y D A T A S H E E T

CATALOG #: 25555-6
NAME: SODIUM METABISULFITE, 97+%, A.C.S. REAGENT

EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION 6. ACCIDENTAL RELEASE MEASURES

WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY RUBBER GLOVES.
SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL.
AVOID RAISING DUST.
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.
EVACUATE AREA.

SECTION 7. HANDLING AND STORAGE

REFER TO SECTION 8.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

MECHANICAL EXHAUST REQUIRED.
SAFETY SHOWER AND EYE BATH.
WASH THOROUGHLY AFTER HANDLING.
DO NOT BREATHE DUST.
AVOID CONTACT WITH EYES, SKIN AND CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
NIOSH/MSHA-APPROVED RESPIRATOR.
COMPATIBLE CHEMICAL-RESISTANT GLOVES.
CHEMICAL SAFETY GOGGLES.
STORE IN A COOL DRY PLACE.
KEEP TIGHTLY CLOSED.
AIR AND MOISTURE SENSITIVE

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR
WHITE CRYSTALLINE POWDER

PHYSICAL PROPERTIES
SPECIFIC GRAVITY: 1.480

SECTION 10. STABILITY AND REACTIVITY

STABILITY
STABLE.

CONDITIONS TO AVOID
MOISTURE SENSITIVE

INCOMPATIBILITIES
AIR SENSITIVE
STRONG ACIDS
STRONG OXIDIZING AGENTS

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS

CONTINUED ON NEXT PAGE

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ALDRICH CHEMICAL COMPANY, INC.
P.O. BOX 355
MILWAUKEE, WISCONSIN 53201, USA

CUST#: 049498329
PO#: 4206

MATERIAL SAFETY DATA SHEET

CATALOG #: 25555-6
NAME: SODIUM METABISULFITE, 97+%, A.C.S. REAGENT

SULFUR OXIDES

HAZARDOUS POLYMERIZATION
WILL NOT OCCUR.

SECTION 11. - - - - - - - - - TOXICOLOGICAL INFORMATION - - - - - - - - -

ACUTE EFFECTS
MAY CAUSE SKIN IRRITATION.
MAY CAUSE EYE IRRITATION.
HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.
HIGH CONCENTRATIONS ARE EXTREMELY DESTRUCTIVE TO TISSUES OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES AND SKIN.
SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND VOMITING.
EXPOSURE CAN CAUSE:
COUGHING, CHEST PAINS, DIFFICULTY IN BREATHING.
STOMACH PAINS, VOMITING, DIARRHEA.
PROLONGED OR REPEATED EXPOSURE MAY CAUSE ALLERGIC REACTIONS IN CERTAIN SENSITIVE INDIVIDUALS.
WARNING: CERTAIN INDIVIDUALS WITH PREEXISTING RESPIRATORY CONDITIONS SUCH AS ASTHMA MAY EXPERIENCE HYPERSENSITIVITY TO SULFITES AND SULFUR DIOXIDE. THE SYMPTOMS INCLUDE BRONCHOCONSTRICTION, BRONCHOSPASM, GASTROINTESTINAL DISTURBANCES, FLUSHING, HYPOTENSION, TINGLING SENSATION, URTICARIA/ANGIOEDEMA AND SHOCK.

RTECS #: UX8225000
PYROSULFUROUS ACID, DISODIUM SALT

IRRITATION DATA
SKN-RBT 500 MG NTIS** OTS0557608

TOXICITY DATA

ORL-RAT LD50:>2 GM/KG	NTIS** OTS0557608
SKN-RAT LD50:>2 GM/KG	NTIS** OTS0557608
IVN-RAT LD50:115 MG/KG	85INA8 6,1418,1991
PAR-MUS LD50:910 MG/KG	RPTOAN 31,120,1968

ADDITIONAL INFORMATION
ORL-RAT LD50: 500 MG/KG
ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE INFORMATION.

SECTION 12. - - - - - - - - - ECOLOGICAL INFORMATION - - - - - - - - - -

DATA NOT YET AVAILABLE.

SECTION 13. - - - - - - - - - - DISPOSAL CONSIDERATIONS - - - - - - - - -

CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF

CONTINUED ON NEXT PAGE

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MILWAUKEE, WISCONSIN 53201, USA

CUST#: 049498329
PO#: 4206

M A T E R I A L S A F E T Y D A T A S H E E T

CATALOG #: 25555-6
NAME: SODIUM METABISULFITE, 97+%, A.C.S. REAGENT

THIS MATERIAL.
OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. - - - - - - - - - TRANSPORT INFORMATION - - - - - - - - -

CONTACT ALDRICH CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

SECTION 15. - - - - - - - - - REGULATORY INFORMATION - - - - - - - - -

EUROPEAN INFORMATION
HARMFUL
R 20/21/22
HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
S 26
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
S 36
WEAR SUITABLE PROTECTIVE CLOTHING.

REVIEWS, STANDARDS, AND REGULATIONS

OEL-MAK
ACGIH TLV-NOT CLASSIFIABLE AS A HUMAN CARCINOGEN DTLVS* TLV/BEI,1997
ACGIH TLV-TWA 5 MG/M3 DTLVS* TLV/BEI,1997
IARC CANCER REVIEW:HUMAN INADEQUATE EVIDENCE IMEMDT 54,131,1992
IARC CANCER REVIEW:ANIMAL INADEQUATE EVIDENCE IMEMDT 54,131,1992
IARC CANCER REVIEW:GROUP 3 IMEMDT 54,131,1992
OEL-AUSTRALIA:TWA 5 MG/M3 JAN 1993
OEL-BELGIUM:TWA 5 MG/M3 JAN 1993
OEL-THE NETHERLANDS:TWA 5 MG/M3 JAN 1993
OEL-SWITZERLAND:TWA 5 MG/M3 JAN 1993
OEL-UNITED KINGDOM:TWA 5 MG/M3 JAN 1993
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV
NIOSH REL TO SODIUM METABISULFITE-AIR:10H TWA 5 MG/M3
NIOSH* DHHS #92-100,1992
NOES 1983: HZD X4004; NLS 73; TNF 8367; NOS 68; TNE 88236; TFE 28696
EPA GENETOX PROGRAM 1988: NEGATIVE: TRP REVERSION
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY
EPA TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, SEPTEMBER 1999

SECTION 16. - - - - - - - - - OTHER INFORMATION- - - - - - - - - -

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. ALDRICH SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT. SEE REVERSE SIDE OF INVOICE OR PACKING SLIP FOR ADDITIONAL TERMS AND CONDITIONS OF SALE.

CONTINUED ON NEXT PAGE

SIGMA-ALDRICH

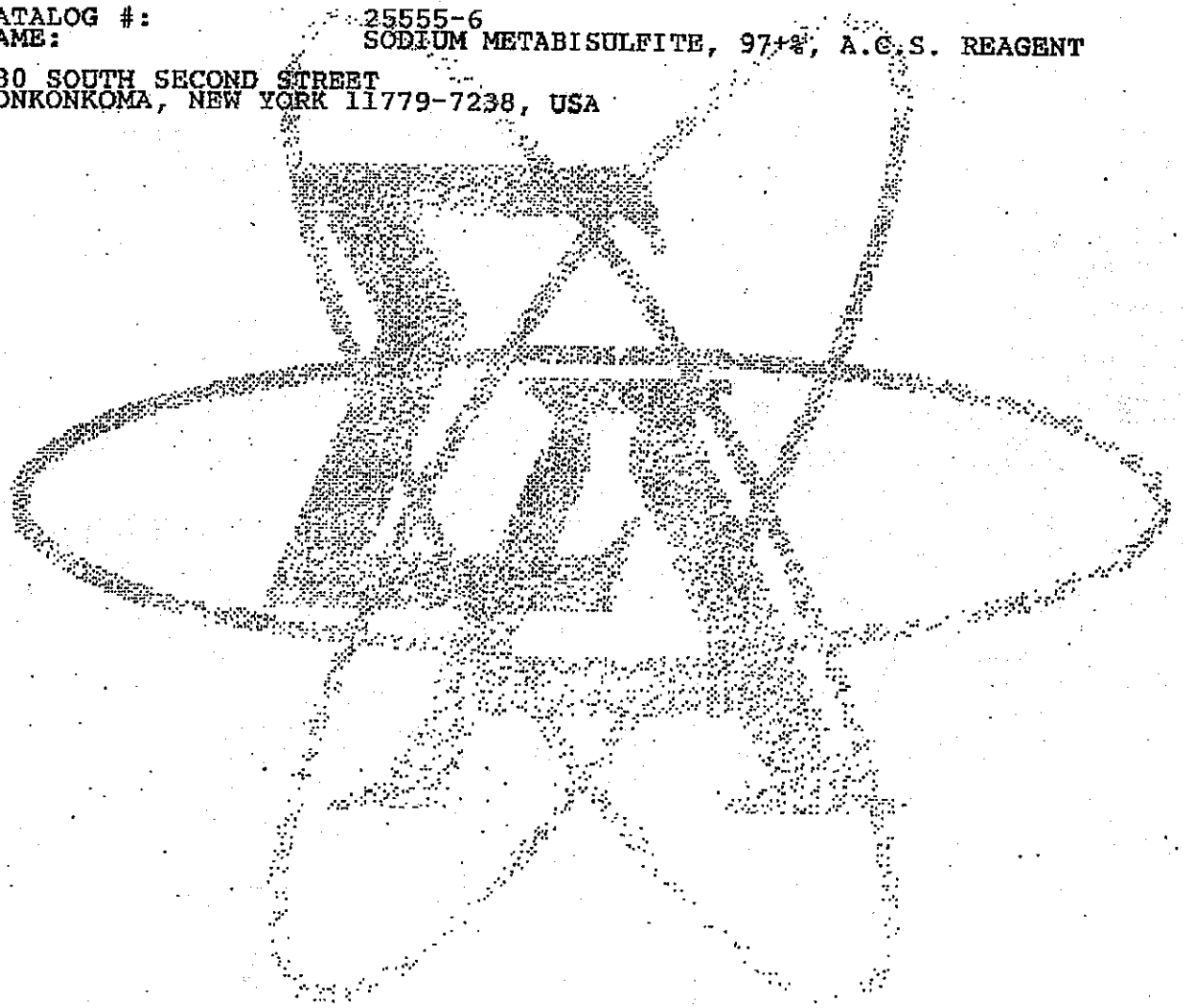
ALDRICH CHEMICAL COMPANY, INC.
P.O. BOX 355
MILWAUKEE, WISCONSIN 53201, USA

CUST#: 049498329
PO#: 4206

M A T E R I A L S A F E T Y D A T A S H E E T

CATALOG #: 25555-6
NAME: SODIUM METABISULFITE, 97+%, A.C.S. REAGENT

980 SOUTH SECOND STREET
RONKONKOMA, NEW YORK 11779-7238, USA



2211

SIGMA-ALDRICH

Material Safety Data Sheet

Date Printed: 12/09/2003
Date Updated: 03/04/2008
Version 1.20

Section 1 - Product and Company Information

Product Name	SODIUM THIOSULFATE, VOLUMETRIC STANDARD, 0.1N SOLUTION IN WATER		
Product Number	319546		
Brand	Aldrich Chemical		
Company	Sigma-Aldrich		
Street Address	3050 Spruce Street		
City, State, Zip, Country	SAINT LOUIS, MO 63103 US		
Technical Phone:	314 771 5765	Emergency Phone:	414 273 3850 Ext. 5996
Fax:	800 325 5052		

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #		SARA 313
SODIUM THIOSULFATE STANDARD SOLUTION, 0.1 M (0.1 N)	None		No
Ingredient Name	**CAS #**	**Percent**	**SARA 313**
SODIUM THIOSULFATE	7772-98-7	>= 1.500 % <= 2.000 %	
WATER	7732-18-5	>= 98.000 %	No

Formula
Synonyms

Section 3 - Hazards Identification

HMIS Rating
Health: 0 Flammability: 0 Reactivity: 0

NFPA Rating
Health: 0 Flammability: 0 Reactivity: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

Dermal Exposure
In case of contact, immediately wash skin with soap and copious amounts of water.

Eye Exposure
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Autoignition Temp: N/A

Extinguishing Media
Suitable
Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting
Protective Equipment
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s)
Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up
Absorb on sand or vermiculite and place in closed containers for disposal. Flush spill area with copious amounts of water.

Section 7 - Handling and Storage

Handling
User Exposure
Avoid inhalation. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure.

Storage
Suitable
Keep tightly closed.

Section 8 - Exposure Controls / PPE

Engineering Controls
Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment
Eye
Chemical safety goggles.

General Hygiene Measures
Wash thoroughly after handling

Section 9 - Physical/Chemical Properties

Appearance
Physical State: Clear liquid
Color: Colorless

Molecular Weight: N/A

pH: N/A
BP/BP Range: N/A

MP/MP Range	N/A
Freezing Point	N/A
Vapor Pressure	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
SG/Density	1.01 g/cm3
Bulk Density	N/A
Odor Threshold	N/A
Volatile%	N/A
VOC Content	N/A
Water Content	N/A
Solvent Content	N/A
Evaporation Rate	N/A
Viscosity	N/A
Partition Coefficient	N/A
Decomposition Temp.	N/A
Flash Point °F	N/A
Flash Point °C	N/A
Explosion Limits	N/A
Flammability	N/A
Autoignition Temp	N/A
Solubility	N/A

N/A = not available

Section 10 - Stability and Reactivity

Stability
Stable
Stable.
Materials to Avoid
Strong oxidizing agents.

Hazardous Decomposition Products
Hazardous Decomposition Products
Carbon monoxide, Carbon dioxide.

Hazardous Exothermic Reactions
Hazardous Exothermic Reactions
Will not occur.

Hazardous Polymerization
Hazardous Polymerization
Will not occur.

Section 11 - Toxicological Information

Route of Exposure
Skin Contact
May cause skin irritation.
Skin Absorption
May be harmful if absorbed through the skin.
Eye Contact
May cause eye irritation.
Inhalation
May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion
May be harmful if swallowed.

Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

RTECS Number: N/A

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation
Small amounts may be washed down the drain with excess water.
Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA
Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

United States Regulatory Information
SARA Listed: No

Canada Regulatory Information
WHMIS Classification
This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: No
NDSL: No

Section 16 - Other Information

Disclaimer
For R&D use only. Not for drug, household or other uses.

Warranty
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Sigma Chemical Co.
P.O. Box 14508
St. Louis, MO 63178 USA
Tel: 314-771-5765

M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1. - - - - - - - - - - CHEMICAL IDENTIFICATION- - - - - - - - - -
CATALOG #: S1526
NAME: SULFURIC ACID ACS REAGENT
SECTION 2. - - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - - -
CAS #: 7664-93-9
MF: H2O4S
EC NO: 231-639-5
SYNONYMS
ACIDE SULFURIQUE (FRENCH) * ACIDO SOLFORICO (ITALIAN) * BATTERY ACID * BOV * DIHYDROGEN SULFATE * DIPPING ACID * ELECTROLYTE ACID * MATTLING ACID * OIL OF VITRIOL * SCHWEFELSAEURELOESUNGEN (GERMAN) * STRONG INORGANIC ACID MISTS CONTAINING SULFURIC ACID * SULFURIC ACID (ACGIH:OSHA) * SULPHURIC ACID * VITRIOL BROWN OIL * ZWAVELZUUROPLOSSINGEN (DUTCH) *
SECTION 3. - - - - - - - - - - HAZARDS IDENTIFICATION - - - - - - - - -
LABEL PRECAUTIONARY STATEMENTS
HIGHLY TOXIC (USA)
TOXIC (EU)
MAY CAUSE CANCER BY INHALATION.
TOXIC BY INHALATION.
HARMFUL IN CONTACT WITH SKIN AND IF SWALLOWED.
CAUSES BURNS.
TARGET ORGAN(S):
TEETH
CARDIOVASCULAR SYSTEM
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.
DO NOT BREATHE VAPOR.
SECTION 4. - - - - - - - - - - FIRST-AID MEASURES- - - - - - - - - - -
IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN IMMEDIATELY.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
IN CASE OF SKIN CONTACT, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. CALL A PHYSICIAN.
IN CASE OF CONTACT WITH EYES, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. ASSURE ADEQUATE FLUSHING BY SEPARATING THE EYELIDS WITH FINGERS. CALL A PHYSICIAN.
SECTION 5. - - - - - - - - - - FIRE FIGHTING MEASURES - - - - - - - - - -
EXTINGUISHING MEDIA
NONCOMBUSTIBLE.
USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS. DO NOT USE WATER.
SPECIAL FIREFIGHTING PROCEDURES
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.
UNUSUAL FIRE AND EXPLOSIONS HAZARDS

EMITS TOXIC FUMES UNDER FIRE CONDITIONS.
CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.
STRONG DEHYDRATING AGENT WHICH MAY CAUSE IGNITION OF FINELY DIVIDED MATERIALS ON CONTACT.

SECTION 6. - - - - - - - - ACCIDENTAL RELEASE MEASURES- - - - - - - - -

WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY RUBBER GLOVES.
COVER WITH DRY-LIME, SAND, OR SODA ASH. PLACE IN COVERED CONTAINERS USING NON-SPARKING TOOLS AND TRANSPORT OUTDOORS.
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.
EVACUATE AREA.

SECTION 7. - - - - - - - - - - - HANDLING AND STORAGE- - - - - - - - - - -

REFER TO SECTION 8.

SECTION 8. - - - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION- - - - - -

WASH CONTAMINATED CLOTHING BEFORE REUSE.
WASH THOROUGHLY AFTER HANDLING.
DO NOT BREATHE VAPOR.
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
NIOSH/MSHA-APPROVED RESPIRATOR.
COMPATIBLE CHEMICAL-RESISTANT GLOVES.
CHEMICAL SAFETY GOGGLES.
WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.
FACESHIELD (8-INCH MINIMUM).
SAFETY SHOWER AND EYE BATH.
USE ONLY IN A CHEMICAL FUME HOOD.
KEEP TIGHTLY CLOSED.
STORE IN A COOL DRY PLACE.
DO NOT ALLOW CONTACT WITH WATER.

SECTION 9. - - - - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - - - - -

APPEARANCE AND ODOR
LIQUID.
PHYSICAL PROPERTIES

BOILING POINT:	100 C
VAPOR PRESSURE:	1 MMHG
SPECIFIC GRAVITY:	1.84
VAPOR DENSITY:	< 0.3 G/L

SECTION 10. - - - - - - - - - -STABILITY AND REACTIVITY - - - - - - - - -

STABILITY
STABLE.
INCOMPATIBILITIES
PROTECT FROM MOISTURE.
DO NOT ALLOW WATER TO ENTER CONTAINER.
BASES
HALIDES
ORGANIC MATERIALS
INCOMPATIBLE WITH CARBIDES, CHLORATES, FULMINATES, NITRATES, PICRATES, CYANIDES, ALKALI HALIDES, ZINC IODIDE, PERMANGANATES, HYDROGEN PEROXIDE, AZIDES, PERCHLORATES, NITROMETHANE, PHOSPHOROUS, NITRITES. VIOLENT REACTION WITH: CYCLOPENTADIENE, CYCLOPENTANONE OXIME, NITROARYL AMINES, HEXALITHIUM DISILICIDE, PHOSPHOROUS (III) OXIDE.
FINELY POWDERED METALS
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
SULFURIC ACID
SULFUR OXIDES
HYDROGEN SULFIDE GAS
HAZARDOUS POLYMERIZATION
WILL NOT OCCUR.

SECTION 11. - - - - - - - - - TOXICOLOGICAL INFORMATION - - - - - - - -

ACUTE EFFECTS
MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES AND SKIN.
INHALATION MAY RESULT IN SPASM, INFLAMMATION AND EDEMA OF THE

LARYNX AND BRONCHI, CHEMICAL PNEUMONITIS AND PULMONARY EDEMA.
SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND VOMITING.
CAUSES BURNS.
HARMFUL IF ABSORBED THROUGH SKIN.
TOXIC IF INHALED.
HARMFUL IF SWALLOWED.

CHRONIC EFFECTS
TARGET ORGAN(S):
TEETH
CARDIOVASCULAR SYSTEM
THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS DETERMINED THAT OCCUPATIONAL EXPOSURE TO STRONG-INORGANIC-ACID MISTS CONTAINING SULFURIC ACID IS CARCINOGENIC TO HUMANS (GROUP 1).

RTECS #: WS5600000
SULFURIC ACID

IRRITATION DATA
EYE-RBT 250 UG SEV — AJOPAA 29,1363,1946
EYE-RBT 5 MG/30S RINSE SEV — TXCYAC 23,281,1982

TOXICITY DATA
UNR-MAN LDLO:135 MG/KG — 85DCAI 2,73,1970
ORL-RAT LD50:2140 MG/KG — AIHAAP 30,470,1969
IHL-RAT LC50:510 MG/M3/2H — 85GMAT -,107,1982
IHL-MUS LC50:320 MG/M3/2H — 85GMAT -,107,1982
IHL-GPG LC50:18 MG/M3 — MELAAD 45,590,1954

ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE INFORMATION.

SECTION 12. - - - - - - - - - - ECOLOGICAL INFORMATION - - - - - - - - - -

DATA NOT YET AVAILABLE.

SECTION 13. - - - - - - - - - - DISPOSAL CONSIDERATIONS - - - - - - - - - -

CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL.

OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. - - - - - - - - - - TRANSPORT INFORMATION - - - - - - - - - -

CONTACT SIGMA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

SECTION 15. - - - - - - - - - - REGULATORY INFORMATION - - - - - - - - - -

EUROPEAN INFORMATION
EC INDEX NO: 016-020-00-8
TOXIC
R 35
CAUSES SEVERE BURNS.
S 26
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
S 30
NEVER ADD WATER TO THIS PRODUCT.
S 45
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).

REVIEWS, STANDARDS, AND REGULATIONS
OEL=MAK
ACGIH TLV-SUSPECTED HUMAN CARCINOGEN — DTLVS* TLV/BEI,1999
ACGIH TLV-STEL 3 MG/M3 — DTLVS* TLV/BEI,1999
ACGIH TLV-TWA 1 MG/M3 — DTLVS* TLV/BEI,1999
IARC CANCER REVIEW:HUMAN SUFFICIENT EVIDENCE — IMEMDT 54,41,1992
IARC CANCER REVIEW:GROUP 1 — IMEMDT 54,41,1992
EPA FIFRA 1988 PESTICIDE SUBJECT TO REGISTRATION OR RE-REGISTRATION — FEREAC 54,7740,1989
MSHA STANDARD-AIR:TWA 1 MG/M3 — DTLVS* 3,239,1971
OSHA PEL (GEN INDU):8H TWA 1 MG/M3 — CFRGBR 29,1910.1000,1994

OSHA PEL (CONSTRUC):8H TWA 1 MG/M3
CFRGBR 29,1926.55,1994
OSHA PEL (SHIPYARD):8H TWA 1 MG/M3
CFRGBR 29,1915.1000,1993
OSHA PEL (FED CONT):8H TWA 1 MG/M3
CFRGBR 41,50-204.50,1994
OEL-ARAB REPUBLIC OF EGYPT: TWA 1 MG/M3, JAN1993
OEL-AUSTRALIA: TWA 1 MG/M3, JAN1993
OEL-AUSTRIA: MAK 1 MG/M3, JAN1999
OEL-BELGIUM: TWA 1 MG/M3, STEL 3 MG/M3, JAN1993
OEL-DENMARK: TWA 1 MG/M3, JAN1999
OEL-FINLAND: TWA 1 MG/M3, STEL 3 MG/M3, SKIN, JAN1999
OEL-FRANCE: VME 1 MG/M3, VLE 3 MG/M3, JAN1999
OEL-GERMANY: MAK 1 MG/M3, JAN1999
OEL-HUNGARY: STEL 1 MG/M3, JAN1993
OEL-JAPAN: OEL 1 MG/M3, JAN1999
OEL-THE NETHERLANDS: MAC-TGG 1 MG/M3, JAN1999
OEL-NORWAY: TWA 1 MG/M3, JAN1999
OEL-POLAND: MAC(TWA) 1 MG/M3, MAC(STEL) 3 MG/M3, JAN1999
OEL-RUSSIA: STEL 1 MG/M3, SKIN, JAN1993
OEL-SWEDEN: NGV 1 MG/M3, TKV 3 MG/M3, JAN1999
OEL-SWITZERLAND: MAK-W 1 MG/M3, KZG-W 2 MG/M3, JAN1999
OEL-THAILAND: TWA 1 MG/M3, JAN1993
OEL-TURKEY: TWA 1 MG/M3, JAN1993
OEL-UNITED KINGDOM: LTEL 1 MG/M3, JAN1993
OEL IN ARGENTINA, BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV;
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV
NIOSH REL TO SULFURIC ACID-AIR:10H TWA 1 MG/M3
NIOSH* DHHS #92-100,1992
NOHS 1974: HZD 70870; NIS 313; TNF 54746; NOS 143; TNS 499446
NOES 1983: HZD 70870; NIS 300; TNF 54516; NOS 182; TNS 775587; TFE 173653
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY
EPA TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES
EPA TSCA SECTION 8(E) RISK NOTIFICATION, 8EHQ-0892-9247;8EHQ-0892-9248
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, OCTOBER 2000
NIOSH ANALYTICAL METHOD, 1994: ACIDS, INORGANIC, 7903
NTP 9TH REPORT ON CARCINOGENS, 2000:KNOWN TO BE HUMAN CARCINOGEN
OSHA ANALYTICAL METHOD #ID-113

U.S. INFORMATION

THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.

SECTION 16. - - - - - - - - - - OTHER INFORMATION- - - - - - - - - - -

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. SIGMA, ALDRICH, FLUKA SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT. SEE REVERSE SIDE OF INVOICE OR PACKING SLIP FOR ADDITIONAL TERMS AND CONDITIONS OF SALE.

MSDS# 6123

MATERIAL SAFETY DATA SHEET

Hydrogen Peroxide (20 to 40%)

MSDS Ref. No.: 7722-84-1-3
Date Approved: 02/02/2004
Revision No.: 7

This document has been prepared to meet the requirements of the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200; the Canada's Workplace Hazardous Materials Information System (WHMIS) and, the EC Directive, 2001/58/EC.

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Hydrogen Peroxide (20 to 40%)

ALTERNATE PRODUCT NAME(S): Durox® Reg. & LR 35%, Oxypure® 35%, Standard 27.5 & 35%, Super D® 25 & 35, Technical 35%, Chlorate Grade, 20%, Semiconductor Reg, Seg, RGS, RGS 2, RGS 3, 31%

GENERAL USE:

Durox® 35% Reg. & LR - meets the Food Chemical Codex requirements for aseptic packaging and other food related applications.

Oxypure® 35% - certified by NSF to meet NSF/ANSI Standard 60 requirements for drinking water treatment.

Standard 27.5 and 35% - most suitable grade for industrial bleaching, processing, pollution abatement and general oxidation reactions.

Semiconductor Reg, Seg, RGS, RGS 2, RGS 3, 31% - conform to ACS and Semi Specs. for wafer etching and cleaning, and applications requiring low residues.

Super D® 25 and 35% - meets US Pharmacopoeia specifications for 3% topical solutions when diluted with proper quality water. While manufactured to the USP standards for purity and to FMC's demanding ISO 9002 quality standards, FMC does not claim that it's Hydrogen Peroxide is manufactured in accordance with all pharmaceutical cGMP conditions.

Technical 35% - essentially free of inorganic metals suitable for chemical synthesis.

Chlorate Grade 20% - specially formulated for use in chlorate manufacture or processing.

MANUFACTURER

FMC CORPORATION
Hydrogen Peroxide Division
1735 Market Street
Philadelphia, PA 19103
(215) 299-6000 (General Information)

FMC of Canada Ltd.
Hydrogen Peroxide Division
PG Pulp Mill Road
Prince George, BC V2N2S6
(250) 561-4200 (General Information)

EMERGENCY TELEPHONE NUMBERS

(800) 424-9300 (CHEMTREC - U.S.)
(613) 996-6666 (CANUTEC)
(303) 595-9048 (Medical - U.S. - Call Collect)

(281) 474-8750 (Plant: Pasadena, TX, US - Call Collect)
(250) 561-4221 (Plant: Prince George, BC, Canada - Call Collect)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

- Clear, colorless, odorless liquid
- Oxidizer.
- Contact with combustibles may cause fire.
- Decomposes yielding oxygen that supports combustion of organic matters and can cause overpressure if confined.
- Corrosive to eyes, nose, throat, lungs and gastrointestinal tract.

POTENTIAL HEALTH EFFECTS: Corrosive to eyes, nose, throat and lungs. May cause irreversible tissue damage to the eyes including blindness. May cause skin irritation.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Wt.%	EC No.	EC Class
Hydrogen Peroxide	7722-84-1	20 - 40	231-765-0	C, R34
Water	7732-18-5	60 - 80	231-791-2	Not classified as hazardous

4. FIRST AID MEASURES

EYES: Immediately flush with water for at least 15 minutes, lifting the upper and lower eyelids intermittently. See a medical doctor or ophthalmologist immediately.

SKIN: Wash with plenty of soap and water. Get medical attention if irritation occurs and persists.

INGESTION: Rinse mouth with water. Dilute by giving 1 or 2 glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. See a medical doctor immediately.

INHALATION: Remove to fresh air. If breathing difficulty or discomfort occurs and persists, contact a medical doctor.

NOTES TO MEDICAL DOCTOR: Hydrogen peroxide at these concentrations is a strong oxidant. Direct contact with the eye is likely to cause corneal damage especially if not washed immediately. Careful ophthalmologic evaluation is recommended and the possibility of local corticosteroid therapy should be considered. Because of the likelihood of corrosive effects on the gastrointestinal tract after ingestion, and the unlikelihood of systemic effects, attempts at evacuating the stomach via emesis induction or gastric lavage should be avoided. There is a remote possibility, however, that a nasogastric or orogastric tube may be required for the reduction of severe distension due to gas formation.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Flood with water.

FIRE / EXPLOSION HAZARDS: Product is non-combustible. On decomposition releases oxygen which may intensify fire.

FIRE FIGHTING PROCEDURES: Any tank or container surrounded by fire should be flooded with water for cooling. Wear full protective clothing and self-contained breathing apparatus.

FLAMMABLE LIMITS: Non-combustible

SENSITIVITY TO IMPACT: No data available

SENSITIVITY TO STATIC DISCHARGE: No data available

6. ACCIDENTAL RELEASE MEASURES

RELEASE NOTES: Dilute with a large volume of water and hold in a pond or diked area until hydrogen peroxide decomposes. Hydrogen peroxide may be decomposed by adding sodium metabisulfite or sodium sulfite after diluting to about 5%. Dispose according to methods outlined for waste disposal.

Combustible materials exposed to hydrogen peroxide should be immediately submerged in or rinsed with large amounts of water to ensure that all hydrogen peroxide is removed. Residual hydrogen peroxide that is allowed to dry (upon evaporation hydrogen peroxide can concentrate) on organic materials such as paper, fabrics, cotton, leather, wood or other combustibles can cause the material to ignite and result in a fire.

7. HANDLING AND STORAGE

HANDLING: Wear chemical splash-type monogoggles and full-face shield, impervious clothing, such as rubber, PVC, etc., and rubber or neoprene gloves and shoes. Avoid cotton, wool and leather. Avoid excessive heat and contamination. Contamination may cause decomposition and generation of oxygen gas which could result in high pressures and possible container rupture. Hydrogen peroxide should be stored only in vented containers and transferred only in a prescribed manner (see FMC Technical Bulletins). Never return unused hydrogen peroxide to original container, empty drums should be triple rinsed with water before discarding. Utensils used for handling hydrogen peroxide should only be made of glass, stainless steel, aluminum or plastic.

STORAGE: Store drums in cool areas out of direct sunlight and away from combustibles. For bulk storage refer to FMC Technical Bulletins.

COMMENTS: VENTILATION: Provide mechanical general and/or local exhaust ventilation to prevent release of vapor or mist into the work environment.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS

Chemical Name	ACGIH	OSHA	Supplier
Hydrogen Peroxide	1 ppm (TWA)	1 ppm (PEL)	

ENGINEERING CONTROLS: Ventilation should be provided to minimize the release of hydrogen peroxide vapors and mists into the work environment. Spills should be minimized or confined immediately to prevent release into the work area. Remove contaminated clothing immediately and wash before reuse.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Use chemical splash-type monogoggles and a full-face shield made of polycarbonate, acetate, polycarbonate/acetate, PETG or thermoplastic.

RESPIRATORY: If concentrations in excess of 10 ppm are expected, use NIOSH/DHHS approved self-contained breathing apparatus (SCBA), or other approved atmospheric-supplied respirator (ASR) equipment (e.g., a full-face airline respirator (ALR)). DO NOT use any form of air-purifying respirator (APR) or filtering facepiece (AKA dust mask), especially those containing oxidizable sorbants such as activated carbon.

PROTECTIVE CLOTHING: For body protection wear impervious clothing such as an approved splash protective suit made of SBR Rubber, PVC (PVC Outershell w/Polyester Substrate), Gore-Tex (Polyester trilaminate w/Gore-Tex), or a specialized HAZMAT Splash or Protective Suite (Level A, B, or C). For foot protection, wear approved boots made of NBR, PVC, Polyurethane, or neoprene. Overboots made of Latex or PVC, as well as firefighter boots or specialized HAZMAT boots are also permitted. DO NOT wear any form of boot or overboots made of nylon or nylon blends. DO NOT use cotton, wool or leather, as these materials react RAPIDLY with higher concentrations of hydrogen peroxide. Completely submerge hydrogen peroxide contaminated clothing or other materials in water prior to drying. Residual hydrogen peroxide, if allowed to dry on materials such as paper, fabrics, cotton, leather, wood or other combustibles can cause the material to ignite and result in a fire.

GLOVES: For hand protection, wear approved gloves made of nitrile, PVC, or neoprene. DO NOT use cotton, wool or leather for these materials react RAPIDLY with higher concentrations of hydrogen peroxide. Thoroughly rinse the outside of gloves with water prior to removal. Inspect regularly for leaks.

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9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR:	Odorless
APPEARANCE:	Clear, colorless liquid
AUTOIGNITION TEMPERATURE:	Non-combustible
BOILING POINT:	103°C/218°F (20%); 107°C/225°F (31%); 108°C/226°F (35%)
COEFFICIENT OF OIL / WATER:	Not available
DENSITY / WEIGHT PER VOLUME:	Not available
EVAPORATION RATE:	Above 1 (Butyl Acetate = 1)
FLASH POINT:	Non-combustible
FREEZING POINT:	-15°C/6°F (20%); -26°C/-15°F (31%); -33°C/-27°F (35%)
ODOR THRESHOLD:	Not available
OXIDIZING PROPERTIES:	Strong oxidizer
PERCENT VOLATILE:	100%
pH:	(as is) 2.0 to 3.7
SOLUBILITY IN WATER:	(in H_2O % by wt) 100%
SPECIFIC GRAVITY:	1.07 @ 20°C/4°C (20%); 1.11 @ 20°C/4°C (31%); 1.13 @ 20°C/4°C (35%)
VAPOR DENSITY:	(Air = 1): Not available
VAPOR PRESSURE:	28 mmHg @ 30°C (20%); 24 mmHg @ 30°C (31%); 23 mmHg @ 30°C (35%)

COMMENTS:

pH (1% solution) @ 25°C: 5.0 - 6.0

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID:	Excessive heat or contamination could cause product to become unstable.
STABILITY:	Stable (heat and contamination could cause decomposition)
POLYMERIZATION:	Will not occur
INCOMPATIBLE MATERIALS:	Reducing agents, wood, paper and other combustibles, iron and other heavy metals, copper alloys and caustic.
HAZARDOUS DECOMPOSITION PRODUCTS:	Oxygen which supports combustion.

COMMENTS: Materials to Avoid : Dirt, organics, cyanides and combustibles such as wood, paper, oils, etc.

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS: 35% hydrogen peroxide: Extremely irritating/corrosive (rabbit) [FMC Study Number: I83-748]

SKIN EFFECTS: 35% hydrogen peroxide: Mildly irritating after 4-hour exposure (rabbit) [FMC Study Number: I83-747]

DERMAL LD_{50}: 35% hydrogen peroxide: > 2,000 mg/kg (rabbit) [FMC Study Number: I83-746]

ORAL LD_{50}: 35% hydrogen peroxide: 1,193 mg/kg (rat) [FMC Study Number: I83-745]

INHALATION LC_{50}: 50% hydrogen peroxide: > 0.17 mg/l (rat) [FMC Study Number: I89-1080]

TARGET ORGANS: Eyes, nose, throat and lungs

ACUTE EFFECTS FROM OVEREXPOSURE: Extremely irritating/corrosive to eyes and gastrointestinal tract. May cause irreversible tissue damage to the eyes including blindness. Inhalation of mist or vapors may be severely irritating to nose, throat and lungs. May cause skin irritation.

CHRONIC EFFECTS FROM OVEREXPOSURE: The International Agency for Research on Cancer (IARC) has concluded that there is inadequate evidence for carcinogenicity of hydrogen peroxide in humans, but limited evidence in experimental animals (Group 3 - not classifiable as to its carcinogenicity to humans). The American Conference of Governmental Industrial Hygienists (ACGIH) has concluded that hydrogen peroxide is a 'Confirmed Animal Carcinogen with Unknown Relevance to Humans' (A3).

CARCINOGENICITY:

Chemical Name	IARC	NTP	OSHA	Other
Hydrogen Peroxide	Listed	Not listed	Not listed	(ACGIH) Listed (A3, Animal Carcinogen)

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: Channel catfish 96-hour LC_{50} = 37.4 mg/L
Fathead minnow 96-hour LC_{50} = 16.4 mg/L
Daphnia magna 24-hour EC_{50} = 7.7 mg/L
Daphnia pulex 48-hour LC_{50} = 2.4 mg/L
Freshwater snail 96-hour LC_{50} = 17.7 mg/L
For more information refer to ECETOC "Joint Assessment of Commodity Chemicals No. 22, Hydrogen Peroxide." ISSN-0773-6339, January 1993

CHEMICAL FATE INFORMATION: Hydrogen peroxide in the aquatic environment is subject to various reduction or oxidation processes and decomposes into water and oxygen. Hydrogen peroxide half-life in freshwater ranged from 8 hours to 20 days, in air from 10-20 hrs. and in soils from minutes to hours depending upon microbiological activity and metal contaminants.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: An acceptable method of disposal is to dilute with a large amount of water and allow the hydrogen peroxide to decompose followed by discharge into a suitable treatment system in accordance with all regulatory agencies. The appropriate regulatory agencies should be contacted prior to disposal.

14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (DOT)

PROPER SHIPPING NAME:	Hydrogen peroxide, aqueous solutions with not less than 20% but not more than 40% hydrogen peroxide
PRIMARY HAZARD CLASS / DIVISION:	5.1 (Oxidizer)
UN/NA NUMBER:	UN 2014
PACKING GROUP:	II
LABEL(S):	Oxidizer, Corrosive
PLACARD(S):	5.1 (Oxidizer)

ADDITIONAL INFORMATION:

DOT Marking: Hydrogen Peroxide, aqueous solution with not less than 20%, but not more than 40% Hydrogen Peroxide, UN 2014

Hazardous Substance/RQ: Not applicable

49 STCC Number: 4918775

DOT Spec: stainless steel/high purity aluminum cargo tanks and rail cars. UN Spec: HDPE drums. Contact FMC for specific details.

INTERNATIONAL MARITIME DANGEROUS GOODS (IMDG)

PROPER SHIPPING NAME: Hydrogen peroxide, aqueous solutions with not less than 20%, but not more than 60% hydrogen peroxide.

INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO) / INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)

PROPER SHIPPING NAME: Hydrogen peroxide, aqueous solutions with not less than 20%, but not more than 40% hydrogen peroxide (*).

OTHER INFORMATION:

(*) Air regulations permit shipment of Hydrogen Peroxide (20 - 40%) in non-vented containers for Air Cargo Only aircraft, as well as for Passenger and Cargo aircraft. HOWEVER, all FMC Hydrogen Peroxide containers are vented and therefore, air shipments of FMC H_2O_2 is not permitted. IATA air regulations state that venting of packages containing oxidizing substances is not permitted for air transport.

Protect from physical damage. Keep drums in upright position. Drums should not be stacked in transit. Do not store drum on wooden pallets.

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15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355, APPENDIX A):
Not listed

SECTION 311 HAZARD CATEGORIES (40 CFR 370):
Fire Hazard, Immediate (Acute) Health Hazard

SECTION 312 THRESHOLD PLANNING QUANTITY (40 CFR 370):
The Threshold Planning Quantity (TPQ) for this product, if treated as a mixture, is 10,000 lbs; however, this product contains the following ingredients with a TPQ of less than 10,000 lbs.:
None, (conc. <52%)

SECTION 313 REPORTABLE INGREDIENTS (40 CFR 372):
Not listed

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT)

CERCLA DESIGNATION & REPORTABLE QUANTITIES (RQ) (40 CFR 302.4):
Unlisted (Hydrogen Peroxide 20-40%); RQ = 100 lbs.; Ignitability, Corrosivity

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA INVENTORY STATUS (40 CFR 710):
Listed

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)
RCRA IDENTIFICATION OF HAZARDOUS WASTE (40 CFR 261):
Waste Number: D001, D002

CANADA

WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM):

Product Identification Number:	2014
Hazard Classification / Division:	Class C (Oxidizer), Class D, Div. 2, Subdiv. B. (Toxic), Class E (Corrosive)
Ingredient Disclosure List:	Listed

EU EINECS NUMBERS:

008-003-00-9 (hydrogen peroxide)

INTERNATIONAL LISTINGS

Hydrogen peroxide:

China: Listed
Japan (ENCS): (1)-419
Korea: KE-20204
Philippines (PICCS): Listed

---

16. OTHER INFORMATION

HAZARD, RISK AND SAFETY PHRASE DESCRIPTIONS:

Hydrogen Peroxide:

Appendix 4

Proposed Development Plans

ADDRESSES	41-10 Crescent Street
BLOCK	414
LOT	23
MAP	9b
ZONED	M1-5 / R7-3 SPECIAL DIST: LIC
LOT SIZE	150' x 200'
TOTAL LOT AREA	30,000 SF

A USE REGULATION

Allowable	(ZR 22-00 and 42-00)	
Use Group as of right	Use group 1 - 14 and 16 - 17	
Proposed	(ZR 32-14)	
Use groups	Commercial use group 5 Hotels, Transient	

30 ROOMS MINIMUM AS PER MDL ARTICLE 1, SECTION 4.12

208 ROOMS PROVIDED x 5% AS PER NYC BC. 27-292.9

10 ROOMS TO BE ADA COMPLIANT

B BULK REGULATIONS

(ZR 117-521) Bulk regulations applicable to all Residential uses as set forth in Article II, chapter 3

(ZR 117-521) Bulk regulations applicable to all Manufacturing, Community Facility, and Commercial uses as set forth in Article IV, chapter 3

PROPOSED DEVELOPMENT	Allow. FAR	Provided FAR	Max. AREA	Provided AREA
For maximum floor area ratio				
Mixed use buildings (ZR 117-522)	5.0	5.0	150,000 SF	149,638 SF

C ACCESSORY OFF-STREET PARKING AND LOADING BERTH

	REQUIRED	PROVIDED
Commercial (Hotel) 15% OF TOTAL ROOMS (ZR 13-131)	208 X .15=31 cars max	31 cars (indoor parking)
Required Off-Street Loading Berth	1	1

Curb Cut (ZR 13-321)

CRESCENT STREET	NOT ALLOWED	132'-2" SEE PLAN
41ST AVENUE	Beyond 50' of Intersection	19'-2"
24TH STREET	Beyond 50' of Intersection	130'-10"

NOTE: D.O.T. APPROVAL REQUIRED FOR CURB CUT ON CRESCENT STREET.

D YARD REGULATIONS

FRONT: WAIVED AS PER (ZR 117-525)
SIDE: WAIVED AS PER (ZR 117-525)
REAR: AS PER (ZR 117-525) REAR YARD PROVIDED

THE REAR YARD PROVISIONS OF THE DESIGNATED M1 DISTRICT SHALL APPLY, EXCEPT THAT SUCH REAR YARD PROVISIONS SHALL NOT APPLY TO MANUFACTURING OR **COMMERCIAL DEVELOPMENTS** OR ENLARGEMENTS ON THROUGH LOTS.

E STREET WALL AND SET BACKS

BASE HEIGHT (ZR 117-532)	REQUIRED	PROVIDED
CRESCENT STREET	60' MIN. 100' MAX.	62'
41ST AVENUE	60' MIN. 100' MAX.	62'
24TH STREET	60' MIN. 100' MAX.	62'

SET BACK (ZR 117-532)	REQUIRED	PROVIDED
CRESCENT STREET	15' MIN	15'
41ST AVENUE	15' MIN	15'
24TH STREET	15' MIN	15'

STREET WALL (ZR 117-531)	REQUIRED	PROVIDED
CRESCENT STREET	70% MIN	80%
41ST AVENUE	70% MIN	85%
24TH STREET	70% MIN	100%

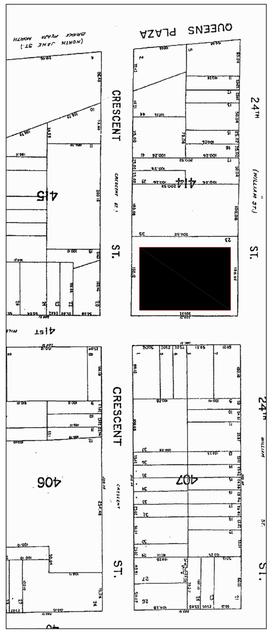
NOTE: DOB RECONSIDERATION FOR STREET WALL DEVIATION FROM ZONING RESOLUTION OBTAINED ON 07/06/2007.

F OPEN SPACE RATIO (OSR)
WAIVED AS PER (ZR 117-523)

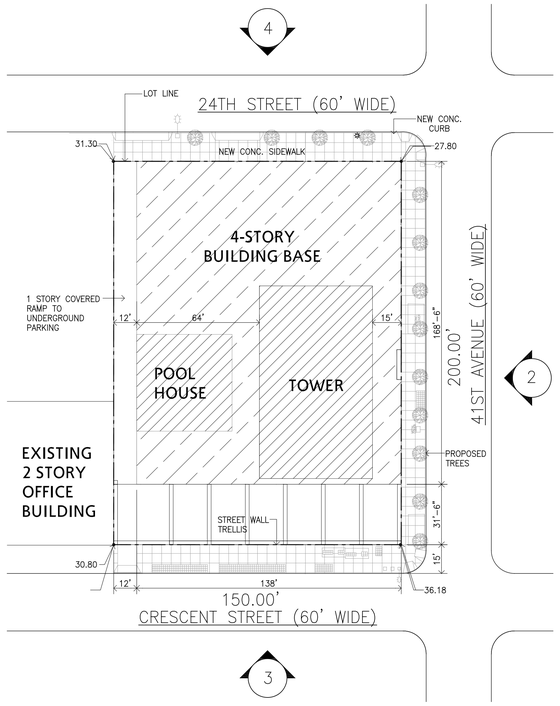
G. PUBLIC PARKING GARAGE...SHALL BE EXEMPT FROM THE DEFINITION OF FLOOR AREA. (117-54 d.)

H. AT LEAST ONE TREE OF 2.5 INCH CALIPER OR MORE SHALL BE PLANTED FOR EACH 25 FEET OF THE ENTIRE STREET FRONTAGE OF THE ZONING LOT, EXCLUDING THE FRONTAGE OCCUPIED BY DRIVEWAYS OR AS REQUIRED BY THE DEPARTMENT OF TRANSPORTATION.

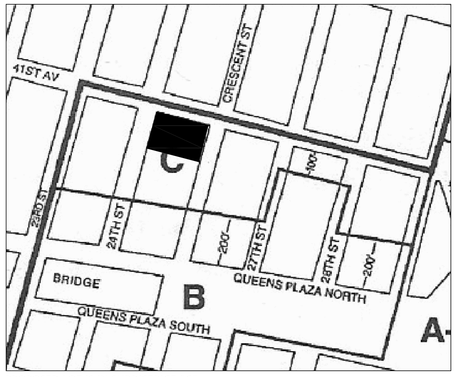
TAX MAP



PLOT PLAN

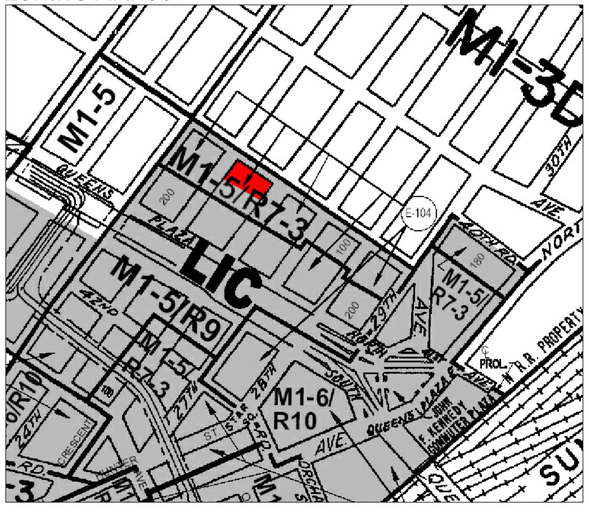


QUEENS PLAZA SUBDISTRICT

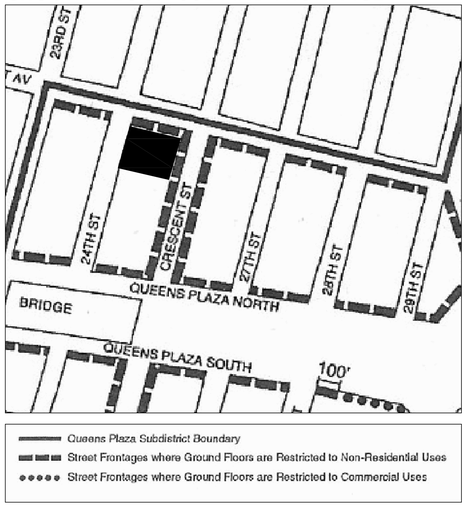


PROPOSED LOT IS IN SUBDISTRICT "C"

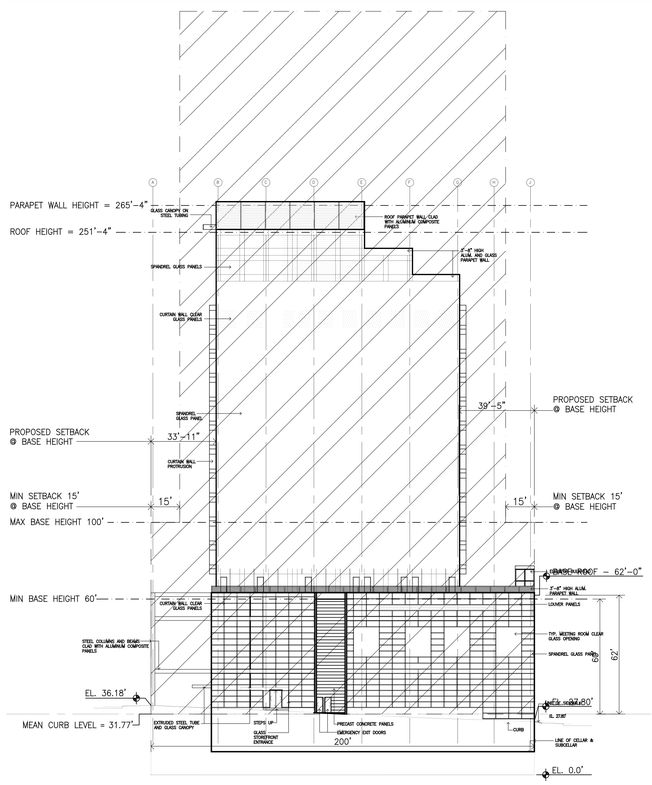
ZONING MAP 9b



GROUND FLOOR USE AND FRONTAGE

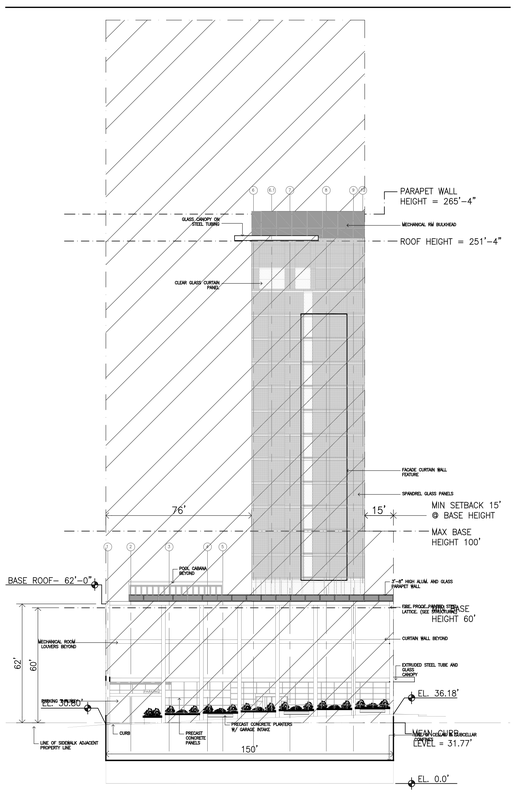


Queens Plaza Subdistrict Boundary
Street Frontages where Ground Floors are Restricted to Non-Residential Uses
Street Frontages where Ground Floors are Restricted to Commercial Uses



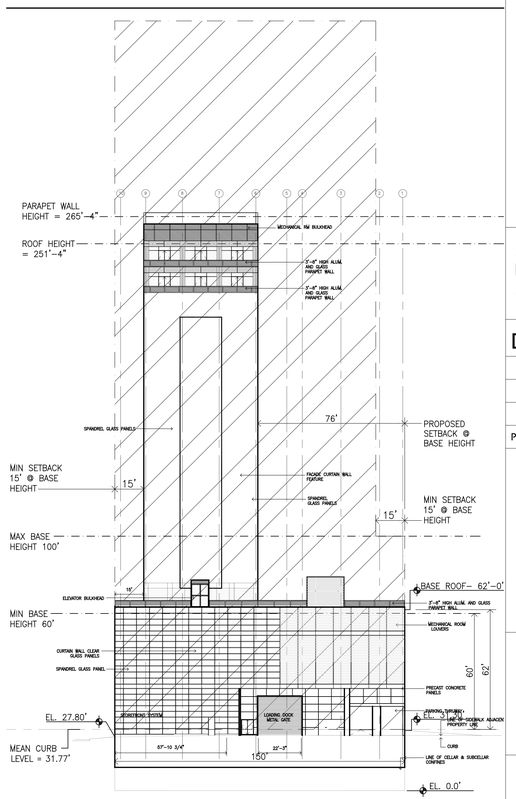
41ST AVENUE ELEVATION

2 SCALE: 1/32" = 1'-0"



CRESCENT STREET ELEVATION

3 SCALE: 1/32" = 1'-0"



24TH STREET ELEVATION

4 SCALE: 1/32" = 1'-0"

FOR ELEVATIONS AT A LARGER SCALE PLEASE SEE A-200 - A-202

MEAN CURB LEVEL CALCULATION

$$\frac{\left[\frac{A+B}{2} \times a\right] + \left[\frac{B+C}{2} \times b\right] + \left[\frac{C+D}{2} \times c\right]}{a+b+c} = MCL$$

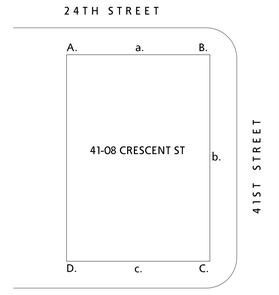
$$\frac{\left[\frac{31.30 + 27.80}{2} \times 28.65\right] + \left[\frac{27.80 + 36.18}{2} \times 31.70\right] + \left[\frac{36.18 + 30.80}{2} \times 33.06\right]}{28.65 + 31.70 + 33.06} = MCL$$

$$\frac{846.6075 + 1{,}014.083 + 1{,}107.1794}{93.41} = MCL$$

31.77' = MCL

ELEVATIONS AS SURVEYED BY "PRECISION SURVEYS". SEE SHEET Z-102.

A.= 31.30' a.= 28.65'
B.= 27.80' b.= 31.70'
C.= 36.18' c.= 33.06'
D.= 30.80'



SPRINKLER, MECHANICAL, AND FIRE ALARM TO BE FILED UNDER SEPARATE APPLICATION

DOB JOB # 410104453

PRELIMINARY DESIGN

Dan Ionescu | Architects
37 WEST 28TH STREET
3RD FLOOR
New York, NY 10001
Tel: 1 212 253 5577
Fax: 1 212 683 1810
www.diarch.net

REGISTERED ARCHITECT DAN G. IONESCU 020424 STATE OF NEW YORK

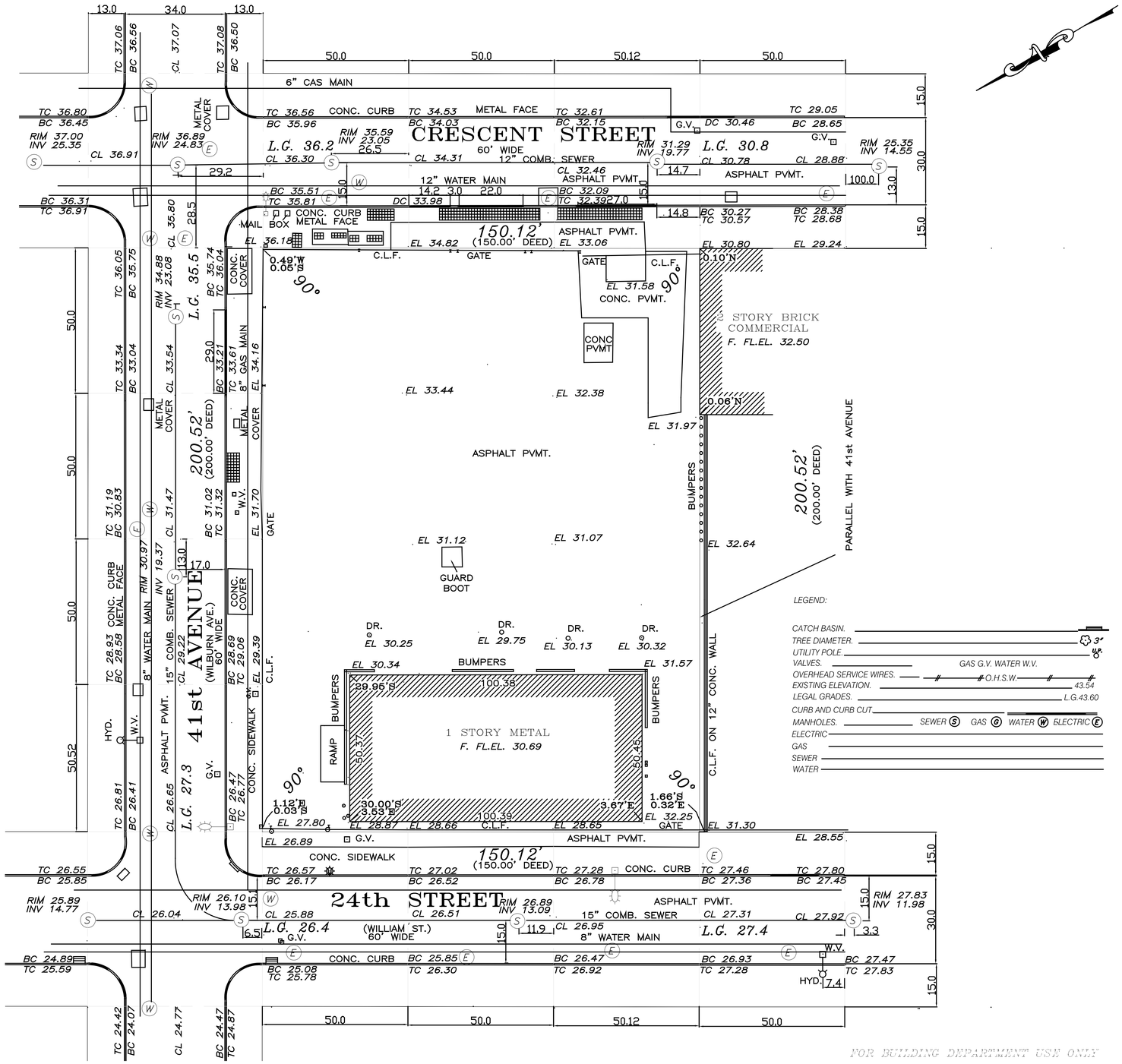
CRESCENT STREET HOTEL

41-08 CRESCENT STREET
LONG ISLAND CITY, NY 11101

ZONING ANALYSIS AND CALCULATIONS

Project#:	02134
Scale:	AS SHOWN
Date:	07.14.2008
Drawn by:	BY
Checked by:	DI

Z-100



LEGEND:

CATCH BASIN.
TREE DIAMETER.
UTILITY POLE.
VALVES. GAS G.V. WATER W.V.
OVERHEAD SERVICE WIRES. O.H.S.W.
EXISTING ELEVATION. 43.54
LEGAL GRADES. L.G.43.60
CURB AND CURB CUT
MANHOLES. SEWER (S) GAS (G) WATER (W) ELECTRIC (E)
ELECTRIC
GAS
SEWER
WATER

NOTE:
UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS SURVEY MAP NOT BEARING THE LAND SURVEYORS BLACK INKED OR EMBOSSED SEAL SHALL NOT BE CONSIDERED TO BE A VALID TRUE COPY.
GUARANTEES OR CERTIFICATIONS INDICATED HEREON SHALL RUN ONLY TO THE PERSON AND/OR PERSONS FOR WHOM THE SURVEY IS PREPARED, AND ONLY ON HIS/HER BEHALF TO THE TITLE COMPANY, GOVERNMENTAL AGENCY AND LENDING INSTITUTION LISTED HEREON, AND TO THE ASSIGNEES OF THE LENDING INSTITUTION GUARANTEES OR CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS.

NOTE:
1. CONSULT WITH THE HIGHWAY DEPARTMENT BEFORE DESIGNING, INSTALLING OR MODIFYING ANY NEW OR EXISTING CURBS, WALKS OR ROADWAYS IN THE STREETS SHOWN HEREON.
2. THE LOCATION OF SUBSURFACE UTILITY INFORMATION SHOULD BE CONSIDERED APPROXIMATE AND MUST BE CONFIRMED BY THE USER OF THIS SURVEY PRIOR TO DESIGN AND/OR CONSTRUCTION. SUBSURFACE UTILITY INFORMATION SHOWN HEREON WAS OBTAINED FROM VARIOUS CITY DEPARTMENTS AND/OR PRIVATE UTILITY COMPANIES. THE SURVEYOR DOES NOT CERTIFY AS TO ITS ACCURACY AND/OR COMPLETENESS AND IS NOT LIABLE FOR ANY DAMAGES ARISING FROM OR INCIDENTIAL TO THE USE OF THIS DATA.
3. THIS IS TO CERTIFY THAT THERE ARE NO VISIBLE STREAMS OR NATURAL COURSES IN THE PROPERTY AS SHOWN ON THE SURVEY.
4. ELEVATIONS REFER TO OFFICIAL DATUM OF THE BOROUGH OF QUEENS WHICH IS 2.725 FEET ABOVE THE U.S. COAST AND GEODETIC SURVEY MEAN SEA LEVEL DATUM AT SANDY HOOK.
5. THE SURVEYOR DID NOT ATTEMPT TO LOCATE ANY SUBSURFACE ENTITIES WITHIN THE PROPERTY. CONTACT ONE CALL OR THE APPLICABLE UTILITY COMPANY TO HAVE ALL SUBSURFACE ENTITIES AND/OR UTILITIES WITHIN THE PROPERTY MARKED OUT (LOCATED) PRIOR TO CONSTRUCTION. THE SURVEYOR DOES NOT CERTIFY AS TO THE ACCURACY AND/OR COMPLETENESS OF ANY SUBSURFACE DATA PROVIDED HEREON AND IS NOT LIABLE FOR ANY DAMAGES ARISING FROM OR INCIDENTIAL TO THE USE OF THIS DATA.
6. THIS SURVEY IS NOT VALID FOR CONVEYANCE.

FOR BUILDING DEPARTMENT USE ONLY

SPRINKLER, MECHANICAL, AND FIRE ALARM TO BE FILED UNDER SEPARATE APPLICATION

DOB JOB # 410104453

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REGISTERED ARCHITECT DAN G. IONESCU STATE OF NEW YORK 020424

TOPOGRAPHIC SURVEY

LOCATED AT:
41–10 Crescent Street L.I.C.
Borough And County Of Queens,
City and State of New York.

TAX DESIG: Block 414, Lot 23

Precision Surveys
TITLE ◦ ARCHITECTURAL ◦ BOUNDARY ◦ CONSTRUCTION
40 FRANKLIN AVE. FRANKLIN SQUARE, N.Y. 11010
Phone (718)472–1571 ◦ (516)488–1608◦ Fax(516)488–2039
CHRISTOPHER M. BUCKLEY
PROFESSIONAL LAND SURVEYOR

CERTIFIED TO: Anthony Pecora
DATE: January 5, 2003
SCALE: 1" = 30'
DRAWN BY MD
JOB No: 6310

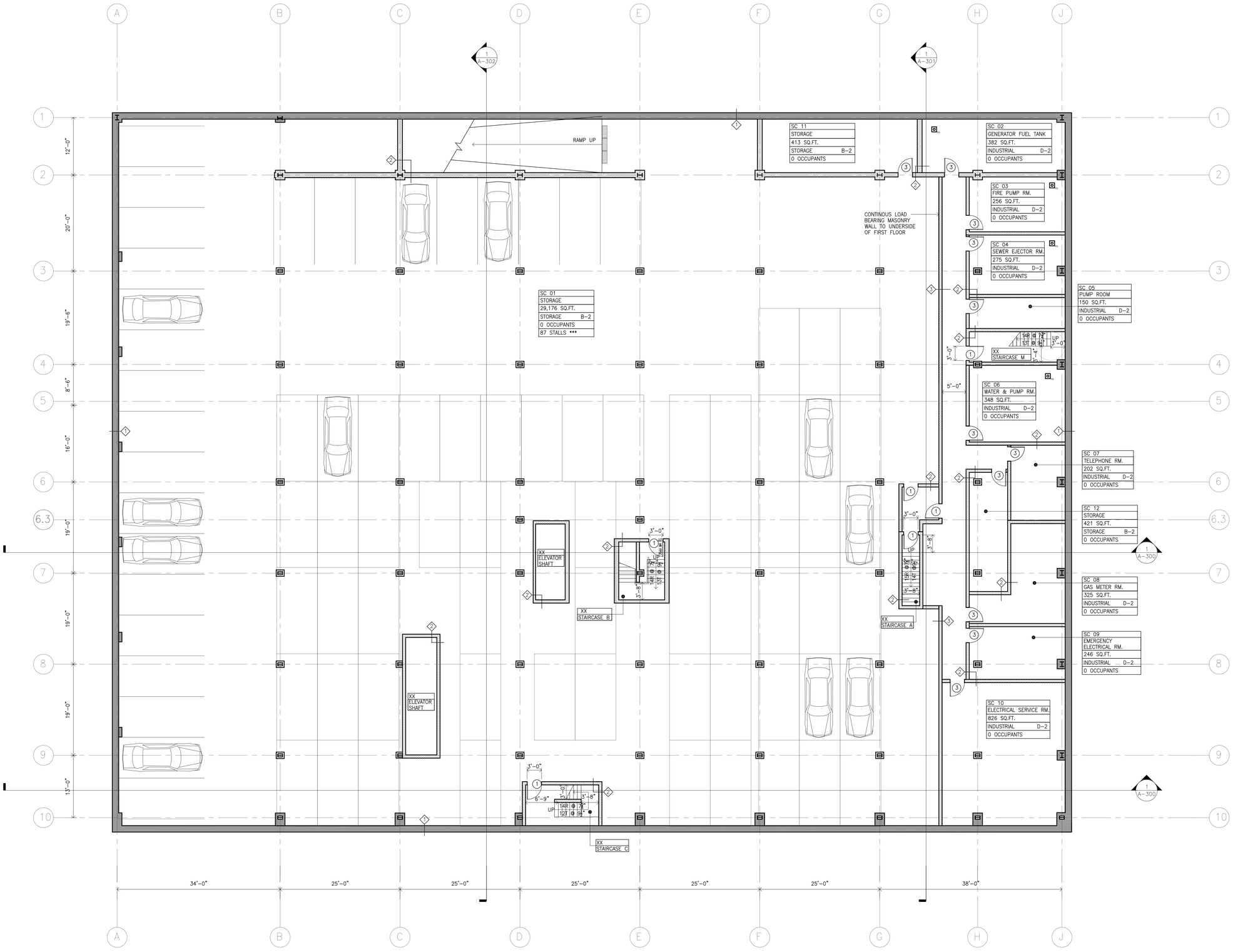
CRESCENT STREET HOTEL

41-08 CRESCENT STREET
LONG ISLAND CITY, NY 11101

SITE SURVEY

Project#:	02134
Scale:	AS SHOWN
Date:	07.14.2008
Drawn by:	BY
Checked by:	DI

Z-102



1 SUB-CELLAR CONSTRUCTION PLAN
Scale: 1/8"=1'-0"

CONSTRUCTION LEGEND

- POURED CONCRETE WALL
- NEW WALL / PARTITION # INDICATES PARTITION TYPE –SEE DETAILS ON SHEET A-23
- 01 KITCHEN — ROOM TAG
- WINDOW NUMBER –SEE WINDOW SCHEDULE ON SHEET A-25
- DOOR TAG W/ DOOR NUMBER –SEE DOOR SCHEDULE ON SHEET A-27
- DENOTES CABINET WORK BY CONTRACTOR. –PROVIDE BLOCKING AS REQUIRED.

SPRINKLER, MECHANICAL, AND FIRE ALARM TO BE FILED UNDER SEPARATE APPLICATION

DOB JOB # 410104453

PRELIMINARY DESIGN

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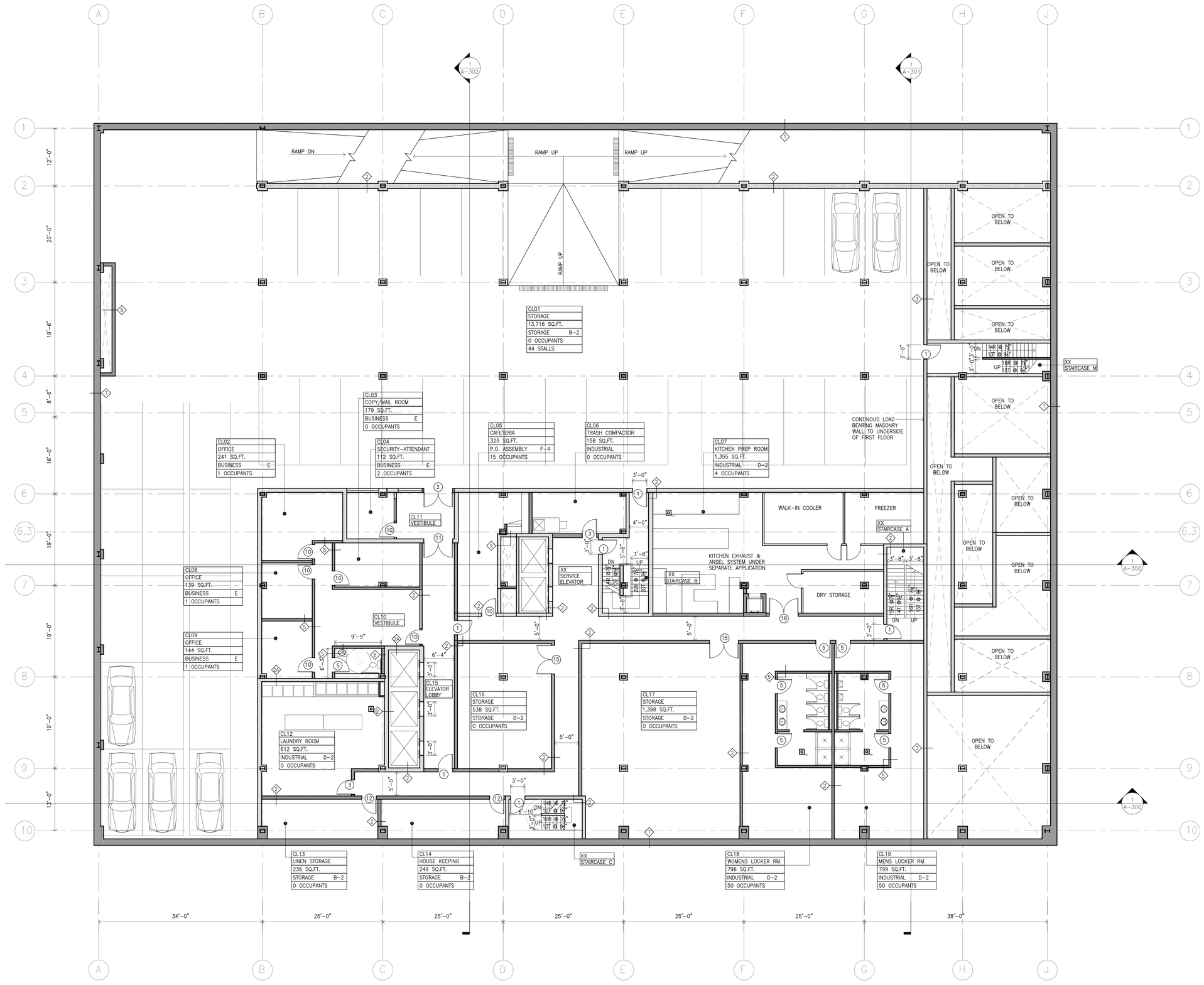
CRESCENT STREET HOTEL

41-08 CRESCENT STREET
LONG ISLAND CITY, NY 11101

SUB-CELLAR FLOOR PLAN

Project#:	02134
Scale:	AS SHOWN
Date:	07.14.2008
Drawn by:	BY
Checked by:	DI

A-100



1 CELLAR CONSTRUCTION PLAN
Scale: 1/8"=1'-0"

CONSTRUCTION LEGEND

- POURED CONCRETE WALL
- NEW WALL / PARTITION # INDICATES PARTITION TYPE –SEE DETAILS ON SHEET A-23
- 01 KITCHEN — ROOM TAG
- WINDOW NUMBER –SEE WINDOW SCHEDULE ON SHEET A-25
- DOOR TAG W/ DOOR NUMBER –SEE DOOR SCHEDULE ON SHEET A-27
- DENOTES CABINET WORK BY CONTRACTOR. –PROVIDE BLOCKING AS REQUIRED.

SPRINKLER, MECHANICAL, AND FIRE ALARM TO BE FILED UNDER SEPARATE APPLICATION

DOB JOB # 410104453

PRELIMINARY DESIGN

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Fax: 1 212 683 1810
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REGISTERED ARCHITECT DAN G. IONESCU 030423 STATE OF NEW YORK

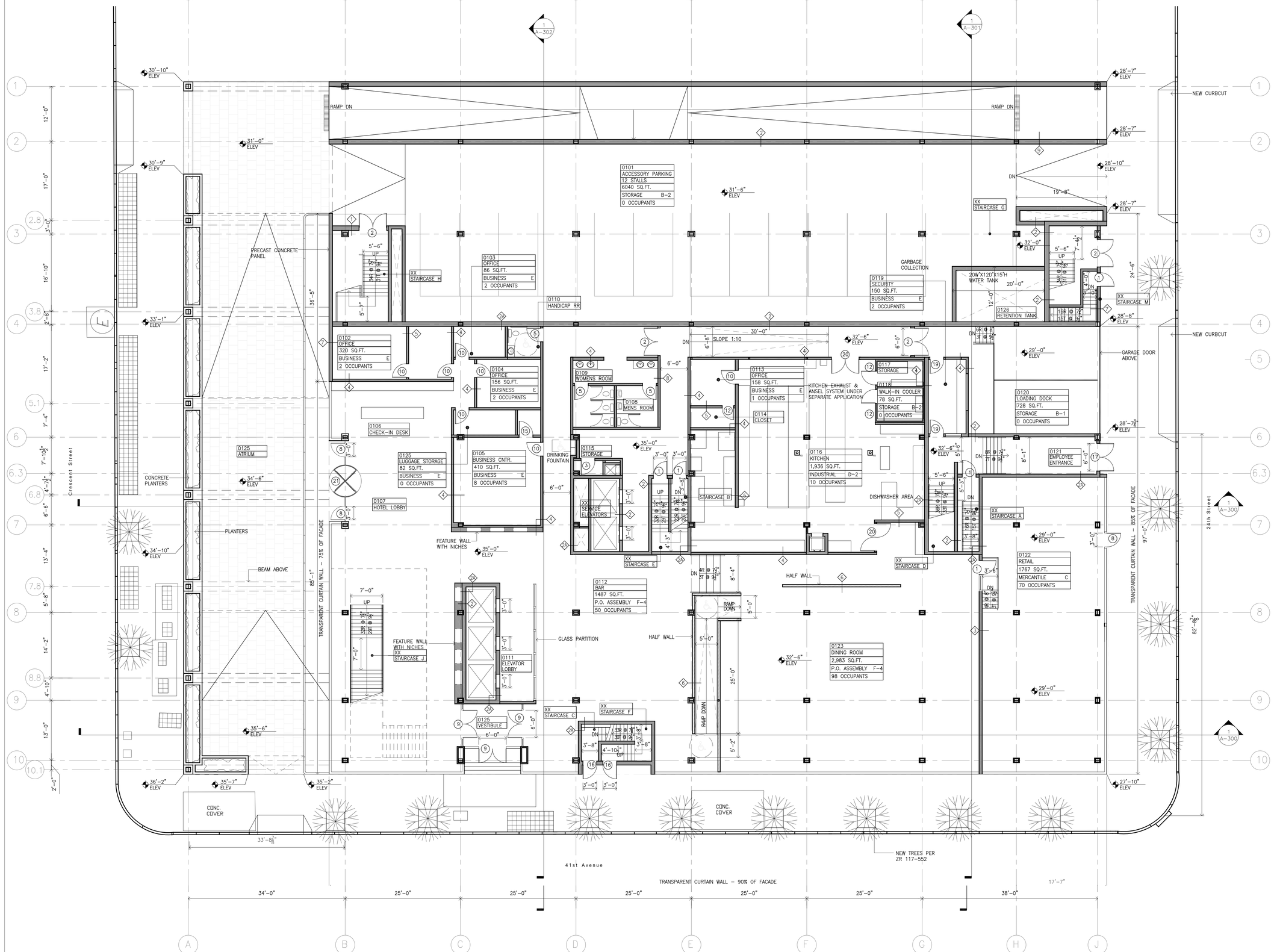
CRESCENT STREET HOTEL

41-08 CRESCENT STREET
LONG ISLAND CITY, NY 11101

CELLAR FLOOR PLAN

Project#:	02134
Scale:	AS SHOWN
Date:	07.14.2008
Drawn by:	BY
Checked by:	DI

A-101



1 FIRST FLOOR CONSTRUCTION PLAN
Scale: 1/8"=1'-0"

CONSTRUCTION LEGEND

- POURED CONCRETE WALL
- NEW WALL / PARTITION # INDICATES PARTITION TYPE –SEE DETAILS ON SHEET A-23
- 01 KITCHEN — ROOM TAG
- (01) — WINDOW NUMBER –SEE WINDOW SCHEDULE ON SHEET A-25
- (#) — DOOR TAG W/ DOOR NUMBER –SEE DOOR SCHEDULE ON SHEET A-27
- DENOTES CABINET WORK BY CONTRACTOR. –PROVIDE BLOCKING AS REQUIRED.

SPRINKLER, MECHANICAL, AND FIRE ALARM TO BE FILED UNDER SEPARATE APPLICATION

DOB JOB # 410104453

PRELIMINARY DESIGN

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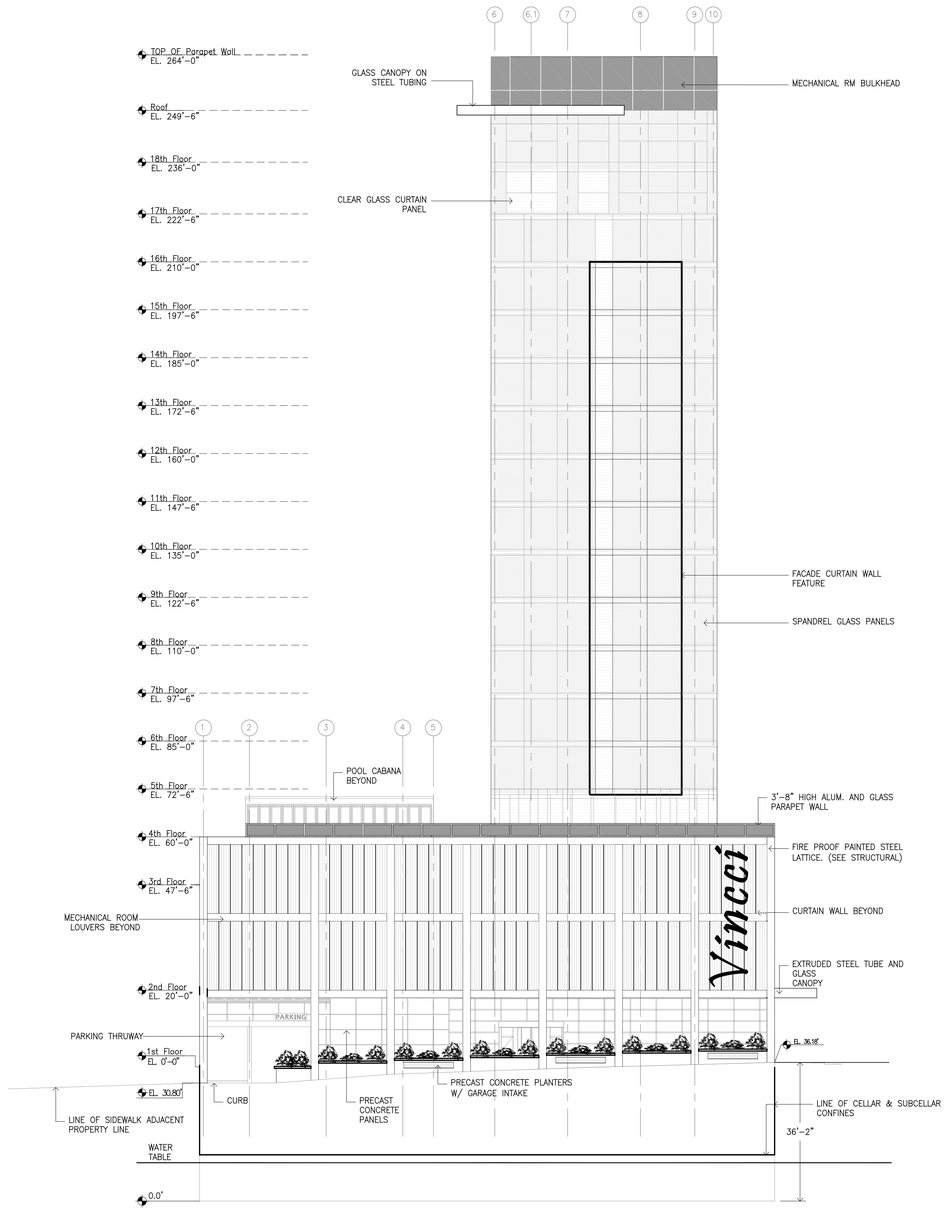
CRESCENT STREET HOTEL

41-08 CRESCENT STREET
LONG ISLAND CITY, NY 11101

1st FLOOR PLAN

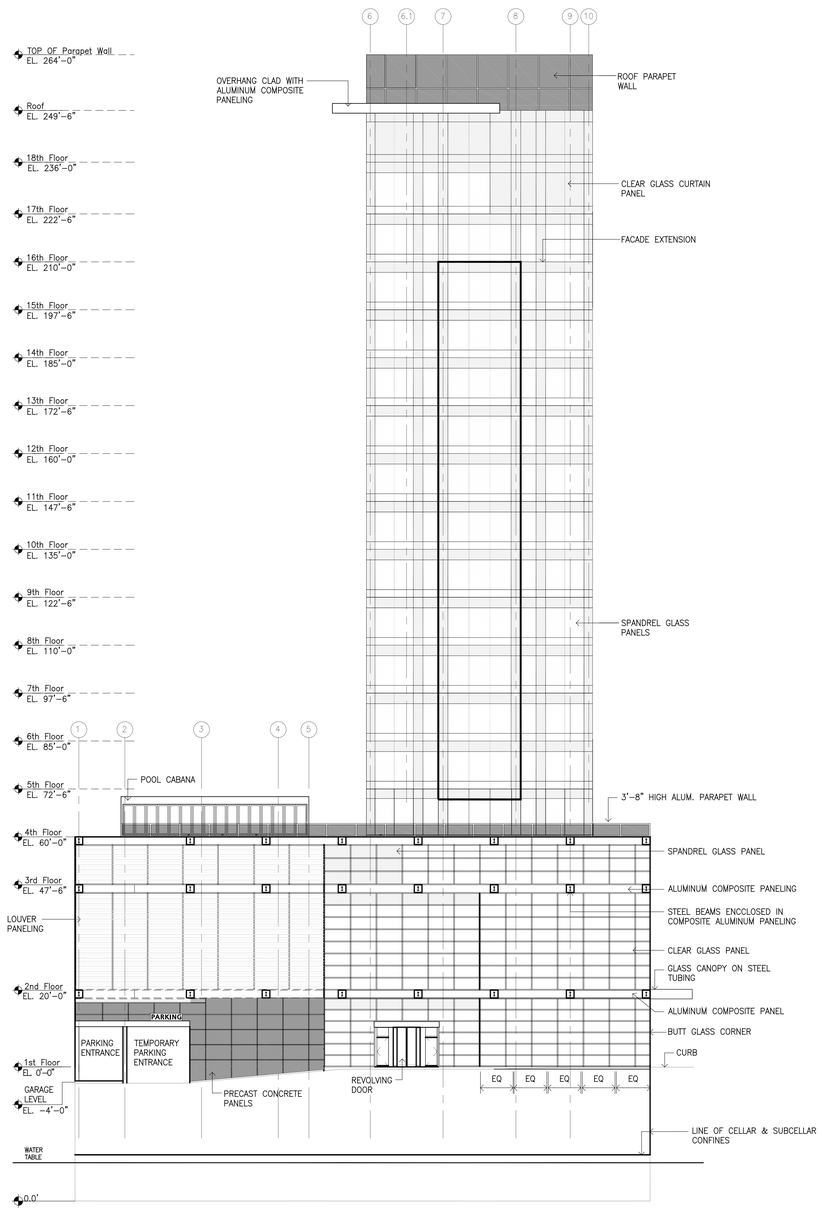
Project#:	02134
Scale:	AS SHOWN
Date:	07.14.2008
Drawn by:	BY
Checked by:	DI

A-102



1 BUILDING ELEVATION (EAST) - CRESCENT STREET - STREET WALL

Scale: 1/16"=1'-0"



2 BUILDING ELEVATION (EAST) - CRESCENT ST. - VIEW BEYOND STEEL FRAME STREET WALL

Scale: 1/16"=1'-0"

SPRINKLER, MECHANICAL, AND FIRE ALARM TO BE FILED UNDER SEPARATE APPLICATION

DOB JOB # 410104453

PRELIMINARY DESIGN

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REGISTERED ARCHITECT DAN G. IONESCU 020424 STATE OF NEW YORK

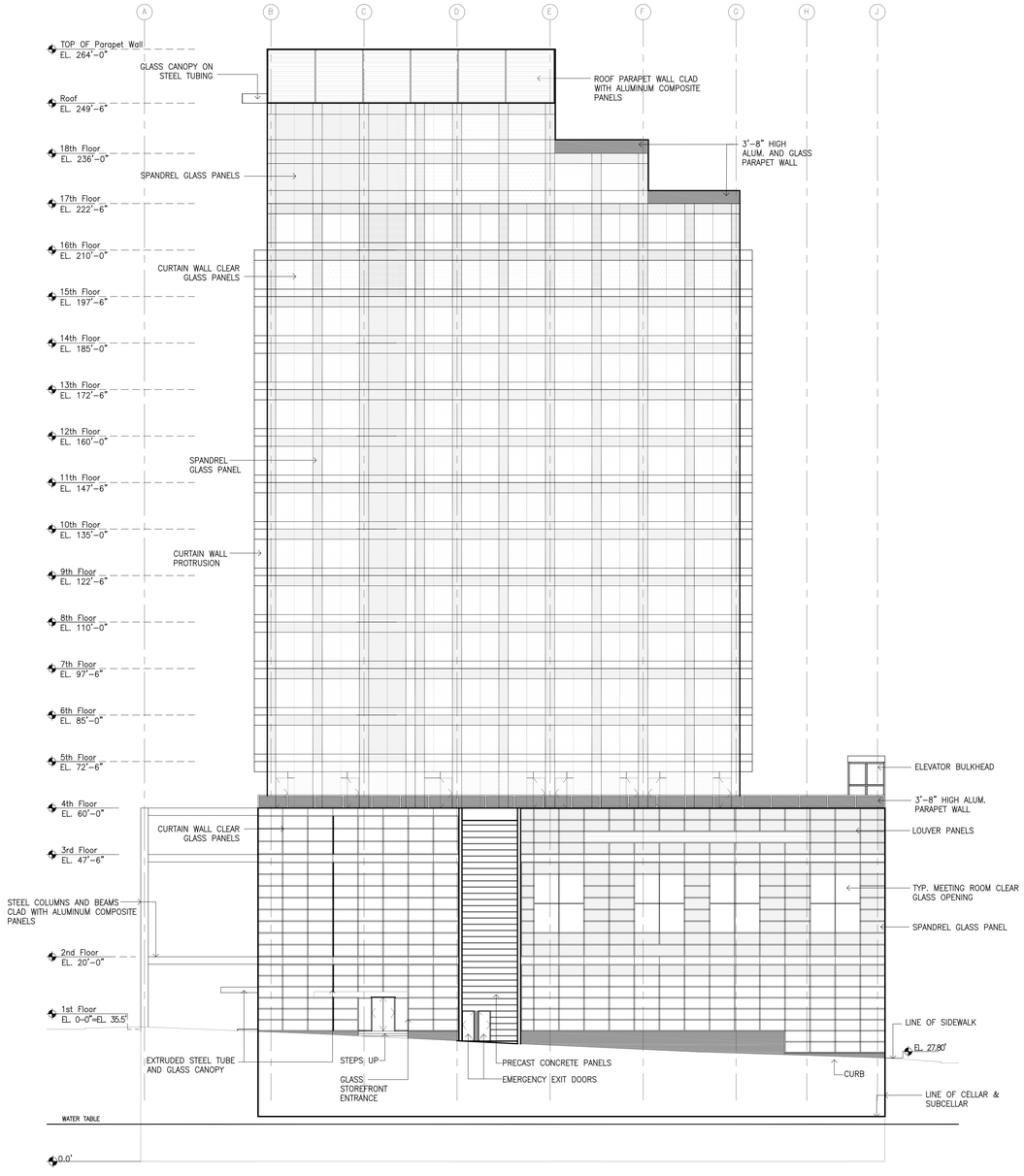
CRESCENT STREET HOTEL

41-08 CRESCENT STREET
LONG ISLAND CITY, NY 11101

BUILDING EXTERIOR ELEVATIONS

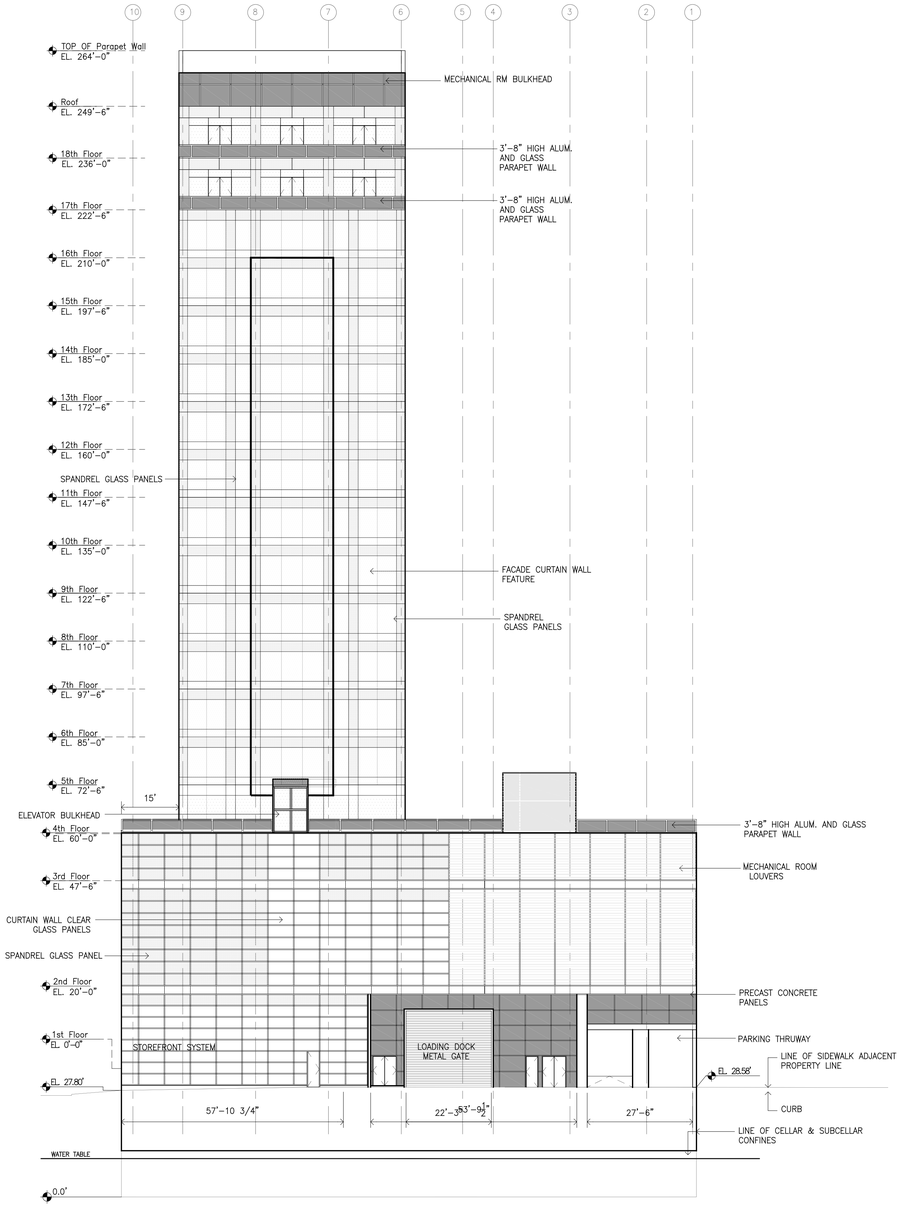
Project#:	02134
Scale:	AS SHOWN
Date:	07.14.2008
Drawn by:	BY
Checked by:	DI

A-300



1 BUILDING ELEVATION (SOUTH) - 41st AVENUE

Scale: 1/16"=1'-0"



2 BUILDING ELEVATION (WEST) - 24TH ST.

Scale: 1/16"=1'-0"

SPRINKLER, MECHANICAL, AND FIRE ALARM TO BE FILED UNDER SEPARATE APPLICATION

DOB JOB # 410104453

PRELIMINARY DESIGN

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REGISTERED ARCHITECT DAN G. IONESCU 020424 STATE OF NEW YORK

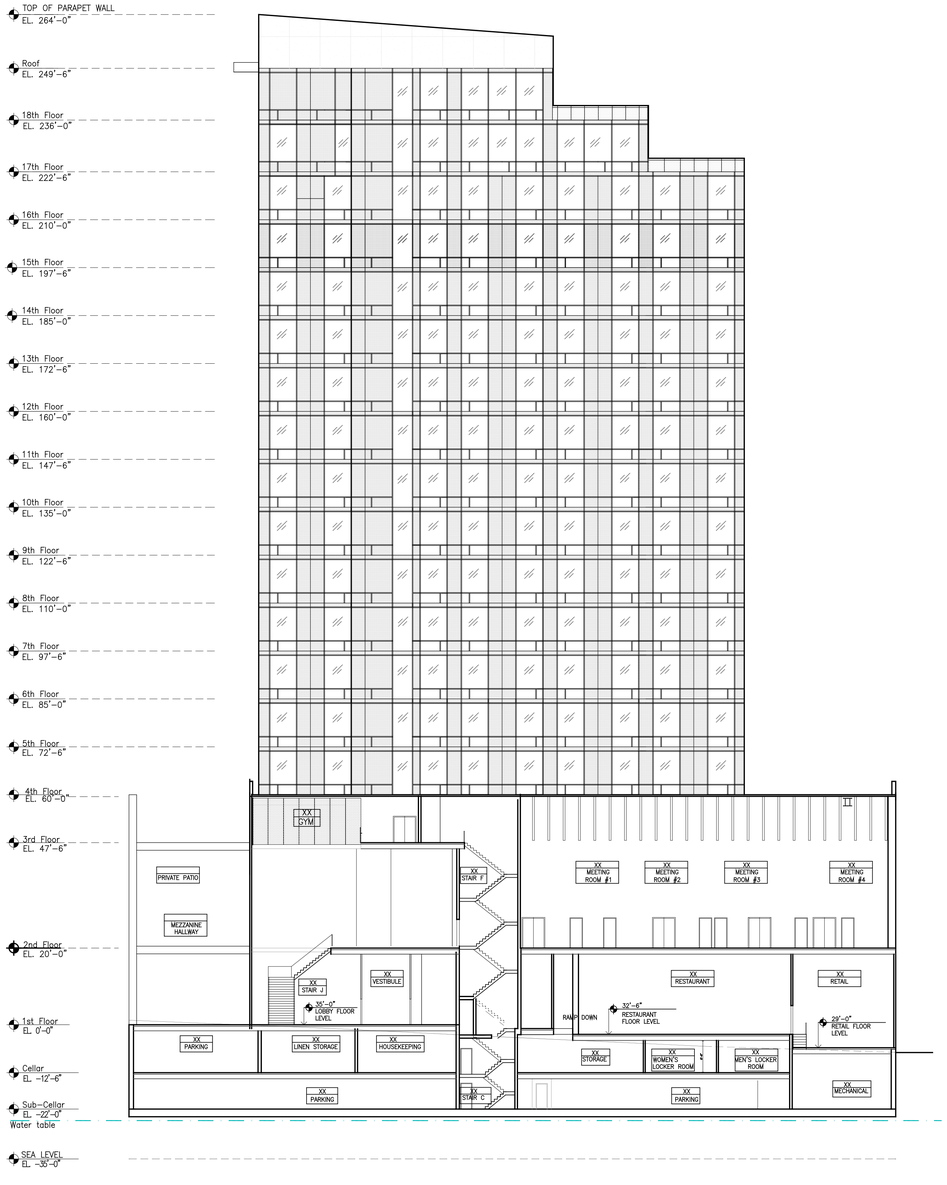
CRESCENT STREET HOTEL

41-08 CRESCENT STREET
LONG ISLAND CITY, NY 11101

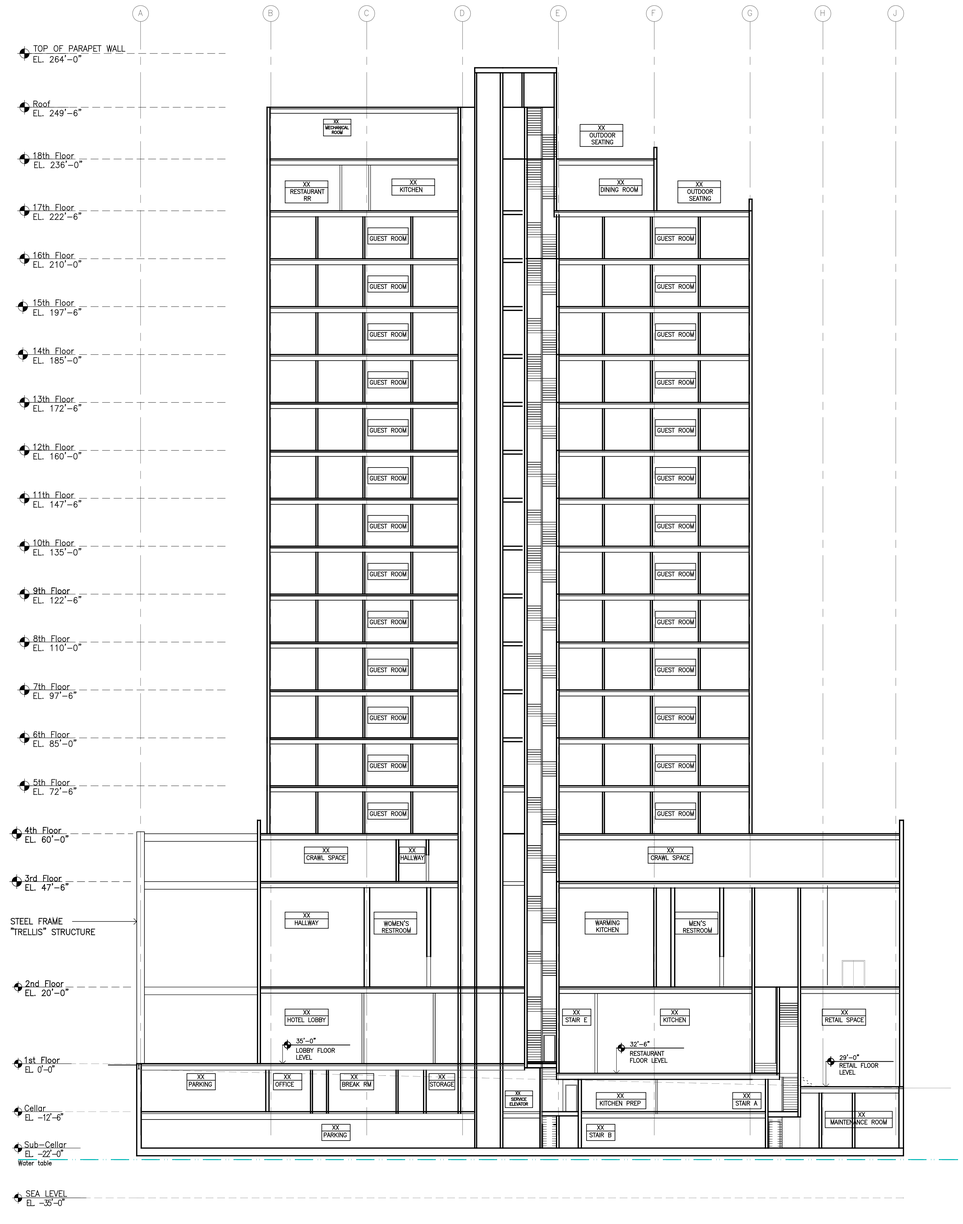
BUILDING EXTERIOR ELEVATIONS

Project#:	02134
Scale:	AS SHOWN
Date:	07.14.2008
Drawn by:	BY
Checked by:	DI

A-301



1 BUILDING SECTION
Scale: 1/16"=1'-0"



2 BUILDING SECTION
Scale: 1/16"=1'-0"

SPRINKLER, MECHANICAL, AND FIRE ALARM TO BE FILED UNDER SEPARATE APPLICATION

DOB JOB # 410104453

PRELIMINARY DESIGN

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REGISTERED ARCHITECT DAN G. IONESCU 020424 STATE OF NEW YORK

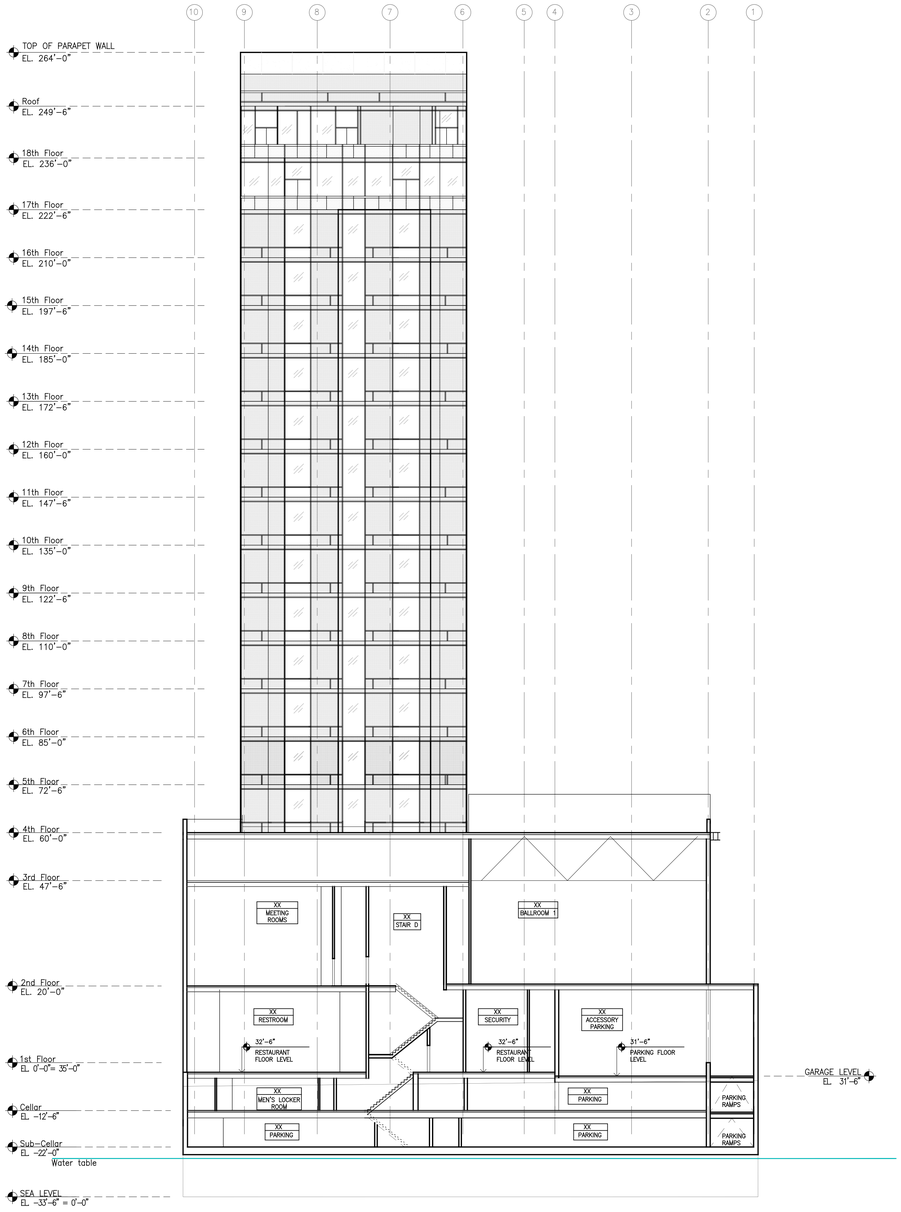
CRESCENT STREET HOTEL

41-08 CRESCENT STREET
LONG ISLAND CITY, NY 11101

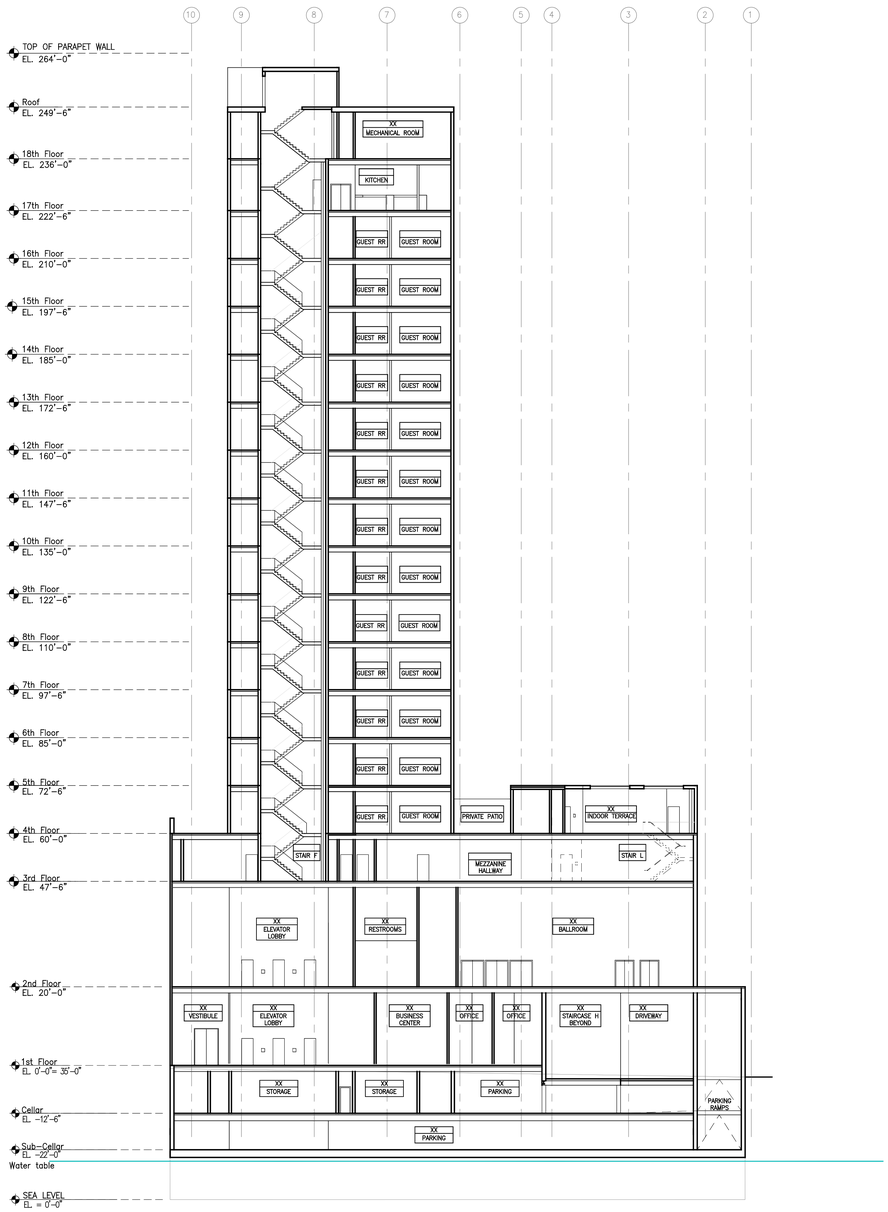
BUILDING SECTIONS

Project#:	02134
Scale:	AS SHOWN
Date:	07.14.2008
Drawn by:	BY
Checked by:	DI

A-400



1 BUILDING SECTION
Scale: 1/16"=1'-0"



2 BUILDING SECTION
Scale: 1/16"=1'-0"

SPRINKLER, MECHANICAL, AND FIRE ALARM TO BE FILED UNDER SEPARATE APPLICATION

DOB JOB # 410104453

PRELIMINARY DESIGN

Dan Ionescu | Architects
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REGISTERED ARCHITECT
DAN G. IONESCU
029042
STATE OF NEW YORK

CRESCENT STREET HOTEL

41-08 CRESCENT STREET
LONG ISLAND CITY, NY 11101

BUILDING SECTIONS

Project#:	02134
Scale:	AS SHOWN
Date:	07.14.2008
Drawn by:	BY
Checked by:	DI

A-401

TRANSIT AUTHORITY SITUATION EXCAVATION PLAN

SCALE : 1/8" = 1'-0"

STRUCTURAL NOTES:

1.) S1 – S6 INDICATES SIDEWALK SETTLEMENT MONITORS TO BE PLACED ON SIDEWALK.

2.) C1 – C6 INDICATES CURB SETTLEMENT MONITORS TO BE PLACED ON CURB.

3.) V1 – V9 INDICATES VELOCITY METERS (SEISMOGRAPHS) TO BE PLACED INSIDE SUBWAY TUNNEL AS PER NYC TRANSIT GENERAL NOTE 10 DWG S-1.4 SEISMOGRAPHS SHOULD BE ATTACHED TO INTERIOR COLUMNS & WALLS (AT MID-HEIGHT OF TUNNEL)

4.) VS1 – VS3 INDICATES VENT SETTLEMENT MONITOR TO BE PLACED ON SUBWAY VENT.

5.) SURVEY TO BE DONE AFTER EACH PROPOSED FLOOR IS COMPLETED.

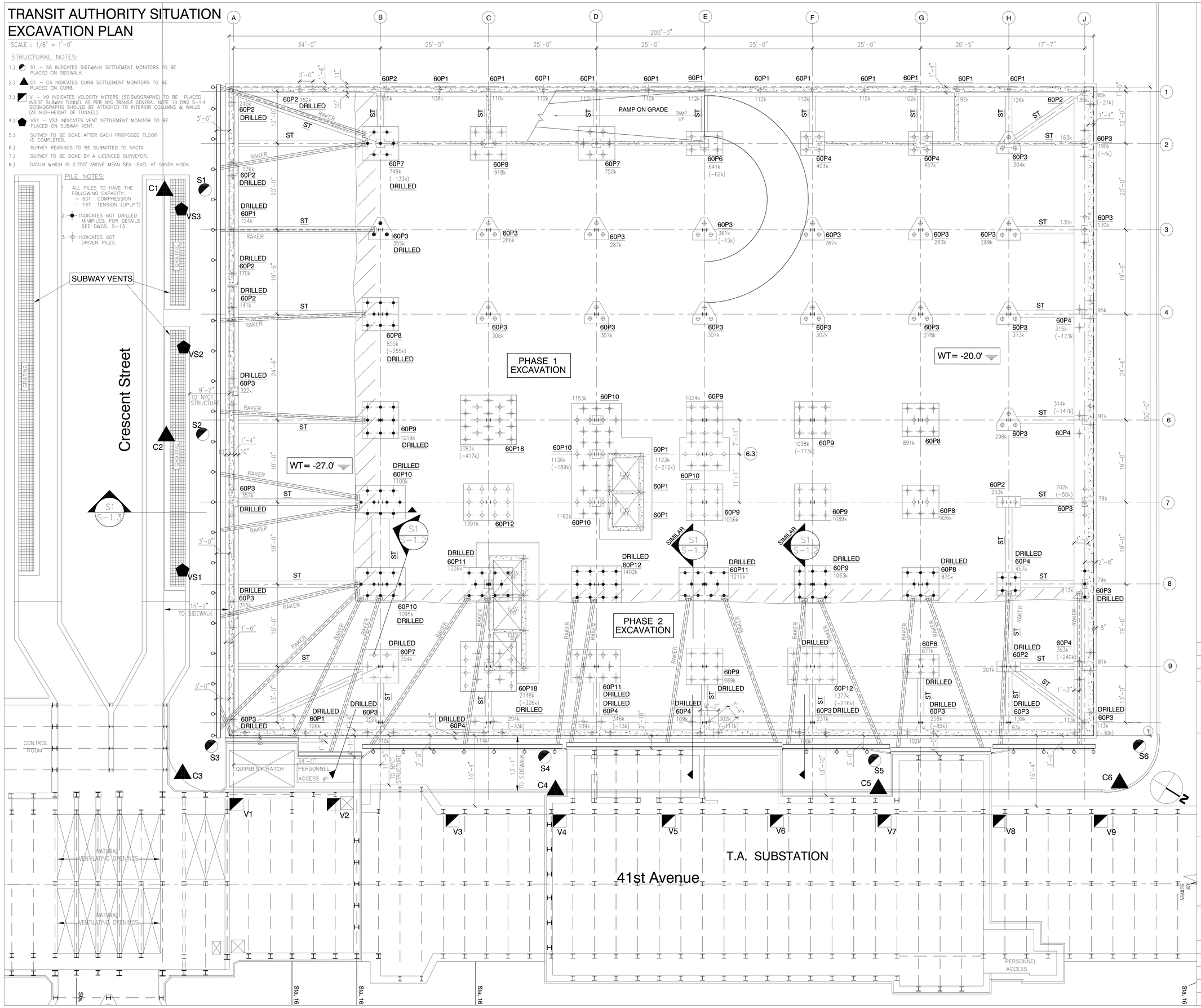
6.) SURVEY READINGS TO BE SUBMITTED TO NYCTA.

7.) SURVEY TO BE DONE BY A LICENCED SURVEYOR.

8.) DATUM WHICH IS 2.750' ABOVE MEAN SEA LEVEL AT SANDY HOOK.

PILE NOTES:

1. ALL PILES TO HAVE THE FOLLOWING CAPACITY:
   – 60T COMPRESSION
   – 15T TENSION (UPLIFT)
2. INDICATES 60T DRILLED MINIPILES; FOR DETAILS SEE DWGS. S-1.3
3. INDICATES 60T DRIVEN PILES.



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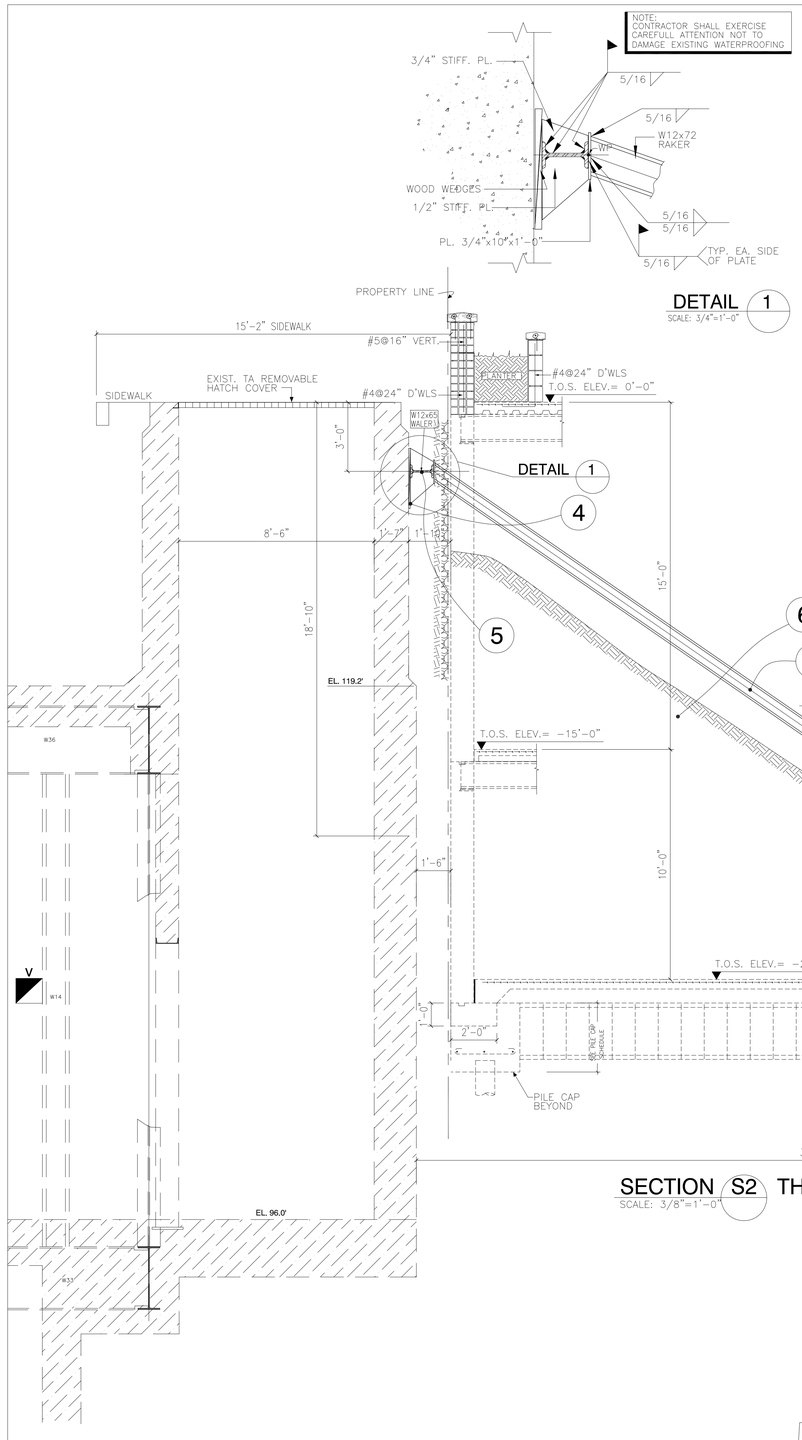
LONG ISLAND CITY, NY 11101

SUB-CELLAR & FOUNDATION FLOOR PLAN W/NYCT EXIST.CON.

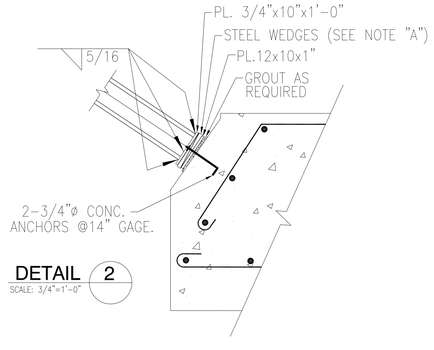
Project#:	02134
Scale:	AS SHOWN
Date:	01.14.2008
Drawn by:	CL
Checked by:	NW

S-1.1



DETAIL 1
SCALE: 3/4"=1'-0"

SECTION S2 THRU SUBWAY VENT
SCALE: 3/8"=1'-0"



DETAIL 2
SCALE: 3/4"=1'-0"

STRUCTURAL NOTES:

1.) ◪ V INDICATES VELOCITY METERS (SEISMOGRAPHS) TO BE PLACED INSIDE SUBWAY TUNNEL AS PER NYC TRANSIT GENERAL NOTE 10 DWG S-1.4 SEISMOGRAPHS SHOULD BE ATTACHED TO INTERIOR COLUMNS & WALLS (AT MID-HEIGHT OF TUNNEL)

GENERAL NOTES

GENERAL:

1. ELEVATIONS ARE REFERENCED TO THE MANHATTAN HIGHWAY DATUM.
2. BASE PLAN IS COMPILED FROM SITE SURVEY DRAWING DATED 12-30-04 PREPARED BY RAMZAN ALI FOUNDATION DWGS S-2 DATED 06-2-05, PREPARED BY WEXLER & ASSOCIATES.
3. DRAWING S-13 SHOWS EXISTING T.A. VENTILATORS IMMEDIATELY ALONG THE NEW YORK CITY TRANSIT (NYCT) STRUCTURE ONLY. THE REMAINDER OF THE DESIGN IS TO BE MADE BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR REVIEW.
4. CONTRACTOR SHALL PREPARE AND SUBMIT SITE SAFETY AND LOGISTICS PLAN TO NYCT FOR APPROVAL PRIOR TO START OF WORK.
5. CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS AND CHECK FOR CLEARANCES PRIOR TO START OF WORK.
6. ACTUAL FIELD CONDITIONS MAY REQUIRE MODIFICATIONS TO THE CONSTRUCTION DETAILS. CONFLICTS BETWEEN ACTUAL CONDITIONS AND DETAILS SHOWN SHALL BE BROUGHT TO THE ENGINEERS ATTENTION FOR RESOLUTION.
7. A SUGGESTED CONSTRUCTION PROCEDURE IS GIVEN. ALTERNATIVE METHODS AND PROCEDURES MAY BE ADOPTED ONLY TO THE EXTENT APPROVED BY THE OWNER AND NYCT.
8. CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT OF EXISTING UTILITIES AS REQUIRED. DESIGN OF UTILITY SUPPORT SHALL BE BY CONTRACTOR.

MATERIALS:

9. ALL STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-36.
10. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS, USING E-70 ELECTRODES, AND SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.1.
11. SURVEY MONITORING OF SUBWAY AT THE FOLLOWING LOCATIONS:
    1. SUBWAY VENT STRUCTURE (GRATING).
    2. SIDEWALK CURB.

A. THE STRUCTURE SHALL BE OPTICALLY MONITORED FOR VERTICAL AND HORIZONTAL MOVEMENTS. PROVIDE OPTICAL MONITORING POINTS AT LOCATIONS SHOWN ON THE DRAWINGS. BENCHMARKS SHALL BE LOCATED A MINIMUM OF 100 FEET AWAY FROM THE CLOSEST POINT OF THE CONSTRUCTION SITE.

B. DURING EXCAVATION, READINGS SHALL BE TAKEN DAILY. THEREAFTER, READINGS SHALL BE TAKEN TWICE WEEKLY. READINGS MAY BE DISCONTINUED AFTER THE FIRST FLOOR SLAB IS CAST.

C. A WRITTEN COPY SHALL BE PROVIDED TO THE ENGINEER WITHIN 24 HOURS OF THE READING.

D. IF THE TOTAL VERTICAL OR HORIZONTAL MOVEMENT AT ANY POINT EXCEEDS 1/8" INCH, NOTIFY THE ENGINEER AND NEW YORK CITY TRANSIT. IF THE MOVEMENT EXCEEDES 1/4" INCH, STOP WORK AND IMMEDIATELY REPORT TO THE NEW YORK CITY TRANSIT AND THE ENGINEER.

PILE NOTES:

1. PILE CAPACITY IS AS FOLLOWS (ULTIMATE):
   COMPRESSIVE (DOWN) 60 TONS
   TENSILE (UP) 15 TONS.
2. AS PER BORINGS PERFORMED BY D.K. DRILLING OF N.Y., DATED 02/25/06-03/04/06 ROCK HAS BEEN FOUND AT DEPTHS BETWEEN 42' AND 51'
3. NYCT INFLUENCE AREA PILES ARE 10ø A572 GRADE 50 STEEL PIPES FILLED WITH 6000 psi CONCRETE, REINFORCED WITH 6#8 BARS CONT. AND #4 SPIRAL
4. NYCT INFLUENCE AREA PILES WILL BE EMBEDDED INTO ROCK FOR A MIN. OF 6' TO OBTAIN THE MAX. COMPRESSIVE AND TENSILE CAPACITY
5. FOR PILE DETAILS SEE DWG S-13

CONSTRUCTION PROCEDURE:

1. LOCATE ALL EXISTING UTILITIES. NOTIFY ENGINEER IF ANY UTILITY CONFLICTS WITH THE PROPOSED RAKER AND WALER LOCATIONS.
2. ESTABLISH VISUAL SURVEY MONITORING POINTS AT LOCATIONS SHOWN IN THE PLAN. PERFORM SURVEY READINGS AS INDICATED IN THE GENERAL NOTES.
3. EXCAVATE TO FINAL CELLAR ELEVATION FOR THE AREA SHOWN ON PLAN (S-03), INSTALL STRUCTURAL DRILLED PILES, PILE CAPS, STRUCTUAL SLAB ON GRADE AND FOUNDATION WALLS FOR THE MARKED AREA; FOLLOW PILE INSTALLATION PROCEDURES.
4. DROP INTERIOR LEVEL TO ELEVATION -3.00' AND EXCAVATE SOIL AT THE NYCT STRUCTURES, LEAVING IT BERMED TO THE EXCAVATED AREA.
5. INSTALL WALERS AND RAKERS WHERE SHOWN. PRE-LOAD RAKERS:
   A. AT EACH WEDGE LOCATION, TACK ONE WEDGE TO BEARING PLATE
   B. DRIVE THE OTHER WEDGE AS FAR AS POSSIBLE USING A SLEDGE HAMMER
   C. TACK WELD WEDGE TO EACH OTHER AND TO EACH END PLATE
6. REMOVE SOIL FOR THE REST OF THE AREA; COMPLETE EXCAVATION.
7. BUILD OUTSIDE WALLS, CELLAR, AND 1st. FLOOR, LEAVE RAKERS EMBEDDED IN CONCRETE WALLS.
8. REMOVE BRACING, PER APPROVAL FROM ENGINEER.

ISSUED FOR TA 6/20/08

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LONG ISLAND CITY, NY 11101

- NYCT - SECTIONS
EXIST. CONDITIONS

Project#:	02134
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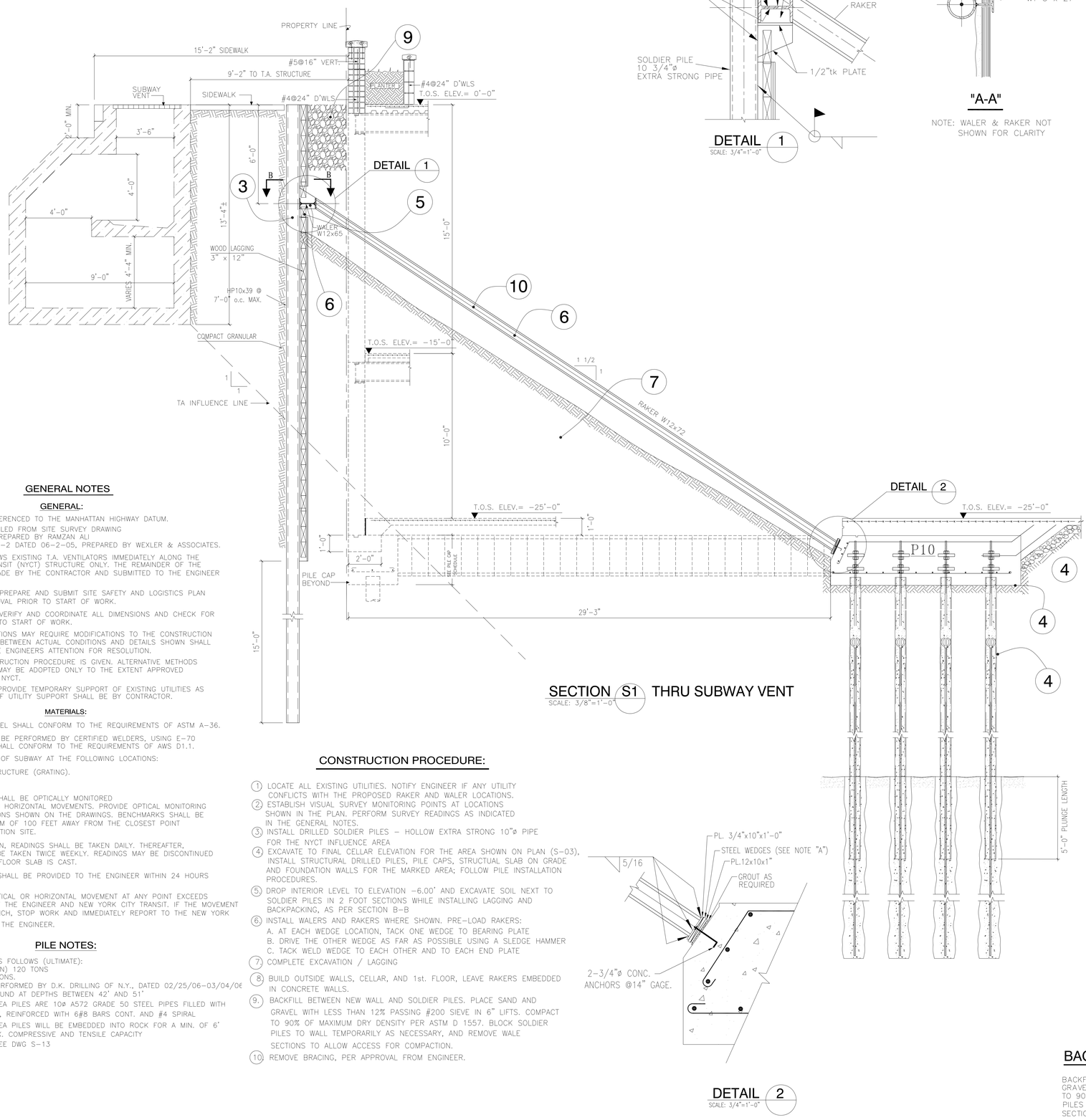
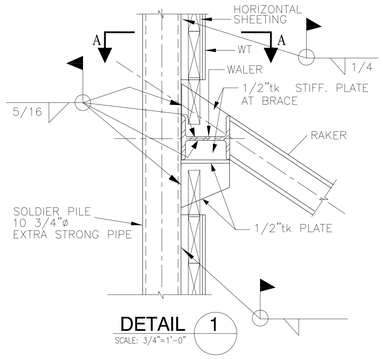
Drawn by:	CL
Checked by:	NW

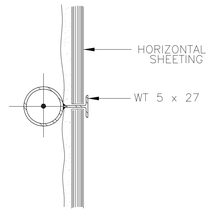
S-1.2



SECTION S1 THRU SUBWAY VENT
SCALE: 3/8"=1'-0"

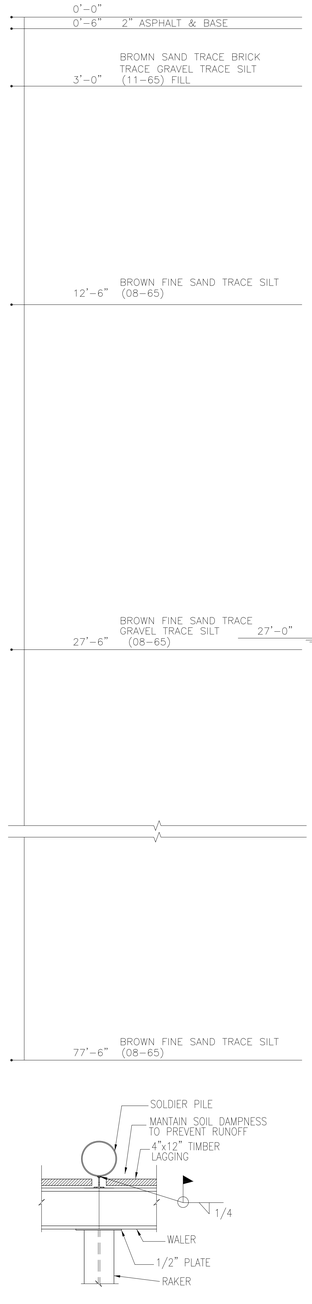


DETAIL 1
SCALE: 3/4"=1'-0"



"A-A"

NOTE: WALER & RAKER NOT SHOWN FOR CLARITY



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5. CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS AND CHECK FOR CLEARANCES PRIOR TO START OF WORK.
6. ACTUAL FIELD CONDITIONS MAY REQUIRE MODIFICATIONS TO THE CONSTRUCTION DETAILS. CONFLICTS BETWEEN ACTUAL CONDITIONS AND DETAILS SHOWN SHALL BE BROUGHT TO THE ENGINEERS ATTENTION FOR RESOLUTION.
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MATERIALS:

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11. SURVEY MONITORING OF SUBWAY AT THE FOLLOWING LOCATIONS:
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    2. SIDEWALK CURB.

A. THE STRUCTURE SHALL BE OPTICALLY MONITORED FOR VERTICAL AND HORIZONTAL MOVEMENTS. PROVIDE OPTICAL MONITORING POINTS AT LOCATIONS SHOWN ON THE DRAWINGS. BENCHMARKS SHALL BE LOCATED A MINIMUM OF 100 FEET AWAY FROM THE CLOSEST POINT OF THE CONSTRUCTION SITE.

B. DURING EXCAVATION, READINGS SHALL BE TAKEN DAILY. THEREAFTER, READINGS SHALL BE TAKEN TWICE WEEKLY. READINGS MAY BE DISCONTINUED AFTER THE FIRST FLOOR SLAB IS CAST.

C. A WRITTEN COPY SHALL BE PROVIDED TO THE ENGINEER WITHIN 24 HOURS OF THE READING.

D. IF THE TOTAL VERTICAL OR HORIZONTAL MOVEMENT AT ANY POINT EXCEEDS 1/8" INCH, NOTIFY THE ENGINEER AND NEW YORK CITY TRANSIT. IF THE MOVEMENT EXCEEDES 1/4" INCH, STOP WORK AND IMMEDIATELY REPORT TO THE NEW YORK CITY TRANSIT AND THE ENGINEER.

PILE NOTES:

1. PILE CAPACITY IS AS FOLLOWS (ULTIMATE):
   COMPRESSIVE (DOWN) 120 TONS
   TENSILE (UP) 25 TONS.
2. AS PER BORINGS PERFORMED BY D.K. DRILLING OF N.Y., DATED 02/25/06-03/04/06 ROCK HAS BEEN FOUND AT DEPTHS BETWEEN 42' AND 51'
3. NYCT INFLUENCE AREA PILES ARE 10ø A572 GRADE 50 STEEL PIPES FILLED WITH 6000 psi CONCRETE, REINFORCED WITH 6#8 BARS CONT. AND #4 SPIRAL
4. NYCT INFLUENCE AREA PILES WILL BE EMBEDDED INTO ROCK FOR A MIN. OF 6' TO OBTAIN THE MAX. COMPRESSIVE AND TENSILE CAPACITY
5. FOR PILE DETAILS SEE DWG S-13

CONSTRUCTION PROCEDURE:

1. LOCATE ALL EXISTING UTILITIES. NOTIFY ENGINEER IF ANY UTILITY CONFLICTS WITH THE PROPOSED RAKER AND WALER LOCATIONS.
2. ESTABLISH VISUAL SURVEY MONITORING POINTS AT LOCATIONS SHOWN IN THE PLAN. PERFORM SURVEY READINGS AS INDICATED IN THE GENERAL NOTES.
3. INSTALL DRILLED SOLDIER PILES – HOLLOW EXTRA STRONG 10"ø PIPE FOR THE NYCT INFLUENCE AREA
4. EXCAVATE TO FINAL CELLAR ELEVATION FOR THE AREA SHOWN ON PLAN (S-03), INSTALL STRUCTURAL DRILLED PILES, PILE CAPS, STRUCTUAL SLAB ON GRADE AND FOUNDATION WALLS FOR THE MARKED AREA; FOLLOW PILE INSTALLATION PROCEDURES.
5. DROP INTERIOR LEVEL TO ELEVATION -6.00' AND EXCAVATE SOIL NEXT TO SOLDIER PILES IN 2 FOOT SECTIONS WHILE INSTALLING LAGGING AND BACKPACKING, AS PER SECTION B-B
6. INSTALL WALERS AND RAKERS WHERE SHOWN. PRE-LOAD RAKERS:
   A. AT EACH WEDGE LOCATION, TACK ONE WEDGE TO BEARING PLATE
   B. DRIVE THE OTHER WEDGE AS FAR AS POSSIBLE USING A SLEDGE HAMMER
   C. TACK WELD WEDGE TO EACH OTHER AND TO EACH END PLATE
7. COMPLETE EXCAVATION / LAGGING
8. BUILD OUTSIDE WALLS, CELLAR, AND 1st. FLOOR, LEAVE RAKERS EMBEDDED IN CONCRETE WALLS.
9. BACKFILL BETWEEN NEW WALL AND SOLDIER PILES. PLACE SAND AND GRAVEL WITH LESS THAN 12% PASSING #200 SIEVE IN 6" LIFTS. COMPACT TO 90% OF MAXIMUM DRY DENSITY PER ASTM D 1557. BLOCK SOLDIER PILES TO WALL TEMPORARILY AS NECESSARY, AND REMOVE WALE SECTIONS TO ALLOW ACCESS FOR COMPACTION.
10. REMOVE BRACING, PER APPROVAL FROM ENGINEER.

DETAIL 2
SCALE: 3/4"=1'-0"

"B-B"

BACKPACKING NOTE:

BACKFILL BETWEEN NEW WALL AND SOLDIER PILES. PLACE SAND AND GRAVEL WITH LESS THAN 12% PASSING #200 SIEVE IN 6" LIFTS. COMPACT TO 90% OF MAXIMUM DRY DENSITY PER ASTM D 1557. BLOCK SOLDIER PILES TO WALL TEMPORARILY AS NECESSARY, AND REMOVE WALE SECTIONS TO ALLOW ACCESS FOR COMPACTION.

ISSUED FOR TA 6/20/08

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CRESCENT STREET HOTEL

41-10 CRESCENT STREET
LONG ISLAND CITY, NY 11101

- NYCT - SECTIONS
EXIST. CONDITIONS

Project#:	02134
Scale:	AS SHOWN
Date:	01.14.2008
Drawn by:	CL
Checked by:	NW

S-1.3

SUB-CELLAR & FOUNDATION PLAN

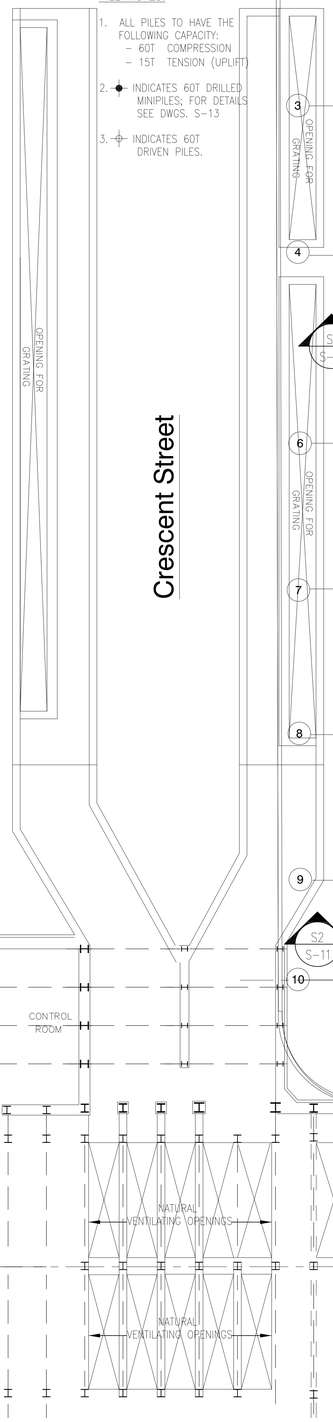
SCALE : 1/8" = 1'-0"

STRUCTURAL NOTES:

1. TOP OF SLAB ELEVATION= -25'-0"
2. SOIL BEARING CAPACITY = 60 TON
3. [--] INDICATES PILE CUT-OFF ELEVATION REFERENCED FROM TOP OF CONC. SLAB ELEVATION.
4. FOR STRUCTURAL NOTES SEE D'WG. S-1.
5. CONTRACTOR TO VERIFY ALL DIMENSIONS & ELEVATIONS WITH ARCHITECT DRAWINGS PRIOR TO CONSTRUCTION.
6. TOP OF PILE CAP TO BE 1'-0" BELOW TOP OF CONC. . SLAB U.O.NOTED.
7. WT – INDICATES WATER TABLE ELEV. SEE PLAN & BORINGS.
8. ST – INDICATES STRAP TIE.

PILE NOTES:

1. ALL PILES TO HAVE THE FOLLOWING CAPACITY:
   - 60T COMPRESSION
   - 15T TENSION (UPLIFT)
2. ◆ INDICATES 60T DRILLED MINIPILES; FOR DETAILS SEE DWGS. S-13
3. ⊕ INDICATES 60T DRIVEN PILES.



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REGISTERED ARCHITECT DAN S. IONESCU 020424 STATE OF NEW YORK

CRESCENT STREET HOTEL

41-10 CRESCENT STREET
LONG ISLAND CITY, NY 11101

SUB-CELLAR & FOUNDATION FLOOR PLAN

Project#:	02134
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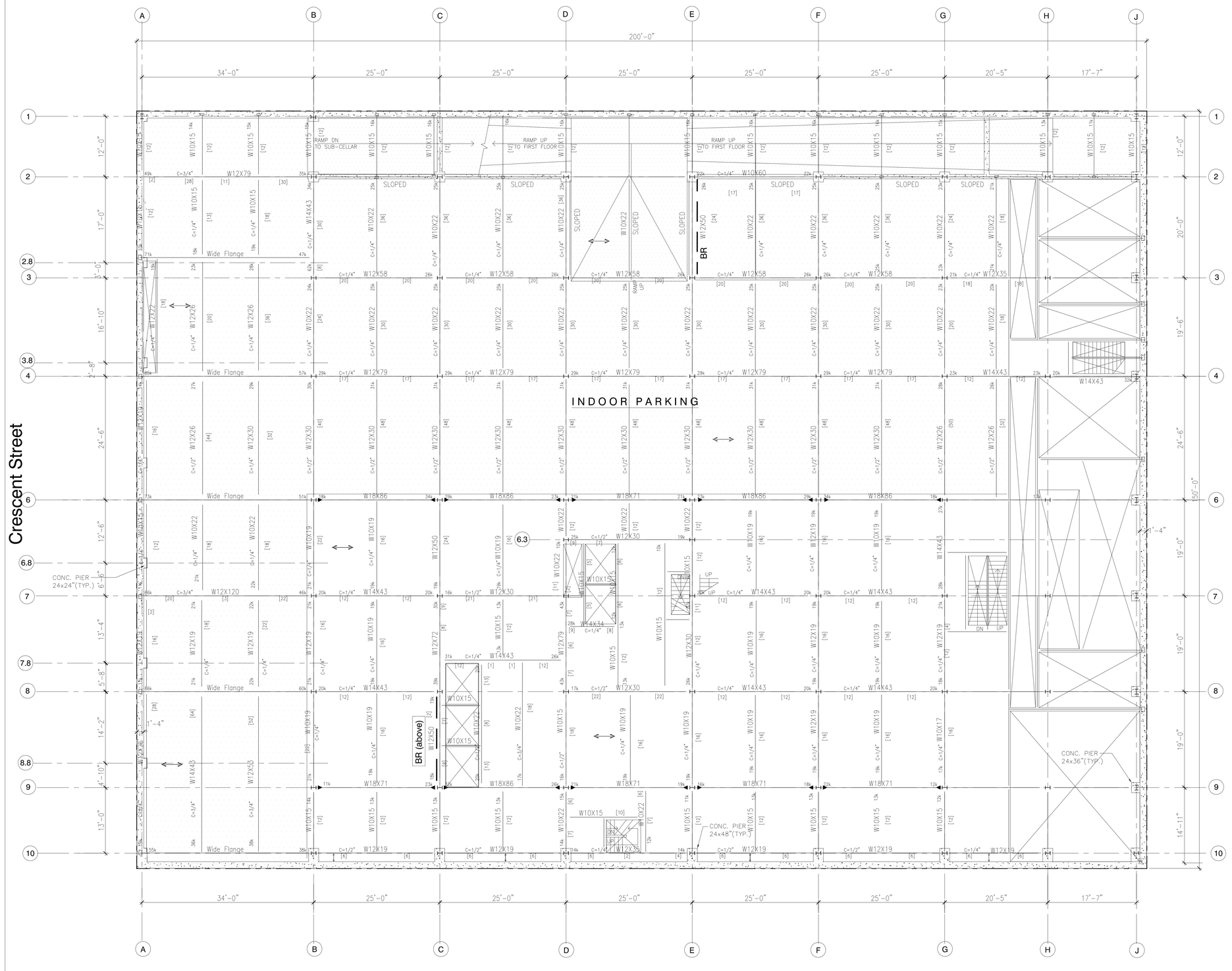
Drawn by:	CL
Checked by:	NW

S-2



CELLAR FLOOR FRAMING PLAN

SCALE : 1/8" = 1'-0"

STRUCTURAL NOTES:

1. TOP OF SLAB ELEVATION= -15'-0"
2. TOP OF STR. STEEL ELEV. TO BE 6 1/4" BELOW TOP OF CONC. FLOOR SLAB.
3. [---] INDICATES 3/4"ø X 5" LONG, WELDED NELSON STUDS, MIN. ONE STUD @ 2'-0" O.C.
4. <--> INDICATES 3" DEEP MD, 18 GA. GALV., COMP. + 3 1/4" LT. WT. CONC. REINF. W/WWF 6x6-10/10.

LOADING SCHEDULE	
3" MD+3 1/4" LT.WT.CONC.	46 PSF
STRUCTURAL STEEL	10 PSF
LIVE LOAD	100 PSF
TOTAL	156 PSF

LOADING SCHEDULE (PARKING)	
3" MD+3 1/4" LT.WT.CONC.	46 PSF
STRUCTURAL STEEL	10 PSF
TOPPING	38 PSF
LIVE LOAD	100 PSF
TOTAL	194 PSF

ISSUED FOR TA 6/20/08

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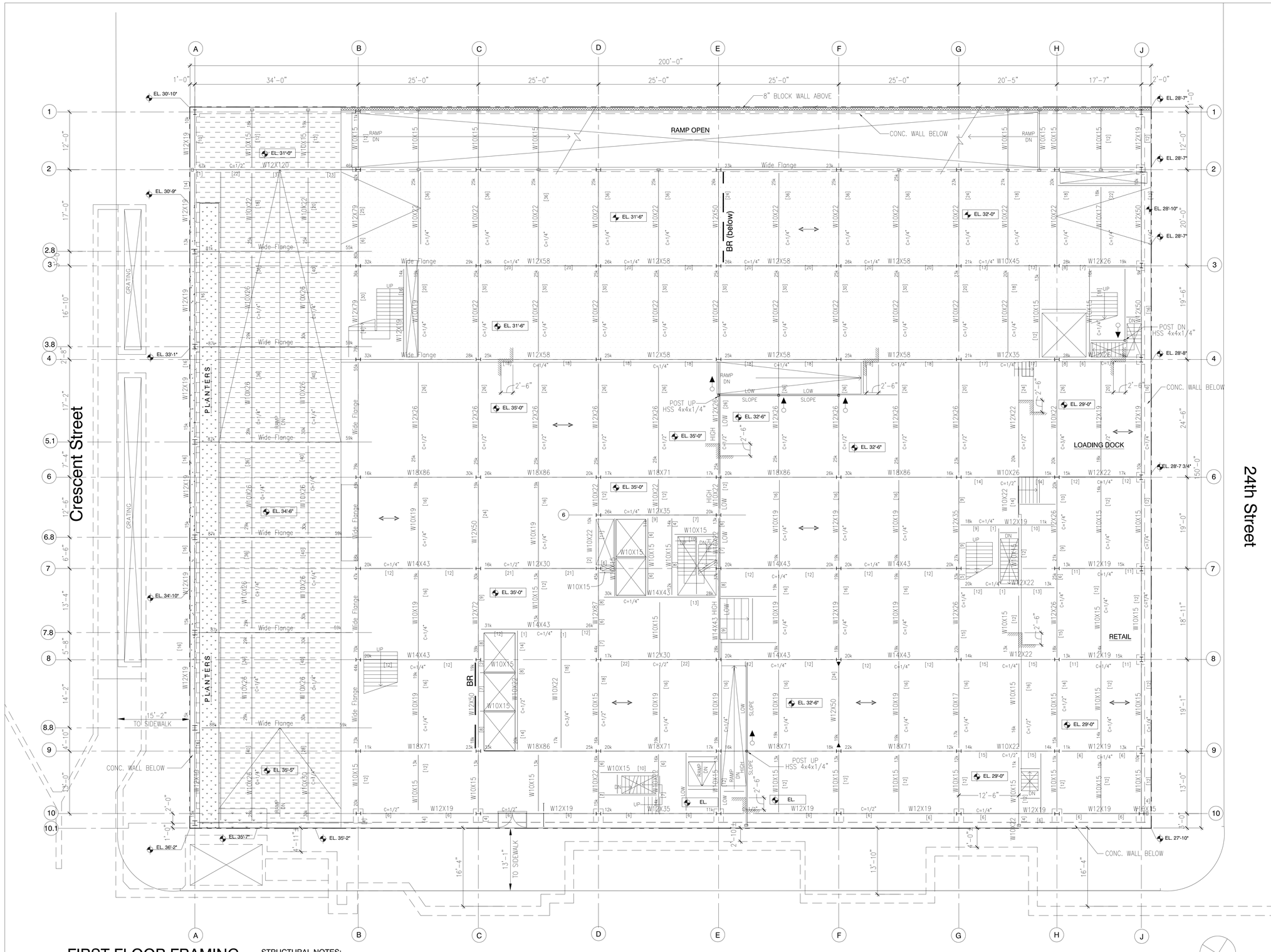
CELLAR
FLOOR FRAMING PLAN

Project#:	02134
Scale:	AS SHOWN
Date:	01.14.2008
Drawn by:	CL
Checked by:	NW

S-3



FIRST FLOOR FRAMING PLAN

SCALE : 1/8" = 1'-0"

STRUCTURAL NOTES:

1. TOP OF SLAB ELEVATION = 0'-0" = (33.5')
2. TOP OF STR. STEEL ELEV. TO BE 6 1/4" BELOW TOP OF CONC. FLOOR SLAB.
3. [---] INDICATE 3/4"ø x 5" LONG, WELDED NELSON STUDS MIN. ONE STUD @ 2'-0" O.C.
4. ► INDICATES MOMENT CONNECTION SEE D'WG S-
5. "C" INDICATES MIDSPAN CAMBER IN INCHES.
6. ⟷ INDICATES 3" DEEP MD, 18 GA. GALV., COMP. + 3 1/4" LT. WT. CONC. REINF. W/WWF 6x6-10/10.

LOADING SCHEDULE ROOF (LANDSCAPE+PARKING)	
3" MD+3 1/4" LT.WT.CONC.	46 PSF
STRUCTURAL STEEL	10 PSF
HUNG CEILING	4 PSF
INS. + WP	3 PSF
TOPPING	40 PSF
LANDSCAPING	50 PSF
LIVE LOAD	100 PSF
TOTAL	253 PSF

INDOOR PARKING LOADING SCHEDULE	
3" MD+ 3 1/4" LT.WT.	46 PSF
STRUCTURAL STEEL	5 PSF
INS. + WP.	7 PSF
TOPPING	40 PSF
LIVE LOAD	100 PSF
TOTAL	198 PSF

LOADING SCHEDULE	
3" MD + 3 1/4" ST. CONC.	46 PSF.
STRUCTURAL STEEL	10 PSF.
LIVE LOAD	100 PSF.
TOTAL	156 PSF

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FIRST
FLOOR FRAMING PLAN

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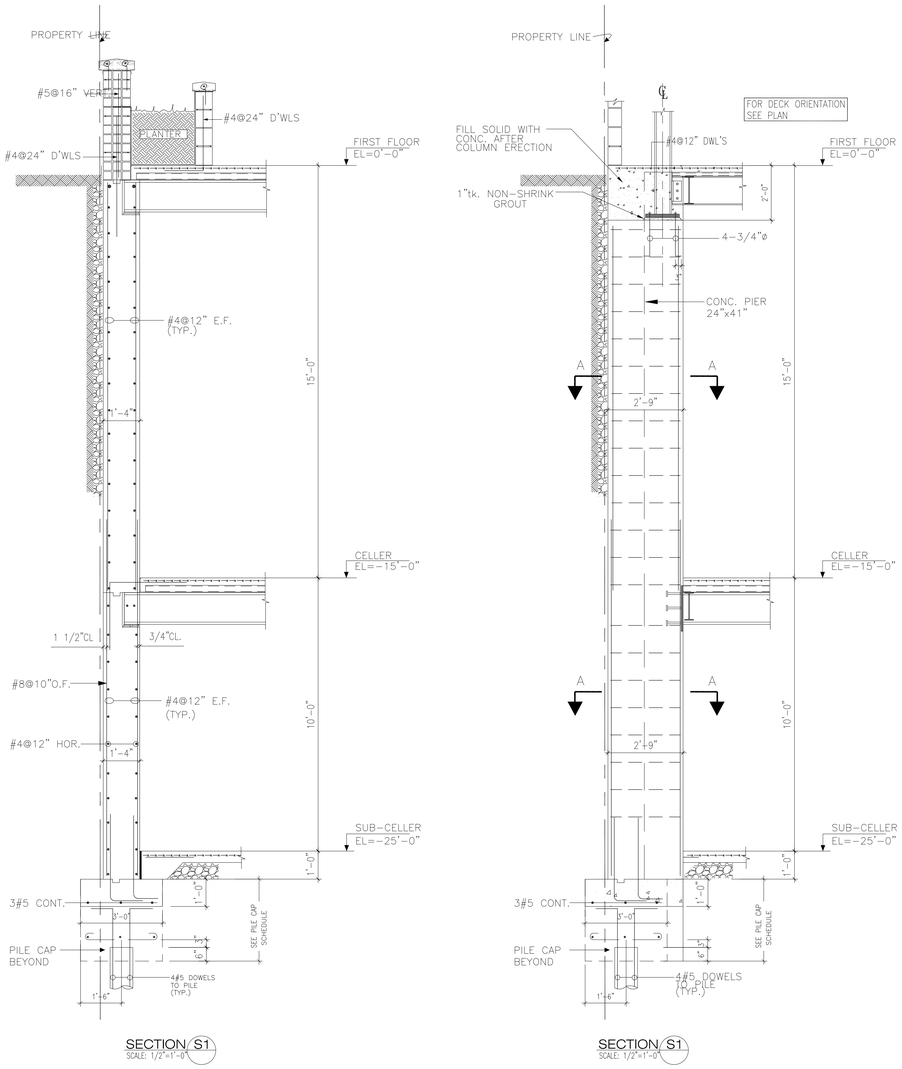
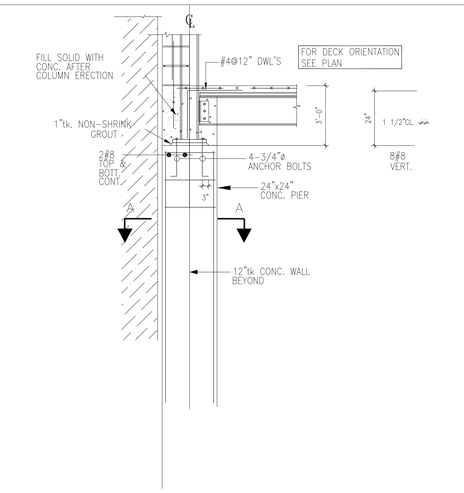
Checked by:	NW

S-4



SECTION S1
SCALE: 1/2"=1'-0"

SECTION S1
SCALE: 1/2"=1'-0"



ISSUED FOR TA 6/20/08

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REGISTERED ARCHITECT DAN G. IONESCU 020402 STATE OF NEW YORK

CRESCENT STREET HOTEL

41-10 CRESCENT STREET
LONG ISLAND CITY, NY 11101

FOUNDATION
SECTIONS

Project#:	02134
Scale:	AS SHOWN
Date:	01.14.2008
Drawn by:	CL
Checked by:	NW

S-11

NOTE:
8"ø PIPE NOMINAL IS 8.63"ø ACTUAL.

Minipile Design (60 Tons):

Strength of Materials:
Grout 4000 psi x 0.25 (Table 11-3 NYC Bldg Code) = 1 ksi allowable
Rebar 75 ksi x .4 = 1ksi for displaced grout (Table 11-3) = 29 ksi allowable
Soil Bond = 0.020 ksi allowable
Steel Shell 36 ksi (max allowable) x .35 (Table 11-3) = 12.6 ksi allowable

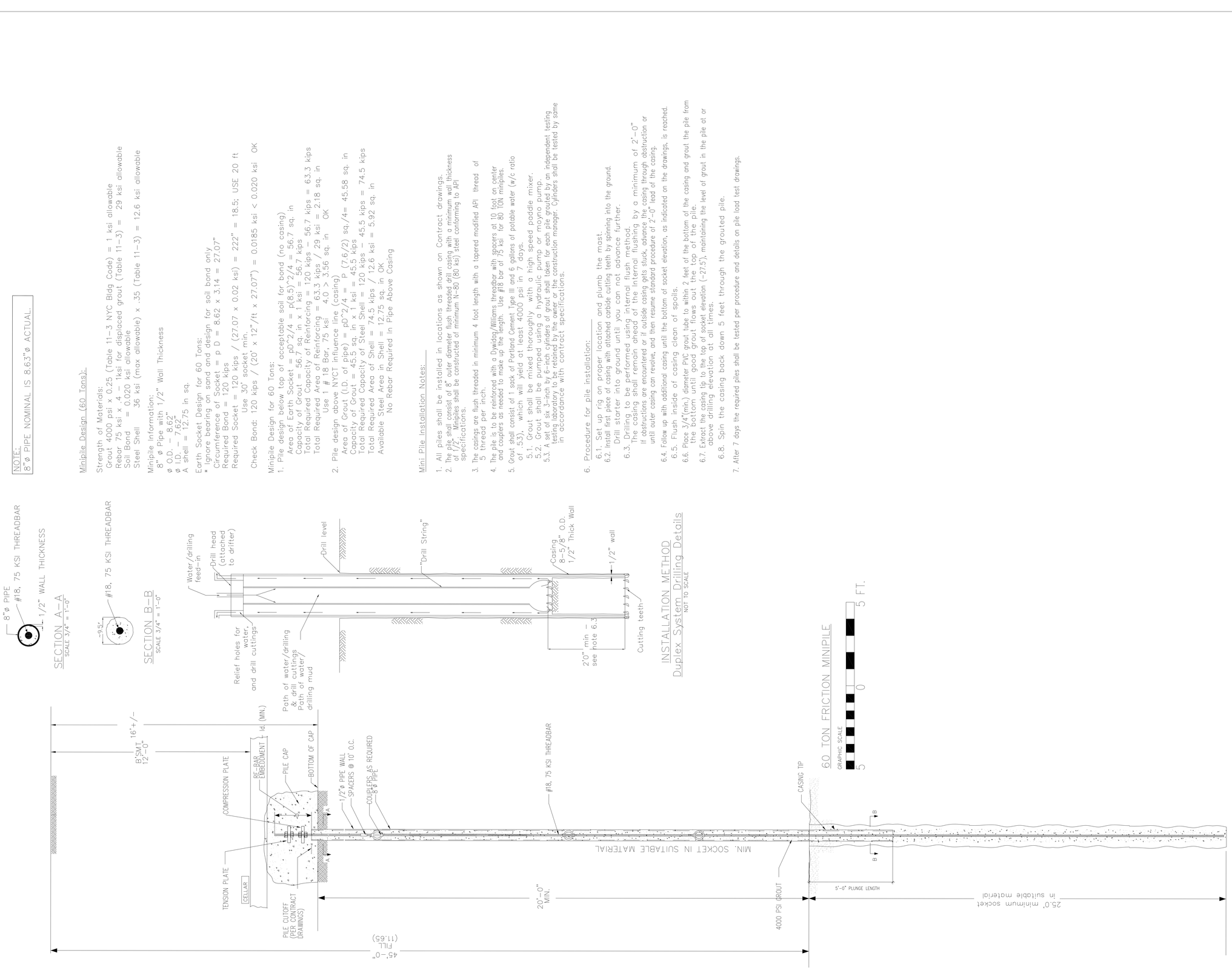
Minipile Information:
8" ø Pipe with 1/2" Wall Thickness
ø O.D. = 8.62"
ø I.D. = 7.62"
A shell = 12.75 in sq.

Earth Socket Design for 60 Tons:
* Ignore bearing on sand and design for soil bond only
Circumference of Socket = p D = 8.62 x 3.14 = 27.07"
Required Bond = 120 kips
Required Socket = 120 kips / (27.07 x 0.02 ksi) = 222" = 18.5; USE 20 ft
Use 30' socket min.
Check Bond: 120 kips / (20' x 12"/ft x 27.07") = 0.0185 ksi < 0.020 ksi OK

Minipile Design for 60 Tons:
1. Pile design below top of acceptable soil for bond (no casing)
Area of Earth Socket = p0^2/4 = p(8.5)^2/4 = 56.7 sq. in
Capacity of Grout = 56.7 sq. in x 1 ksi = 56.7 kips
Total Required Capacity of Reinforcing = 120 kips - 56.7 kips = 63.3 kips
Total Required Area of Reinforcing = 63.3 kips / 29 ksi = 2.18 sq. in
Use 1 # 18 Bar, 75 ksi 4.0 > 3.56 sq. in OK
2. Pile design above NYCT influence line (casing)
Area of Grout (I.D. of pipe) = pD^2/4 = P (7.6/2) sq./4= 45.58 sq. in
Capacity of Grout = 45.5 sq. in x 1 ksi = 45.5 kips
Total Required Capacity of Steel Shell = 120 kips - 45.5 kips = 74.5 kips
Total Required Area of Shell = 74.5 kips / 12.6 ksi = 5.92 sq. in
Available Steel Area in Shell = 12.75 sq. in OK
No Rebar Required In Pipe Above Casing

Mini Pile Installation Notes:

1. All piles shall be installed in locations as shown on Contract drawings.
2. The pile shall consist of 8" outer diameter flush threaded drill casing with a minimum wall thickness of 1/2". Minipiles shall be constructed of minimum N-80 (80 ksi) steel conforming to API specifications.
3. The casings are flush threaded in minimum 4 foot length with a tapered modified API thread of 5 thread per inch.
4. The pile is to be reinforced with a Dywidag/Williams threadbar with spacers at 10 foot on center and couplers as needed to make up the length. Use #18 bar of 75 ksi for 80 TON minipiles.
5. Grout shall consist of 1 sack of Portland Cement Type III and 6 gallons of potable water (w/c ratio of .53), which will yield at least 4000 psi in 7 days.
5.1. Grout shall be mixed thoroughly with a high speed paddle mixer.
5.2. Grout shall be pumped using a hydraulic pump or moyno pump.
5.3. A set of six 3-inch by 6-inch cylinders of grout shall taken for each pile grouted by an independent testing laboratory to be retained by the owner or the construction manager. Cylinders shall be tested by same in accordance with contract specifications.
6. Procedure for pile installation:
6.1. Set up rig on proper location and plumb the mast.
6.2. Install first piece of casing with attached carbide cutting teeth by spinning into the ground. Drill starter into ground until you can not advance further.
6.3. Drilling to be performed using internal flush method.
The casing shall remain ahead of the internal flushing by a minimum of 2'-0" If obstructions are encountered or if outside casing gets stuck, advance the casing through obstruction or until outer casing can revolve, and then resume standard procedure of 2'-0" lead of the casing.
6.4. Follow up with additional casing until the bottom of socket elevation, as indicated on the drawings, is reached.
6.5. Flush inside of casing clean of spoils.
6.6. Place 3/4"(min.) diameter PVC grout tube to within 2 feet of the bottom of the casing and grout the pile from the bottom until good grout flows out the top of the pile.
6.7. Extract the casing tip to the top of socket elevation (-27.5'), maintaining the level of grout in the pile at or above drilling elevation at all times.
6.8. Spin the casing back down 5 feet through the grouted pile.
7. After 7 days the required piles shall be tested per procedure and details on pile load test drawings.



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CRESCENT STREET HOTEL

41-10 CRESCENT STREET
LONG ISLAND CITY, NY 11101

60 TON DRILLED PILE DESIGN & INSTALLATION NOTES

Project#:	02134
Scale:	AS SHOWN
Date:	01.14.2008
Drawn by:	CL
Checked by:	NW

S-13

Appendix 5

Site-Wide Excavation Plan/Cover Plan/Foundation Plan

SUB-CELLAR & FOUNDATION PLAN

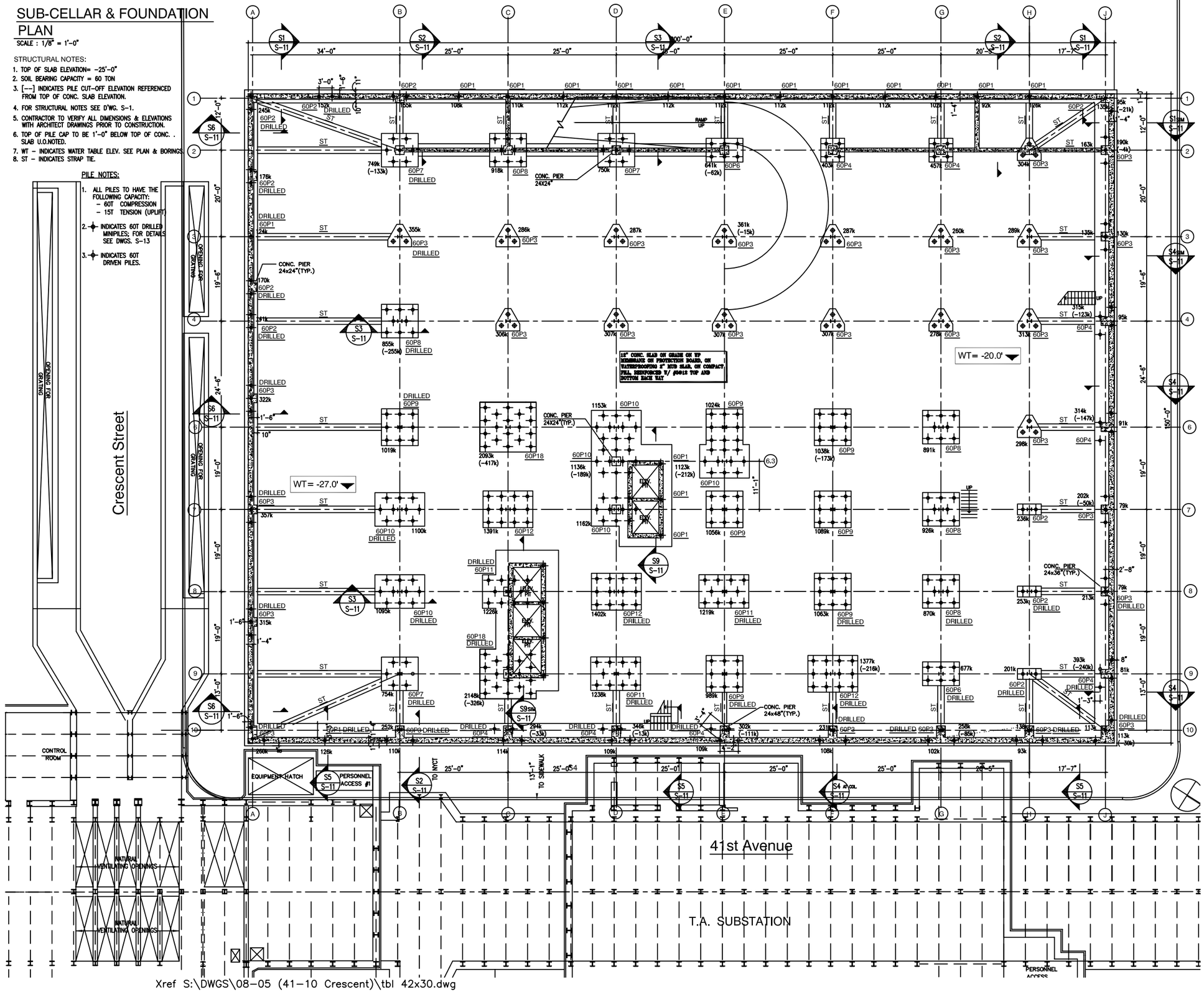
SCALE : 1/8" = 1'-0"

STRUCTURAL NOTES:

1. TOP OF SLAB ELEVATION= -25'-0"
2. SOIL BEARING CAPACITY = 60 TON
3. [---] INDICATES PILE CUT-OFF ELEVATION REFERENCED FROM TOP OF CONC. SLAB ELEVATION.
4. FOR STRUCTURAL NOTES SEE D'WG. S-1.
5. CONTRACTOR TO VERIFY ALL DIMENSIONS & ELEVATIONS WITH ARCHITECT DRAWINGS PRIOR TO CONSTRUCTION.
6. TOP OF PILE CAP TO BE 1'-0" BELOW TOP OF CONC. . SLAB U.O.NOTED.
7. WT – INDICATES WATER TABLE ELEV. SEE PLAN & BORINGS.
8. ST – INDICATES STRAP TIE.

PILE NOTES:

1. ALL PILES TO HAVE THE FOLLOWING CAPACITY:
   - 60T COMPRESSION
   - 15T TENSION (UPLIFT)
2. ◆ INDICATES 60T DRILLED MINIPILES; FOR DETAILS SEE DWGS. S-13
3. ◆ INDICATES 60T DRIVEN PILES.



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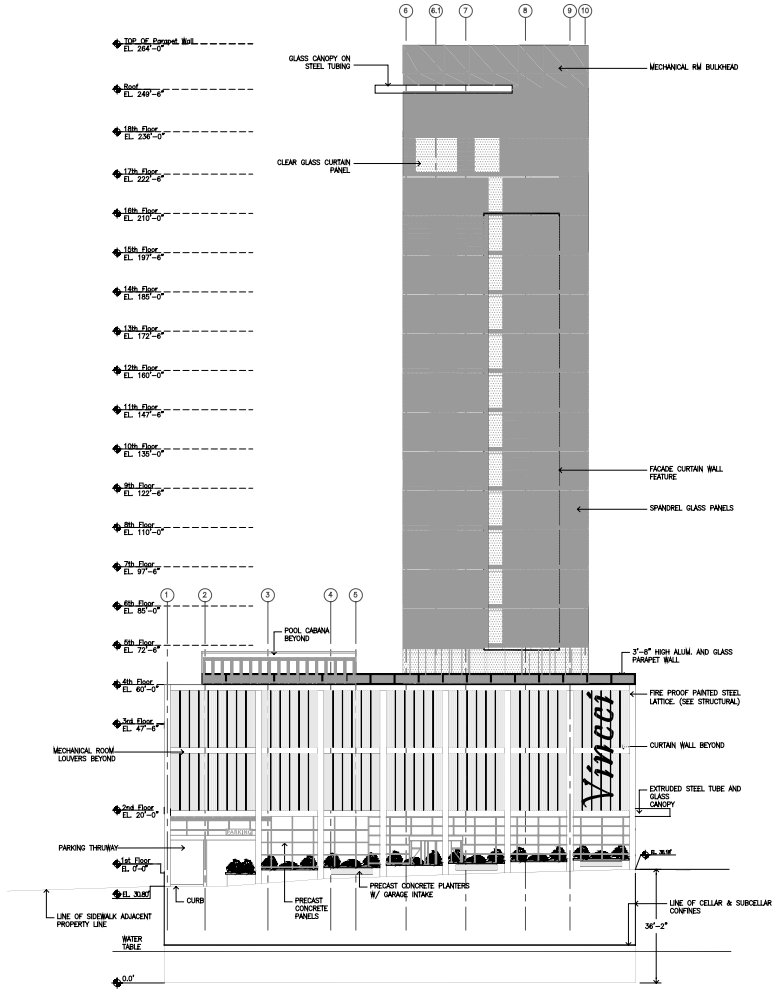
SUB-CELLAR & FOUNDATION FLOOR PLAN

Appendix 6

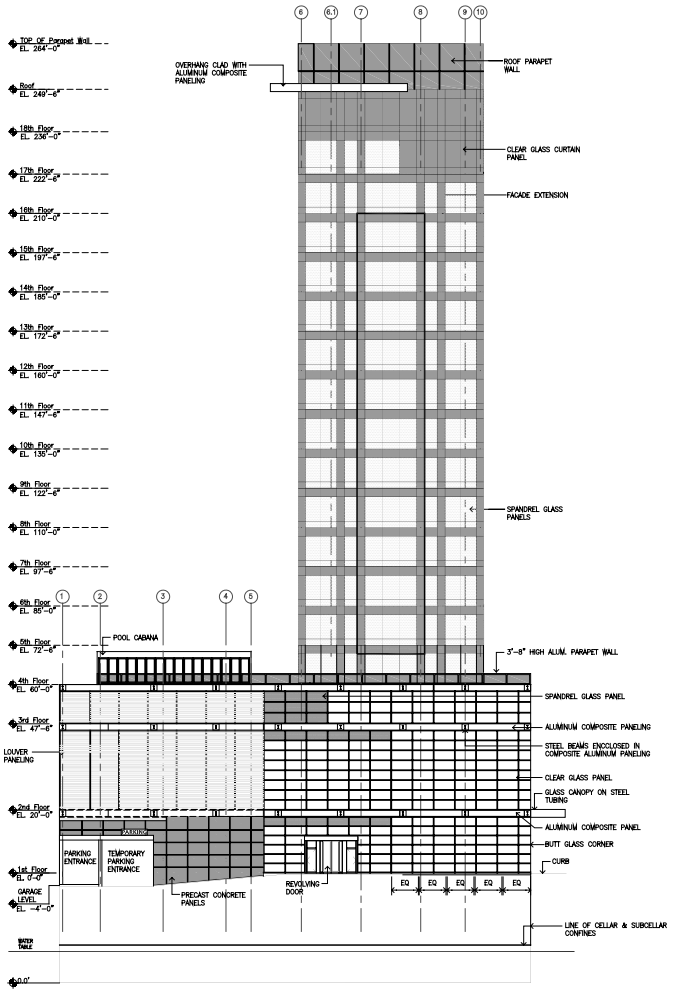
Side View Profiles of Building &

Below Ground Sidewalls



1 BUILDING ELEVATION (EAST) - CRESCENT STREET - STREET WALL

Scale: 1/16"=1'-0"



2 BUILDING ELEVATION (EAST) - CRESCENT ST. - VIEW BEYOND STEEL FRAME STREET WALL

Scale: 1/16"=1'-0"

SPRINKLER, MECHANICAL, AND FIRE ALARM TO BE FILED UNDER SEPARATE APPLICATION

DOB JOB # 410104453

PRELIMINARY DESIGN

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REGISTERED ARCHITECT STATE OF NEW YORK

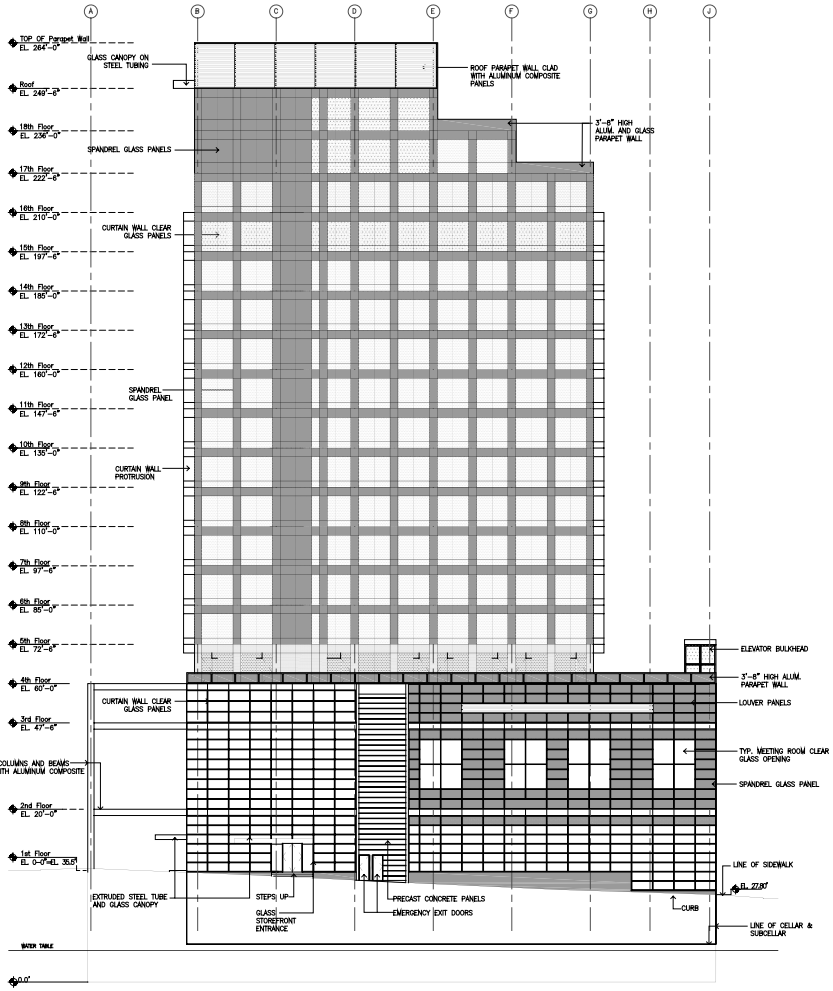
CRESCENT STREET HOTEL

41-08 CRESCENT STREET
LONG ISLAND CITY, NY 11101

BUILDING EXTERIOR ELEVATIONS

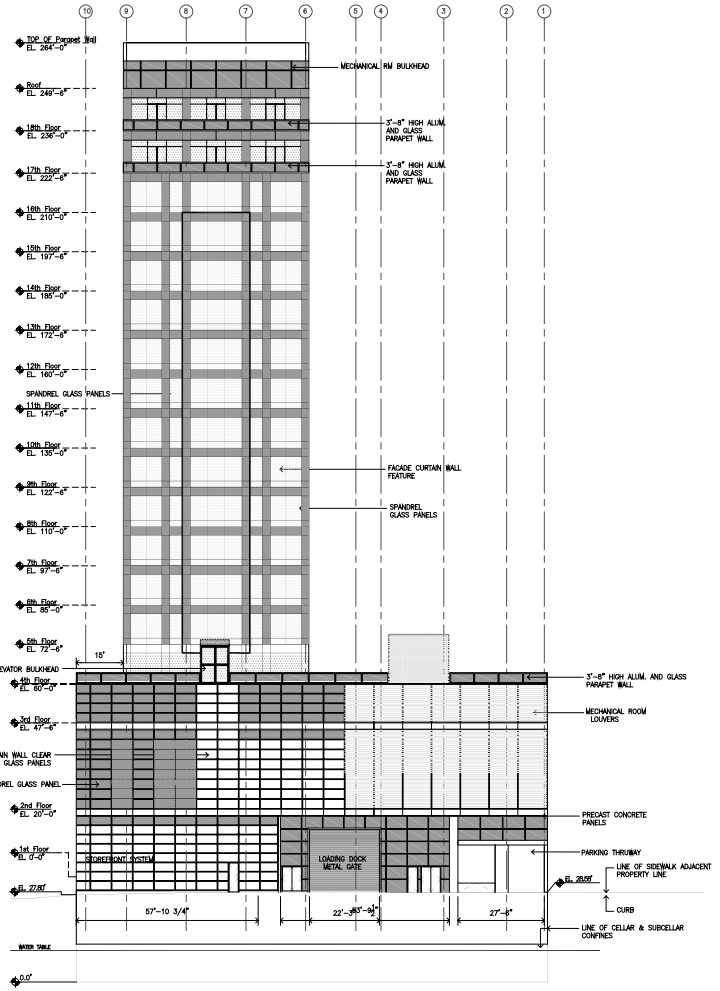
Project#:	02134
Scale:	AS SHOWN
Date:	07.14.2008
Drawn by:	BY
Checked by:	DI

A-300



1 BUILDING ELEVATION (SOUTH) - 41st AVENUE

Scale: 1/16"=1'-0"



2 BUILDING ELEVATION (WEST) - 24TH ST.

Scale: 1/16"=1'-0"

SPRINKLER, MECHANICAL, AND FIRE ALARM TO BE FILED UNDER SEPARATE APPLICATION

DOB JOB # 410104453

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CRESCENT STREET HOTEL

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LONG ISLAND CITY, NY 11101

BUILDING EXTERIOR ELEVATIONS

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Checked by:	DI

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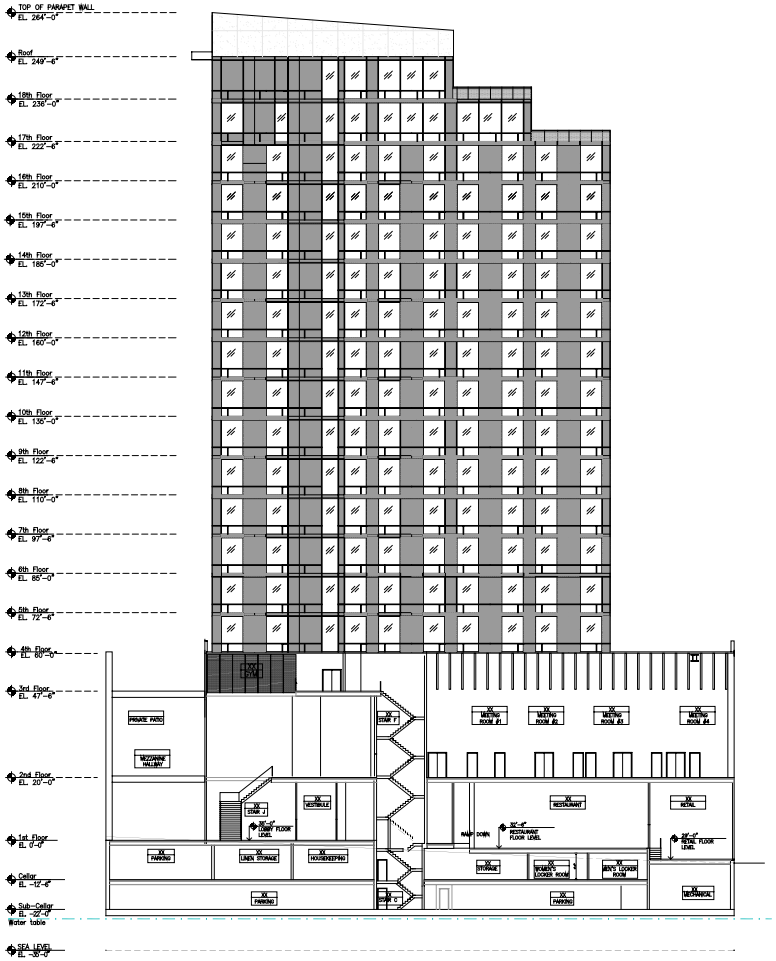
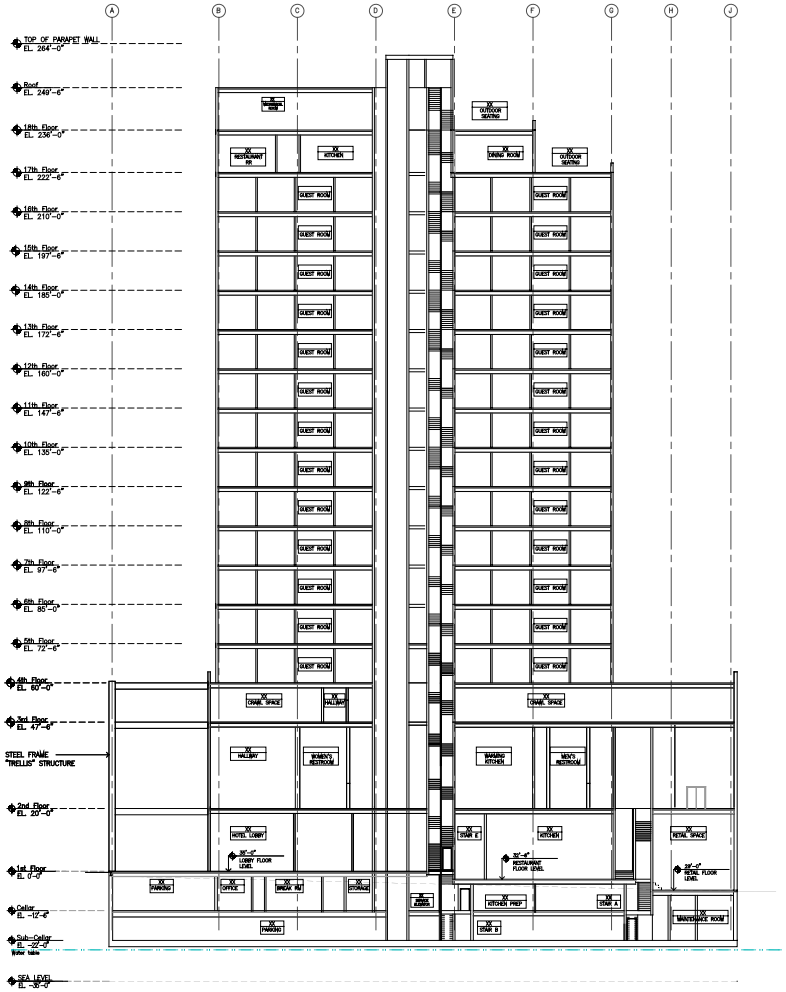


1 BUILDING SECTION
Scale: 1/16"=1'-0"



2 BUILDING SECTION
Scale: 1/16"=1'-0"

SPRINKLER, MECHANICAL, AND FIRE ALARM TO BE FILED UNDER SEPARATE APPLICATION

DOB JOB # 410104453

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DANIEL IONESCU
STATE OF NEW YORK

CRESCENT STREET HOTEL

41-08 CRESCENT STREET
LONG ISLAND CITY, NY 11101

BUILDING SECTIONS

Project#:	02134
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Checked by:	DI

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Appendix 7

Phase II Environmental Assessment by Cosmos Environmental, March 2012

NYC DEP ID No. 09EHAZ191Q

PHASE II ENVIRONMENTAL SITE ASSESSMENT

(AMENDED)

4102-4110 Crescent Street
Long Island City, NY 11101
(Block 414 / Lot 23)

Client:
Forte Italia LLC / Marco Hotel
506 Ninth Avenue
Suite 285
New York, NY 10018

March 2012

Cosmos Environmental services, Inc.
132 Franklin Place, PO Box 349
Woodmere, NY 11598
516. 374-7890
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Phase II Environmental Site Assessment

4102-4110 Crescent Street, Long Island City, NY 11101

Table of Contents

1. Background

1.1. Site Location and Description

The applicant, Forte Italia LLC., has proposed to construct a twenty–story hotel building with a basement located 15 foot below ground level (BGL)on the property located at 4102-4110 Crescent Street, Long Island City, New York (Block 414 / Lot 23). The subject site occupies nearly 1.5 acres (30,000 sq. ft) and located along the S side of 41st Avenue and between Crescent Street and 24th Street.

It is owned and managed by Forte Italia LLC.

Figure A illustrates a **Site Plan** as it appeared during the site inspection.

Figure B illustrates a **Site Location** on a street map of the area.

Figure C depicts an **Arial Site Photograph**.

Figure D is a USGS 7.5-Minute Topographic Quadrangle Site Location Map depicting the physical location of the subject site and the surrounding area.

1.2 Site Use & History

Presently, the subject site is utilized as a parking lot. However, according to Sanborn Fire Insurance Maps presented in **Appendix I**, a SE portion of the subject site was utilized as a gasoline dispensing station.

No information regarding the closure/ removal of these USTs was available at the time of the assessment. Furthermore, Mr. Anthony Pecora of Forte Italia LLC stated that to the best of his knowledge, USTs were removed prior to purchase of the site by the current owner.

A **Phase I Environmental Site Assessment** conducted in 2009 revealed that an "E-designation" has been placed on the property. NY City Zoning Resolution #11-15 provides that the NYC DOB may not issue a building permit for (1) any development; (2) an enlargement, extension or change of use involving a residential or community facility use; or (3) an enlargement that disturbs soil on said lot, if *Property* has been tagged with an "E" designation.

Once an "E" designation is assigned to a lot, a building permit can only be obtained after the NYCDEP issues a "Notice to Proceed" to the NYC DOB. A "Notice to Proceed" requires NYCDEP approval of a Remedial Action Plan (RAP) and a Construction Health & Safety Plan (CHSP).

To address the NYC "E" Designation requirements, as a part of "Notice to Proceed", **Cosmos Environmental Services, Inc.** (**CES)** recommended preparing a **Phase II Workplan** for the property and submitting it to the NYCDEP, along with **Phase I** and a site-specific **Health & Safety Plan**. As part of the **Phase II Workplan**, **CES** will propose additional site investigation activities that would be required by the NYCDEP, based upon the anticipated redevelopment activities at the Property and the *Recognized Environmental Conditions* (RECs) discussed in **Phase I**.

This task was accomplished and in September of 2009 a NYC DEP approval for Phase II Environmental Site Assessment (**Phase II**) was issued.

1.3. Surrounding Area

The subject site is adjacent to the following properties:

E – A multi-story office building under construction;
W – A vacant lot with a residential building under construction and a one-story retail structure;
S – A two-story office building and a parking lot;
N – along 41st Avenue, Exxon gasoline dispensing station and an apartment building with a store on the ground floor.

2. Objective

The objective of this **Phase II** is to characterize the Subject Property based on the DEP's concerns and the **REC**s found in the **Phase I Report**. The following Scope of Work was conducted prior to any further site construction activities.

3. Scope of Work

The Subject Property has a 150-foot wide frontage on 41st Avenue and has a maximum depth of about 200 feet. The subject property is currently utilized as a parking lot.

3.1. Magnetometer and Ground Penetrating Radar Survey (M/GPR)

As there is no information regarding the size and/ or location of USTs on the subject property, **CES** conducted a Magnetometric (M) and Ground-penetrating Radar (GPR) survey of the site (see **Appendix I**).

Though, several subsurface anomalies were detected, none of them were indicative of an underground storage tanks' farm.

However, this survey is being used to identify potential areas where such tanks were probably installed in order to define the specific areas for soil testing.

3.2. Soil Borings

Prior to the onset of drilling, **CES** placed a One-Call Utility Survey Request to have the local utility companies' mark out existing utilities on and entering the subject property.

In consideration of the subject property's size, a total of nine (9) test-borings were advanced on the subject property. The borings' locations are depicted in **Figure A**.

All borings were advanced to a depth of **22** feet below grade surface (bgs), the maximum depth of the proposed structure, including footings.

The groundwater was encountered at the bottom of the borings at the depths varied from 17 feet to 22.5 feet depending on the elevation of boring locations.

Extracted soil was screened with a photo-ionization detector (PID), calibrated using an isobutylene standard, for the presence of volatile organic compounds (VOCs).

Two soil samples were collected from each boring, one at the 0.5 to 2.5 feet interval (consisted a layer of compacted gravel, brown sand Urban Fill to varying depth of 4-5 feet), and the second from the soil/groundwater interface or from the interval exhibiting the highest PID reading. No PID elevated readings were noted and / or no visual contamination was observed during the advancement of each borehole. Therefore, the second subsurface soil sample was collected from the depth of 20-22 feet bgs.

In the course of the project, during the installation of soil boring **B-9,** three attempts were made collect soil samples from the depth greater than 3 feet. In all three instances, **CES** encountered a heavy reinforced concrete slab (over 16" thick) and after third "refusal" ceased drilling at this location. However, we would like to note that on September 15, 2009, a total of three (3) additional test borings (**B-01, B-02** & **B-03** as indicated on **SITE PLAN & SAMPLING LOCATIONS –** see **Figure A** below) were placed in a close proximity to **B-9** area and four (4) soil samples were collected from the depths of 12'-15' and 22'-25'.

Urban Fill encountered in the upper stratum of the subject site in general extended to the depth of 4-5 feet and consisted of compacted very dark mixture of sand, gravel and asphalt in the top layer underlined by discolored dark brown coarse sand, small pieces of brick, broken up concrete and wood.

All collected soil samples were placed in laboratory-supplied containers, preserved on ice, and submitted under chain-of-custody procedures to the contract laboratory for analysis (described below).

Following sample collection, all equipment was decontaminated on-site using methods outlined in the HASP. The boreholes, upon completion, were backfilled with soil cuttings and the surface repaired with an asphalt plug.

3.3. Monitoring Well Installation

As per **DEP's** approved Scope of Work, **CES** converted five (5) of the borings into a temporary monitoring wells **(B-1/MW-1; B-2/MW-2; B-4/MW-4; B-6/MW-6; B-8/MW-8).** A perforated PVC portion of each well was installed in the interval from 15 feet to 25 feet. Groundwater was sampled 48 hours after the time of wells' installation. Prior to collection of groundwater samples, each well was examined for the presence/ absence of "free floating" product. None was detected.

In the course of the project, the depth of groundwater was monitored in **MW-6 (20' 07.50" BGS)** and **MW-4 (17'11.25" BGS)**. Furthermore, **Appendix VII** contains Site Survey and Geotechnical Borings' Test Results depicting the elevations throughout the subject site, as well as soil profiles and groundwater depths in each boring.

It appears that the general direction of the groundwater flow is due West.

3.4. Laboratory Analysis

All collected soil, groundwater, and quality control samples were stored on ice in a cooler immediately upon collection and shipped to a New York State Department of Health (DOH) Environmental Laboratory Analysis Program (ELAP) certified laboratory for analysis. All soil and groundwater samples were analyzed for the targeted compound list (TCL) specifically:

- Volatile organic compounds (VOCs) EPA Method 8260
- Semi-volatile organic compounds (SVOC's) EPA Method 8270
- Pesticides and PCBs EPA Method 8081/8082
- TAL Metals EPA Method 6010/6020/7471

Also, filtered groundwater samples were analyzed for TAL metals.

Furthermore, additional four **(4)** soil samples collected from **B-01, B-02** & **B-03** were analyzed for the list of target compounds published in the **NYS DEC STARS Memo #1 for Gasoline and Oil Contaminated Soil**.

3.5. Waste Disposal

Soil cuttings derived from boring program were backfilled into the boreholes. No remaining material and ground water were accumulated.

3.6. Data Reporting

Attached to this **Phase II Subsurface Investigation Report** (**SIR**) is a compilation of analytical data acquired in the course of the project. This information is presented in two forms: five (5) Tables depicting each chemical detected in concentrations above the Method Detection Limit (MDL) for the soil and groundwater samples, respectively; and a **Laboratory Report** with **Chains of Custody** for each day of collection.

All monitoring data is compared to the New York State Department of Environmental Conservation's (DEC) **Technical and Administrative Guidance Memorandum (TAGM) 4046 Guidance Values**.

Appendix III contains aforementioned tables depicting only **detected** contaminants. **Appendix V** contains Laboratory Reports for each sample, as well as Chains of Custody.

Appendix IV contains Laboratory Reports for analysis of four (4) additional soil samples collected from **B-01, B-02** & **B-03**, as well as Chain of Custody.

Appendix VI contains Boring Logs.

4. Findings

4.1 Soil Sampling & Analysis – Volatile Organics (EPA Method 8260)

With the exception of two soil samples located in the immediate vicinity of a dry-well (**B-2**), no Volatile Organic Compounds (VOC) in concentrations above the **MDL** and/ or **TAGM** were found. But even these two samples exhibited VOC concentrations well below **TAGM** levels.

Table I presents the analytical data described above.

Analysis of four **(4)** soil samples collected from **B-01, B-02** & **B-03** did not reveal any of the target compounds listed in the **NYS DEC STARS Memo #1 for Gasoline and Oil Contaminated Soil** in concentrations above the Method Detection Limit (**MDL**).

4.2 Soil Sampling & Analysis – Semi-Volatile Organics (EPA Method 8270)

Several Semi-Volatile Organic Compounds (SVOC) were found in concentrations above the **MDL**. Further more, soil samples collected from borings **B-1**, **B-2**, **B-5** and **B-8** from the stratum immediately below a macadam-paved parking lot and concrete floor of the shop exhibit concentrations in excess of established **TAGM** levels. It should be noted, that no significant discoloration was observed in any of the shallow soil samples collected and no PID readings and/ or VOC compounds above the **MDL** were found in the soils beneath this collection stratum. It would be safe to assume, that the probable source of contamination is the Macadam pavement itself, as well as gravel-fill located immediately beneath.

Furthermore, no significant oil stains and/ or odors were detected on the pavement not only throughout the course of this **Phase II**, but during the inspection conducted in preparation of **Phase I Environmental Site Assessment**.

Table II presents the analytical data described above.

Analysis of four **(4)** soil samples collected from **B-01, B-02** & **B-03** did not reveal any target compounds listed in the **NYS DEC STARS Memo #1 for Gasoline and Oil Contaminated Soil** in concentrations above the **MDL**.

4.3 Soil Sampling & Analysis – Pesticides & PCB (EPA Method 8081/8082)

Pesticides in concentrations exciding the **MDL** were found in the soil samples colleted from **B-1.1, B-4.1 & B-5.1**. However, none of these samples exhibit concentrations exceeding the Soil Cleanup Objectives listed in **TAGM**.

No **PCBs** were found in concentrations above the **MDL**.

Table III presents the analytical data described above.

4.4 Soil Sampling & Analysis – TAL Metals (EPA Method 6010/6020/7471)

Several metals specified in TAL Metals list were found throughout the site in concentrations above the **MDL**. Further more, soil samples collected from borings **B-1**, **B-2**, **B-5** and **B-8** from the stratum immediately below a macadam-paved parking lot and concrete floor of the shop exhibited concentrations in excess of established TAGM levels.

Cadmium (**Cd**) was found throughout the site in concentrations ranging from 1.41 ppm to 13.6 ppm, probably indicating an elevated background level of this metal in the area (especially if we consider the absence of Organics and significant concentrations of Metals in deeper strata).

Several other metals (Aluminum, Chromium, Copper, Magnesium, Mercury, Nickel & Zinc) found in concentrations above the TAGM-established action levels and are mostly located in the upper stratum below the Macadam-paved lot.

Table IV presents the analytical data described above.

4.5.1 Groundwater Sampling & Analysis – Volatile & Semi-Volatile Organics (EPA Method 8260 / 8270)

No Volatile and/ or Semi-Volatile Organic Compounds were found in concentrations above the **MDL**.

4.5.2 Groundwater Sampling & Analysis – TAL Metals (EPA Method 6010/6020/7471)

Several metals specified in TAL Metals list were found throughout the site in concentrations above the **MDL**. Some of them (mostly in un-filtered samples) are in concentrations above the **NYSDEC TOGS 1.1.1. Ambient Water Quality Standards and Guidance Values**. However, in all of the filtered samples only Iron, Aluminum and Manganese/Sodium are found in concentrations exceeding the **TOGS**.

It appears that these elevated concentrations, which are not significantly different form the up-gradient to down-gradient wells, are exhibiting a general groundwater condition in this urbanized area and are not the result of historical use of the subject site as a Gasoline-dispensing Station and an auto repair shop.

Table V presents the analytical data described above.

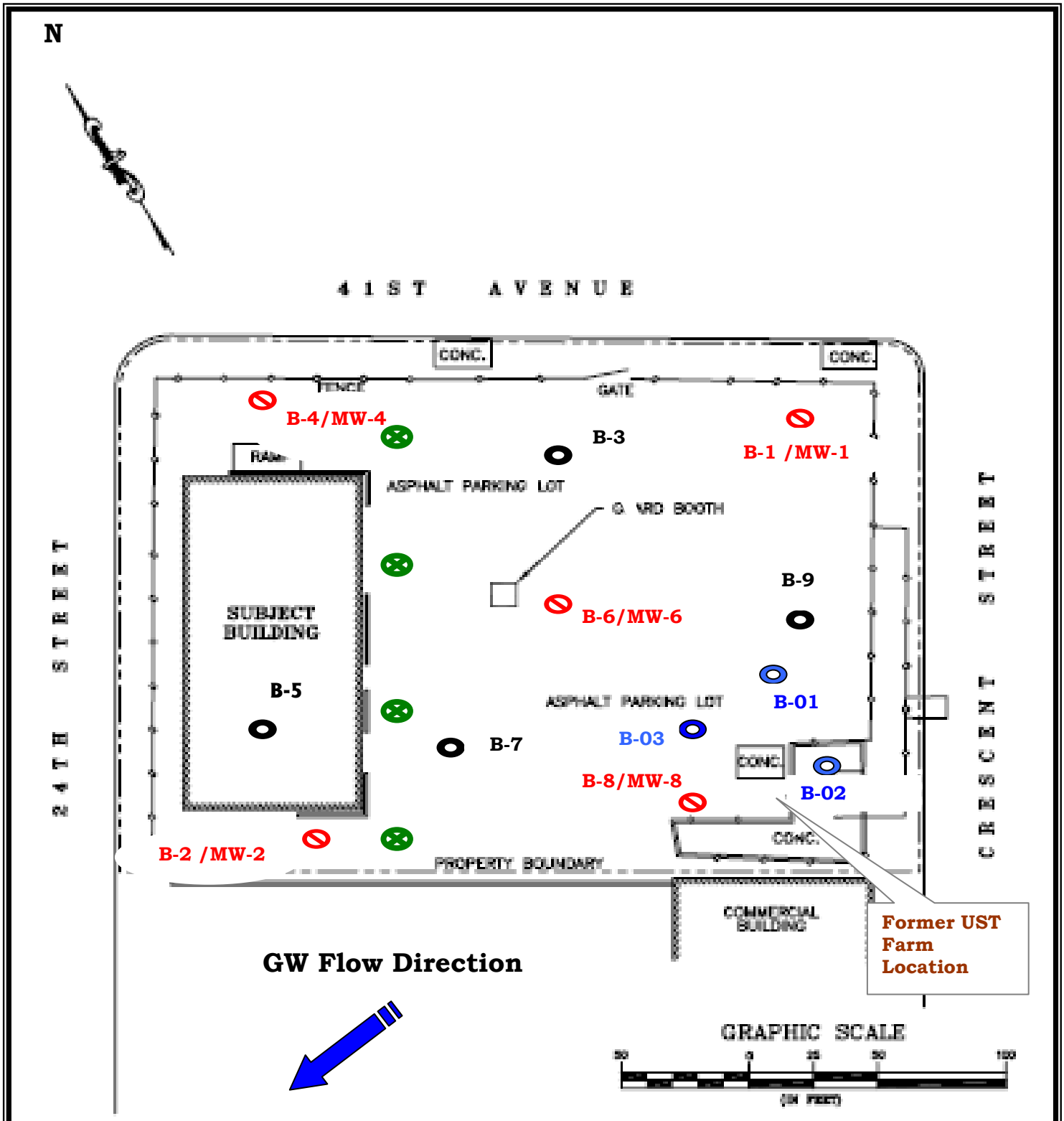
5. Recommendations

It is **CES'** opinion that the removal and disposal of Macadam pavement of the parking lot and underlying fill should be conducted in accordance with procedures associated with removal of non-Hazardous contaminated soil.

Drywells located on the subject site should be excavated and collected material removed as non-Hazardous as well.

No other environmental restrictions associated with excavation and disposal of dipper strata should apply to the development of the subject site. However, findings of this Phase II as well as our recommendations are subject to a NY City Department of Environmental Protection review and approval.

FIGURE A SITE PLAN & SAMPLING LOCATIONS



Locations of temporary groundwater monitoring wells (MW)

Locations of test borings (**B**)

Locations of additio0nal test borings (**B**)

Locations of 4 Drywells

GW Depth MW-6 (20' 07.50" BGS)
MW-4 (17'11.25" BGS)

42-02/10 Crescent Street, LIC, NY

Cosmos Environmental services, Inc.

FIGURE B

SITE LOCATION

42-02/10 Crescent Street, LIC, NY

Cosmos Environmental services, Inc.

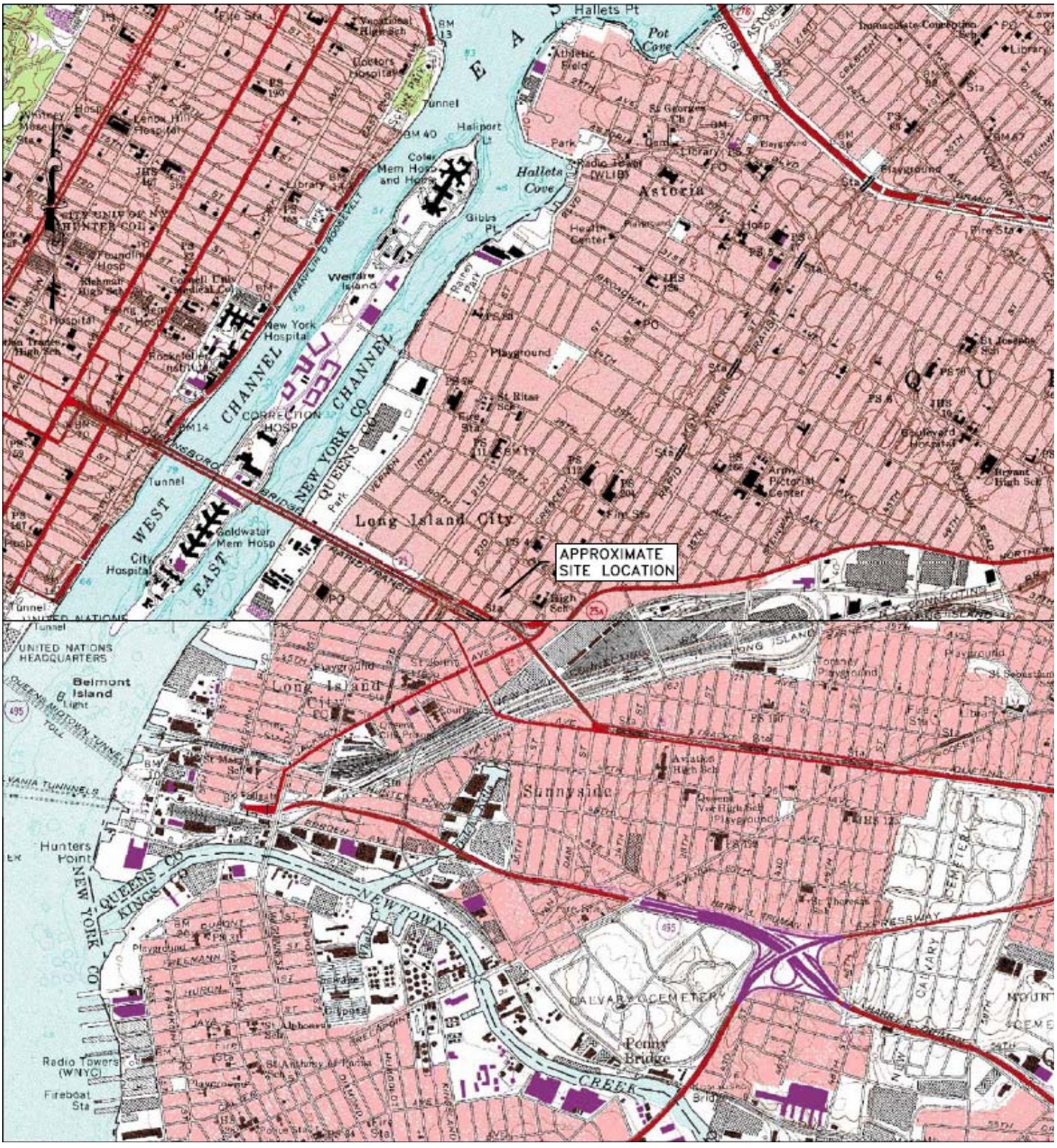
FIGURE C ARIAL SITE PHOTOGRAPH

42-02/10 Crescent Street, LIC, NY

Cosmos Environmental services, Inc.

FIGURE D

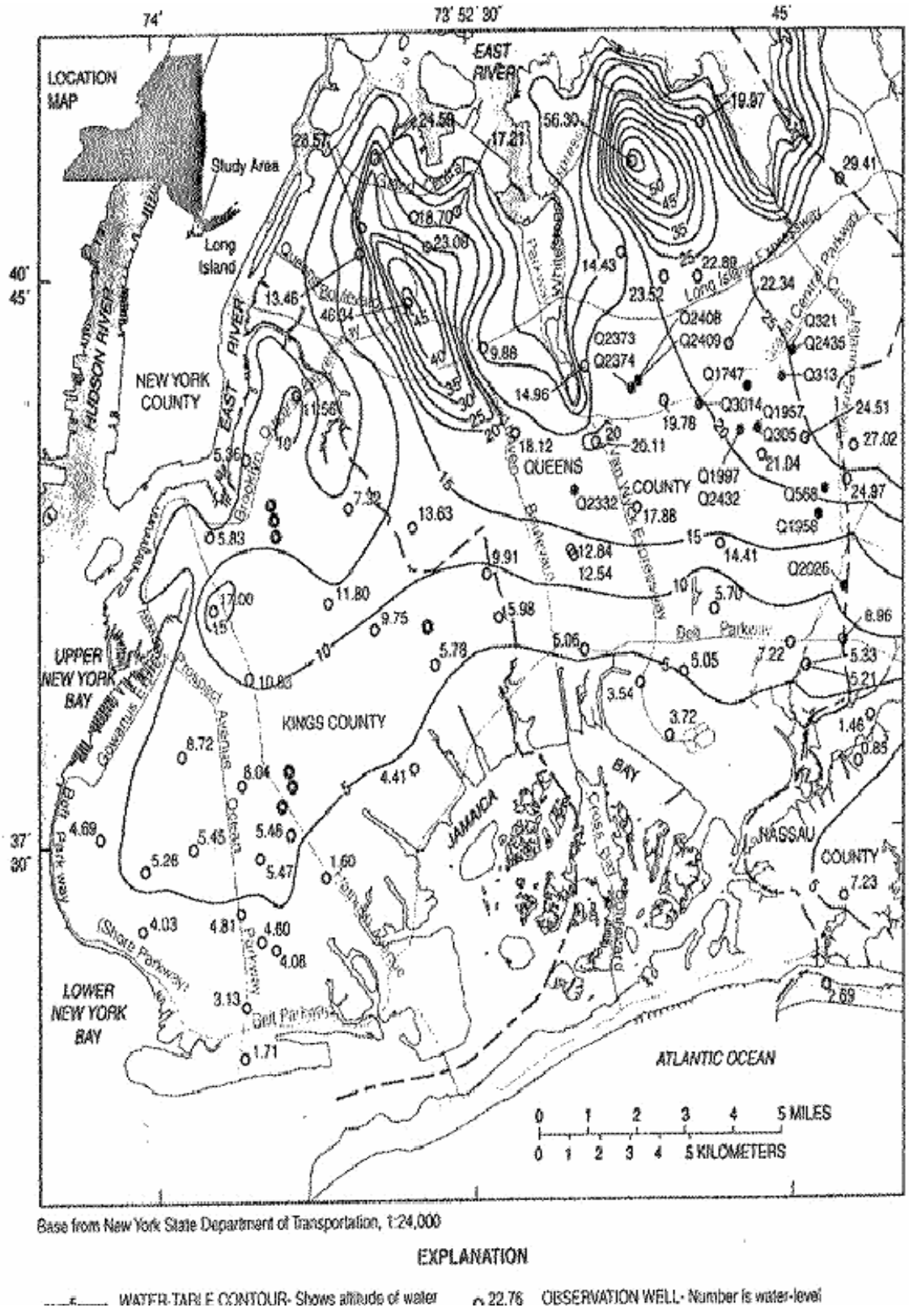
USGS MAP



42-02/10 Crescent Street, LIC, NY

Cosmos Environmental services, Inc.

FIGURE E GROUNDWATER ELEVATION MAP



42-02/10 Crescent Street, LIC, NY

Cosmos Environmental services, Inc.

APPENDIX I

1950 Sanborn Fire Insurance Map

Environmental Waste Management Associates, LLC
P.O. Box 5430
Parsippany, NJ 07054
Tel: (973) 560-1400

SCALE: N.T.S.	PROJECT# 206488
DATE: 7/28/08	
DRAWN BY: JM	
CHECKED BY: BC	
FILE: k:\drawings\206000\206488\206488f4.dwg	

1950 SANBORN FIRE INSURANCE MAP

41-10 CRESCENT STREET
QUEENS, NEW YORK

FIGURE# 4-5

SOURCE: EDR SANBORN, INC.

APPENDIX II

Ground Penetrating Radar (GPR) Survey

LAUREL ENVIRONMENTAL ASSOCIATES, LTD
52 ELM STREET • HUNTINGTON, NY • 11743-3402
PHONE: (631) 673-0612 • FAX: (631) 427-5323
WWW.LAURELENV.COM

February 6, 2009

Mr. Alex Avracen
Cosmos Contracting, Inc.
132 Franklin Place
P.O. Box 349
Woodmere, NY 11598

Re: Geophysical Survey at 4102 Crescent/4102 24th St, Long Island City, NY
LEA Project #09-125

Mr. Avracen,

On Sunday, February 1, 2009, Geophysicist Scott Yanuck conducted a Ground Penetrating Radar Survey of all accessible areas of the parking lot and building at the site. The following equipment was utilized in the survey:

- GSSI SIR-3000 Ground Penetrating Radar (GPR) Unit with 400 Mhz Antenna capable of reaching depths of up to twenty feet below grade.

Survey Techniques:

A GSSI model SIR-3000 with a 400 MHz antenna GPR system was used for the survey and consisted of a control unit, control cable and a transducer. The GPR control unit transmits a trigger pulse at a normal repetition rate of 50 KHz. The pulse is then sent to the transmitter electronics in the transducer (antenna) via the control cable where the trigger pulses are transformed into bipolar pulses with higher amplitudes. The transformed pulse will vary in shape and frequency according to the transducer used. The GSSI system is capable of transmitting electromagnetic energy into the subsurface of the earth in the frequency range of 16 MHz to 2000 MHz. In the subsurface, reflections of the pulse occur at boundaries where there is a dielectric contrast (void, steel, soil type). The reflected portion of the signal travels back to the antenna and the control unit and is subsequently shown on the display of the computers color video monitor for interpolation.

A qualified technician specified a coordinate system on the planimetric surface to locate any subsurface dielectric anomalies on the premises. The operator used known knowledge of the subsurface soil composition to calibrate the SIR-3000 system to site specific conditions. Factor settings such as range, gain, number of gain points, and scans per unit, are modified to yield the

most accurate data to describe the subsurface conditions. Four separate grids were surveyed and recorded in addition to on the fly surveys conducted in the southern third of the building and area to the south of the building. Grid data was modified with filters to yield more usable data and presented in three dimensions across the grid survey area.

Survey Results:

Data collected during the survey was reviewed by the operator and compared against past experience, technical judgment and prior site knowledge to classify any anomalies.

Upon final review the survey did not indicate the presence of any USTs at the subject site. Anomalies were found in the following areas:

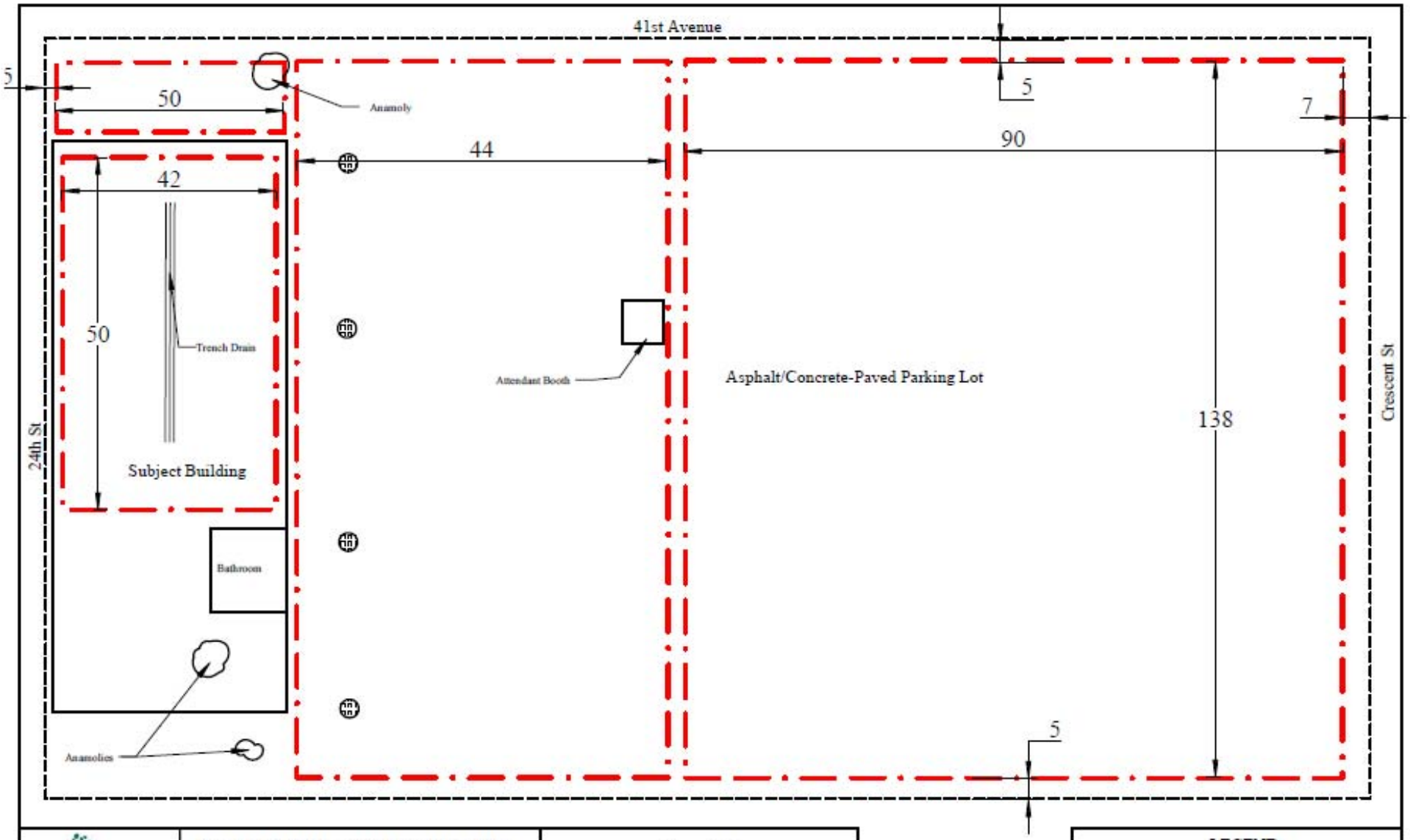
- Between SW corner of bathroom and southern wall of building
- Ten feet south of southern wall of building, approximately 50 feet from western property boundary
- Conduits leading from building/shack to gate at east side of property
- Drainage structures and piping east of building
- Floor drains and piping inside building
- Sewer cleanout along west side of building

See site sketch and 3-D GPR Images for further details.

Respectfully submitted by,

Scott A. Yanuck

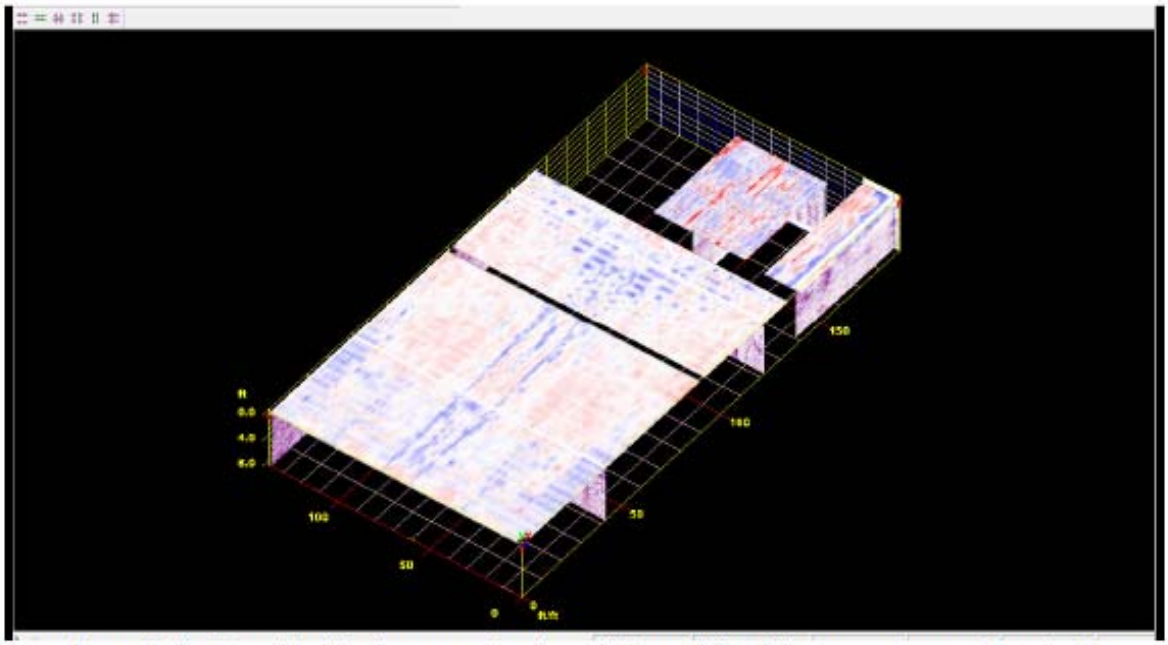
Attachment: Site Sketch
3-D GPR Images



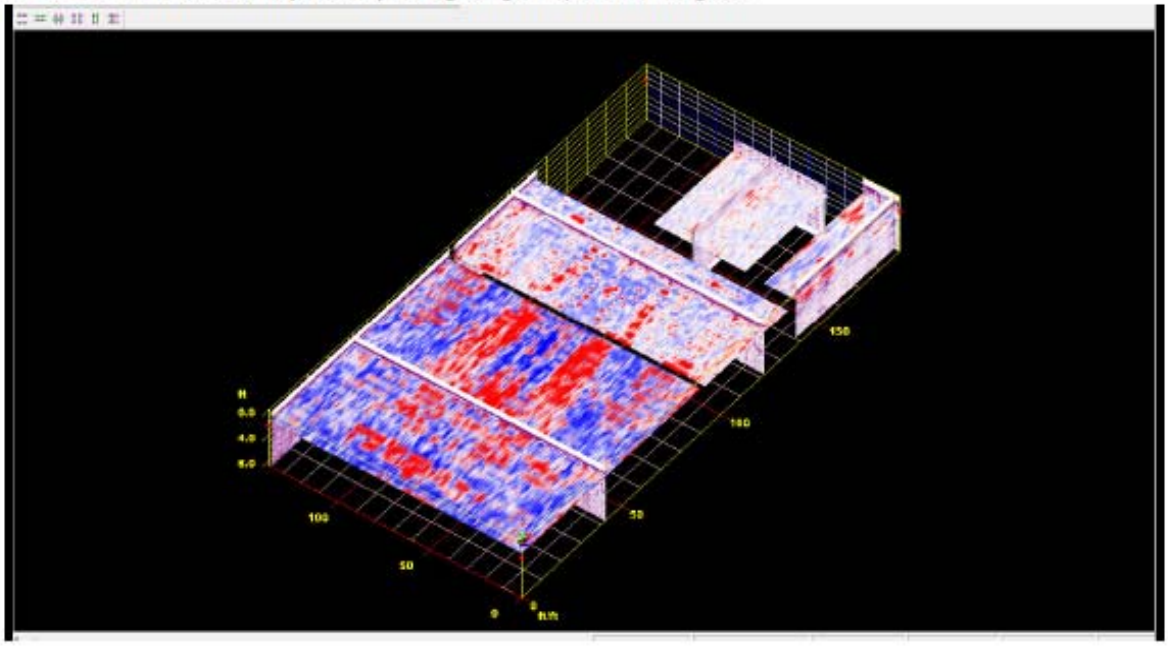
Laurel ENVIRONMENTAL ASSOCIATES, LTD	**Laurel Environmental Associates, Ltd.** 52 Elm Street Huntington, NY 11743 631-673-0612	Figure 1.0 GPR Sketch
	Drawn by SAY 2/2/09 — Not to Scale	4102 Crescent St Long Island City, New York

LEGEND

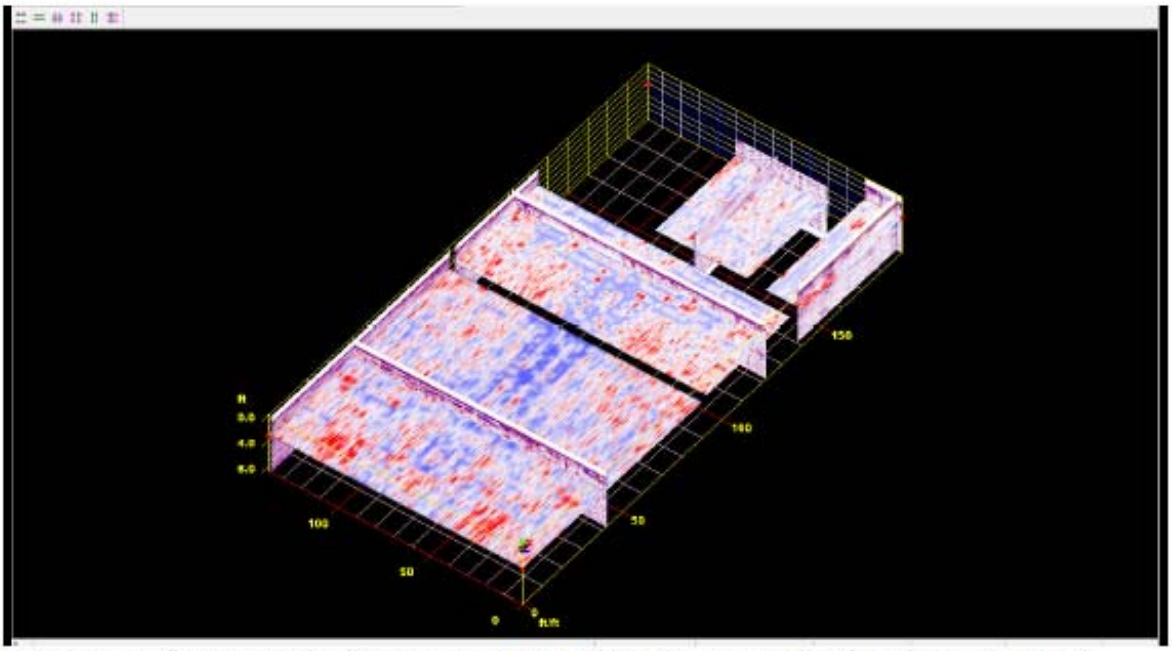
= Drywell



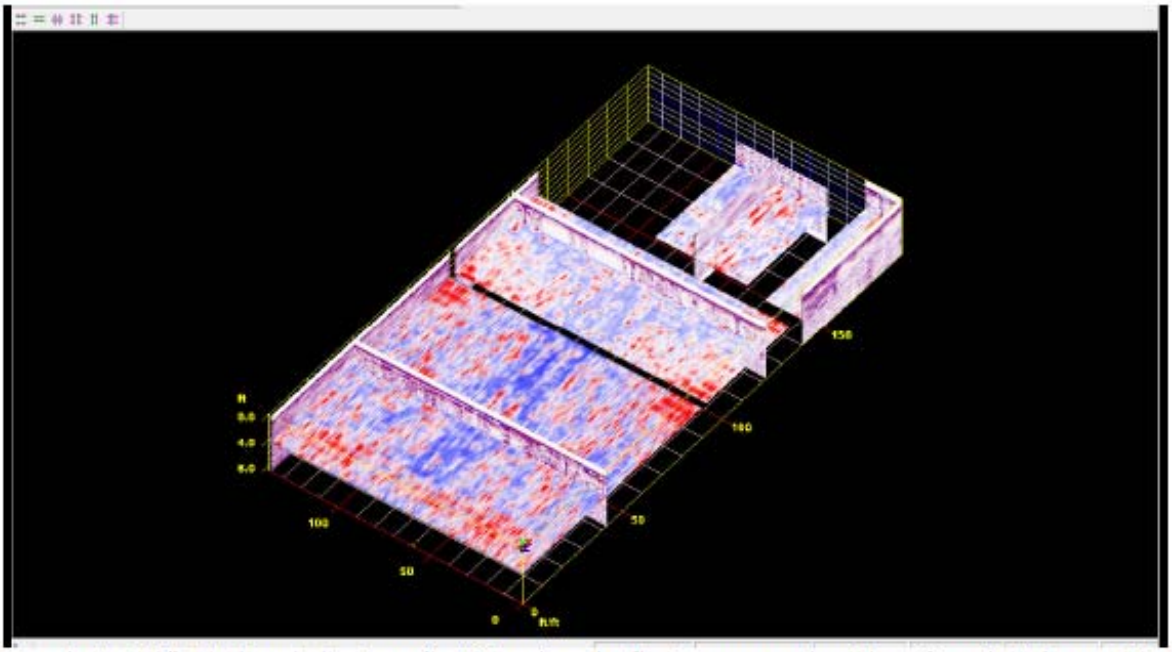
Snapshot at 12" – Note thin blue lines running through the middle of the property at y=60 and y=70 which are buried concuit, probably for lighting or operation of gate.



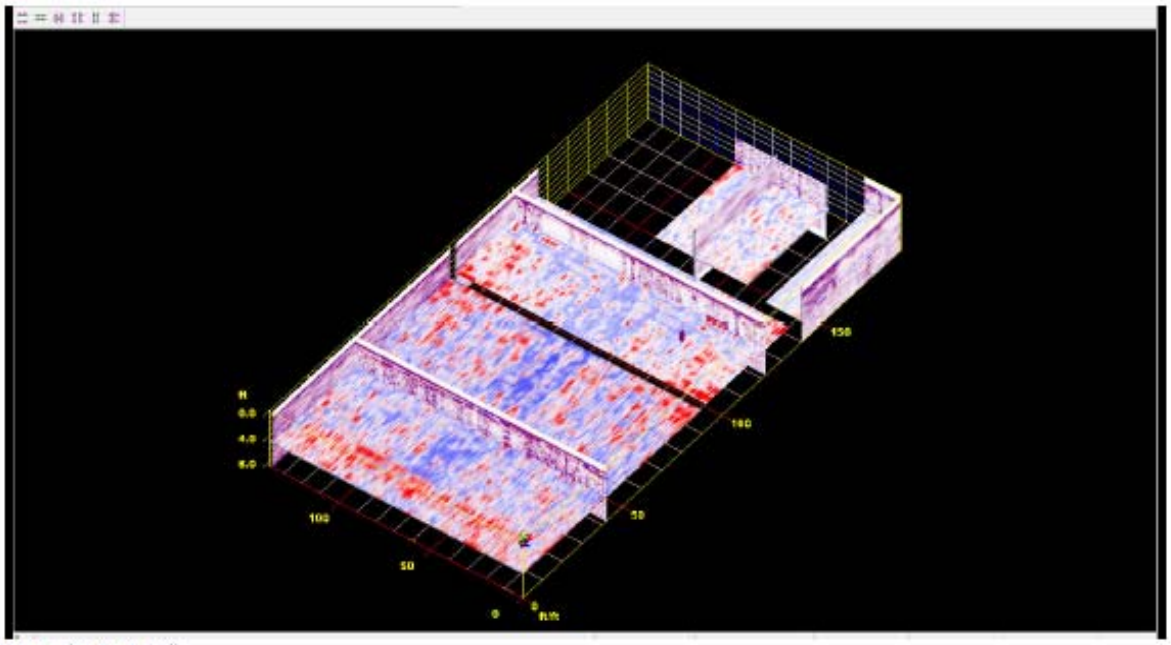
Snapshot at 24". Note large red masses and blue masses which are over fifty feet long along the y=50 and 100 lines. This is reflection of soils.



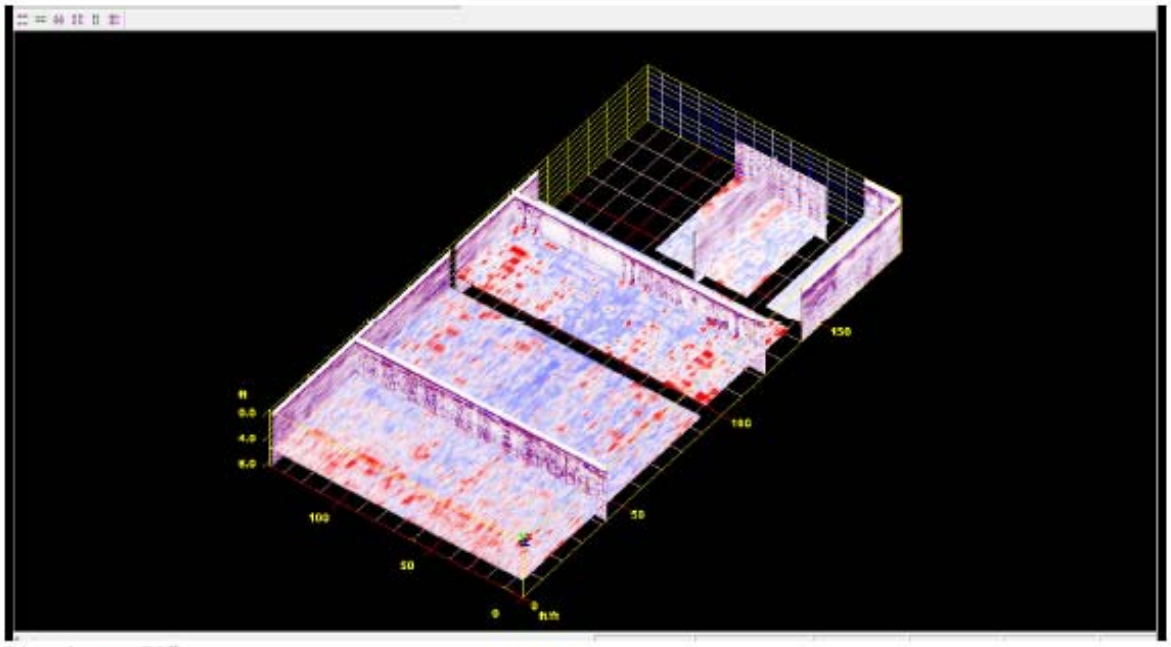
Snapshot at 36". Seeing soil reflection again in the 50' blue lines in middle of the first grid and soil reflection or possible conduit or drainage piping between heading parallel with the building in the second grid. Nothing of note in the grid under the building. The NW grid shows some reflections indicating anomaly near the x=150, y=10 location



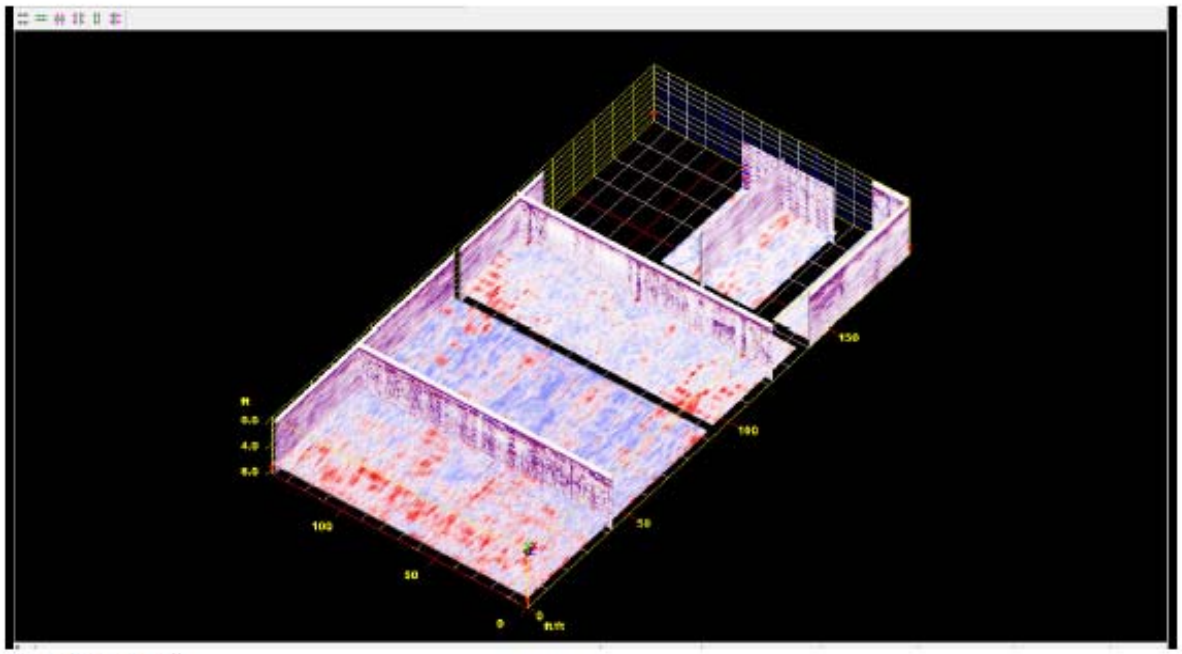
Snapshot at 48". Nothing indicative of a UST, only soil reflection or reverberation of conduit along y=70, y=80 lines.



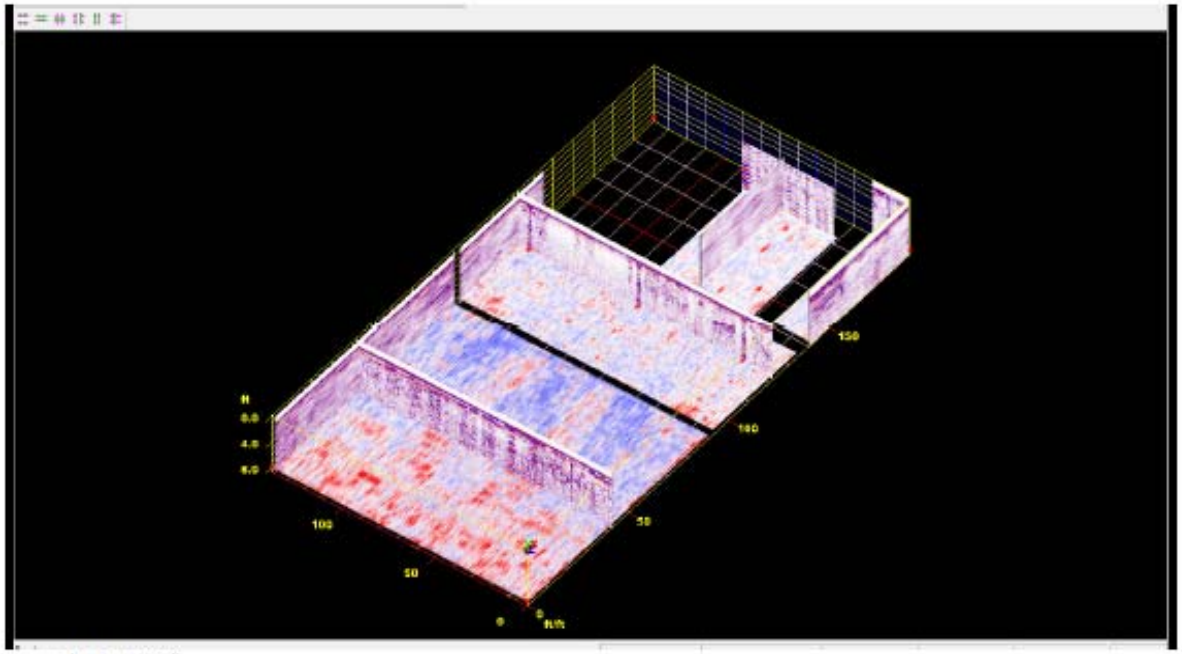
Snapshot at 60”



Snapshot at 72”



Snapshot at 84”



Snapshot at 96”

APPENDIX III

Analytical Tables

(DETECTED ANALYTES ONLY)

Table I

Soil Sampling & Analysis – Volatile Organics (EPA Method 8260)

CAS Number	Parameter Name	Parameter ID	B-1.1 (.5'-2.5')	B-1.2 (20'-22')	B-2.1 (.5'-2.5')	B-2.2 (20'-22')	B-3.1 (.5'-2.5')	B-3.2 (20'-22')	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	NYCRR 375 Protection of Groundwater	NYCRR 375 Restricted-Commercial	NYC 37 Restr Indu
	Sample ID / Unit		*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug*
95-63-6	**1,2,4-Trimethylbenzene**	VOC	<5.1	<5.3	**45**	**11**	<5.2	<5.6	NA	10,000	3,600	47,000	52,000	3,600	190,000	380
108-67-8	**1,3,5-Trimethylbenzene**	VOC	<5.1	<5.3	**11**	<6.4	<5.2	<5.6	NA	3,300	8,400	47,000	52,000	8,400	190,000	380
100-41-4	**Ethylbenzene**	VOC	<5.1	<5.3	**6.3**	<6.4	<5.2	<5.6	NA	5,500	1,000	30,000	41,000	1,000	390,000	780
91-20-3	**Naphthalene**	VOC	<5.1	<5.3	**33**	**9**	<5.2	<5.6	NA	13,000	12,000	100,000a	100,000a	12,000	500,000b	1,000
1330-20-7	**Total Xylenes**	VOC	<5.1	<5.3	**31.9**	**9.1**	<5.2	<5.6	NA	1,200	260	100,000a	100,000a	1,600	500,000b	1,000

CAS Number	Parameter Name	Parameter ID	B-4.1 (0.5'-2.5')	B-4.2 (20'-22')	B-5.1 (0.5'-2.5')	B-5.2 (20'-22')	B-6.1 (0.5'-2.5')	B-6.2 (20'-22')								
	Sample ID / Unit		*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug*
95-63-6	**1,2,4-Trimethylbenzene**	VOC	<5.6	<5.9	<5.2	<5.6	<5.2	<6.2	NA	10,000	3,600	47,000	52,000	3,600	190,000	380
108-67-8	**1,3,5-Trimethylbenzene**	VOC	<5.6	<5.9	<5.2	<5.6	<5.2	<6.2	NA	3,300	8,400	47,000	52,000	8,400	190,000	380
100-41-4	**Ethylbenzene**	VOC	<5.6	<5.9	<5.2	<5.6	<5.2	<6.2	NA	5,500	1,000	30,000	41,000	1,000	390,000	780
91-20-3	**Naphthalene**	VOC	<5.6	<5.9	<5.2	<5.6	<5.2	<6.2	NA	13,000	12,000	100,000a	100,000a	12,000	500,000b	1,000
1330-20-7	**Total Xylenes**	VOC	<5.6	<5.9	<5.2	<5.6	<5.2	<6.2	NA	1,200	260	100,000a	100,000a	1,600	500,000b	1,000

CAS Number	Parameter Name	Parameter ID	B-7.1 (0.5'-2.5')	B-7.2 (20'-22')	B-8.1 (0.5'-2.5')	B-8.2 (20'-22')	B-9.1 (0.5'-2.5')								
	Sample ID / Unit		*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug*
95-63-6	**1,2,4-Trimethylbenzene**	VOC	<5.5	<6.3	<5.3	<5.1	<5.6	NA	10,000	3,600	47,000	52,000	3,600	190,000	380
108-67-8	**1,3,5-Trimethylbenzene**	VOC	<5.5	<6.3	<5.3	<5.1	<5.6	NA	3,300	8,400	47,000	52,000	8,400	190,000	380
100-41-4	**Ethylbenzene**	VOC	<5.5	<6.3	<5.3	<5.1	<5.6	NA	5,500	1,000	30,000	41,000	1,000	390,000	780
91-20-3	**Naphthalene**	VOC	<5.5	<6.3	<5.3	<5.1	<5.6	NA	13,000	12,000	100,000a	100,000a	12,000	500,000b	1,000
1330-20-7	**Total Xylenes**	VOC	<5.5	<6.3	<5.3	<5.1	<5.6	NA	1,200	260	100,000a	100,000a	1,600	500,000b	1,000

Bold Font (Black) – Concentrations above MDL but within Recommended Soil Cleanup Objectives (TAGM) and/ or NYSDEC Background Levels limit
Bold Font (Red) – Concentrations above Recommended Soil Cleanup Objectives (TAGM)

Table II.A

Soil Sampling & Analysis – Semi-Volatile Organics (EPA Method 8270)

CAS Number	Parameter Name	Parameter ID	B-1.1 (.5'-2')	B-1.2 (20'-22')	B-2.1 (.5'-2')	B-2.2 (20'-22')	B-3.1 (.5'-2')	B-3.2 (20'-22')	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	NYCRR 375 Protection of Groundwater	NYCRR 375 Restricted-Commercial	NYCRR 375 Restricted-Industrial
	Sample ID / Unit		*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*
83-32-9	**Acenaphthene**	SVOC	**580**	<360	**610**	<340	<340	<360	NA	50,000	20,000	100,000a	100,000a	98,000	500,000b	1,000,000c
208-96-8	**Acenaphthylene**	SVOC	**490**	<360	<350	<340	<340	<360	NA	41,000	100,000a	100,000a	100,000a	107,000	500,000b	1,000,000c
120-12-7	**Anthracene**	SVOC	**1,800**	<360	**1,100**	<340	<340	<360	NA	50,000	100,000a	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
56-55-3	**Benzo(a)Anthracene**	SVOC	**4,800**	<360	**2,800**	<340	<340	<360	NA	224 or MDL	1,000c	1,000f	1,000f	1,000f	5,600	11,000
50-32-8	**Benzo(a)Pyrene**	SVOC	**3,800**	<360	**2,300**	<340	<340	<360	NA	61 or MDL	1,000c	1,000f	1,000f	22,000	1,000f	1,100
205-99-2	**Benzo(b)Fluoroanthene**	SVOC	**6,700**	<360	**4,200**	<340	<340	<360	NA	1,100	1,000c	1,000f	1,000f	1,700	5600	11,000
207-08-9	**Benzo(k)Fluoroanthene**	SVOC	**2,300**	<360	**1,400**	<340	<340	<360	NA	1,100	800c	1,000	3,900	1,700	56,000	110,000
191-24-2	**Benzo(g,h,i)Perylene**	SVOC	**1,300**	<360	**780**	<340	<340	<360	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
218-01-9	**Chrysene**	SVOC	**4,800**	<360	**3,100**	<340	<340	<360	NA	400	1,000c	1,000f	3,900	1,000f	56,000	110,000
132-64-9	**Dibenzofuran**	SVOC	**590**	<360	**540**	<340	<340	<360	NA	6,200	7,000	14,000	59,000	210,000	350,000	1,000,000c
206-44-0	**Fluoranthene**	SVOC	**13,000**	<360	**6,400**	<340	<340	<360	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
86-73-7	**Fluorene**	SVOC	**840**	<360	**690**	<340	<340	<360	NA	50,000	30,000	100,000a	100,000a	386,000	500,000b	1,000,000c
193-39-5	**Indeno(1,2,3-c,d)Pyrene**	SVOC	**640**	<360	<350	<340	<340	<360	NA	3,200	500c	500f	500f	8,200	5,600	11,000
85-01-8	**Phenanthrene**	SVOC	**10,000**	<360	**6,500**	<340	<340	<360	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
129-00-0	**Pyrene**	SVOC	**11,000**	<360	**6,900**	<340	<340	<360	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
	Total		**62,640**		**37,320**											

Bold Font (Black) – Concentrations above MDL but within Recommended Soil Cleanup Objectives (TAGM) and/ or NYSDEC Background Levels limit
Bold Font (Red) – Concentrations above Recommended Soil Cleanup Objectives (TAGM)

Table II.B

Soil Sampling & Analysis – Semi-Volatile Organics (EPA Method 8270)

CAS Number	Parameter Name	Parameter ID	B-4.1 (.5'-2.5')	B-4.2 (20'-22')	B-5.1 (.5'-2.5')	B-5.2 (20'-22')	B-6.1 (.5'-2.5')	B-6.2 (20'-22')	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	NYCRR 375 Protection of Groundwater	NYCRR 375 Restricted-Commercial	NYCRR 375 Restricted-Industrial
	Sample ID / Unit		*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*
83-32-9	**Acenaphthene**	SVOC	<370	<390	<3500	<3700	<350	<430	NA	50,000	20,000	100,000a	100,000a	98,000	500,000b	1,000,000c
208-96-8	**Acenaphthylene**	SVOC	<370	<390	<3500	<3700	<350	<430	NA	41,000	100,000a	100,000a	100,000a	107,000	500,000b	1,000,000c
120-12-7	**Anthracene**	SVOC	<370	<390	<3500	<3700	<350	<430	NA	50,000	100,000a	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
56-55-3	**Benzo(a)Anthracene**	SVOC	<370	<390	**6,100**	<3700	<350	<430	NA	224 or MDL	1,000c	1,000f	1,000f	1,000f	5,600	11,000
50-32-8	**Benzo(a)Pyrene**	SVOC	<370	<390	**6,000**	<3700	<350	<430	NA	61 or MDL	1,000c	1,000f	1,000f	22,000	1,000f	1,100
205-99-2	**Benzo(b)Fluoroanthene**	SVOC	<370	<390	**11,000**	<3700	<350	<430	NA	1,100	1,000c	1,000f	1,000f	1,700	5600	11,000
207-08-9	**Benzo(k)Fluoroanthene**	SVOC	<370	<390	**3,800**	<3700	<350	<430	NA	1,100	800c	1,000	3,900	1,700	56,000	110,000
191-24-2	**Benzo(g,h,i)Perylene**	SVOC	<370	<390	<3500	<3700	<350	<430	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
218-01-9	**Chrysene**	SVOC	<370	<390	**6,600**	<3700	<350	<430	NA	400	1,000c	1,000f	3,900	1,000f	56,000	110,000
132-64-9	**Dibenzofuran**	SVOC	<370	<390	<3500	<3700	<350	<430	NA	6,200	7,000	14,000	59,000	210,000	350,000	1,000,000c
206-44-0	**Fluoranthene**	SVOC	<370	**640**	**11,000**	<3700	<350	<430	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
86-73-7	**Fluorene**	SVOC	<370	<390	<3500	<3700	<350	<430	NA	50,000	30,000	100,000a	100,000a	386,000	500,000b	1,000,000c
193-39-5	**Indeno(1,2,3-c,d)Pyrene**	SVOC	<370	<390	<3500	<3700	<350	<430	NA	3,200	500c	500f	500f	8,200	5,600	11,000
85-01-8	**Phenanthrene**	SVOC	<370	**630**	**4,300**	<3700	<350	<430	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
129-00-0	**Pyrene**	SVOC	<370	**720**	**11,000**	<3700	<350	<430	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
	Total			**1,990**	**59,800**											

Bold Font (Black) – Concentrations above MDL but within Recommended Soil Cleanup Objectives (TAGM) and/ or NYSDEC Background Levels limit
Bold Font (Red) – Concentrations above Recommended Soil Cleanup Objectives (TAGM)

Table II.C

Soil Sampling & Analysis – Semi-Volatile Organics (EPA Method 8270)

CAS Number	Parameter Name	Parameter ID	[redacted]	B-7.1 (.5'-2.5')	B-7.2 (20'-22')	B-8.1 (.5'-2.5')	B-8.2 (20'-22')	B-9.1 (.5'-2.5')	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	NYCRR 375 Protection of Groundwater	NYCRR 375 Restricted-Commercial	NYCRR 375 Restricted-Industrial
	Sample ID / Unit			*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*
83-32-9	**Acenaphthene**	SVOC		<340	<340	<340	<360	<340	NA	50,000	20,000	100,000a	100,000a	98,000	500,000b	1,000,000c
208-96-8	**Acenaphthylene**	SVOC		<340	<340	<340	<360	<340	NA	41,000	100,000a	100,000a	100,000a	107,000	500,000b	1,000,000c
120-12-7	**Anthracene**	SVOC		<340	<340	<340	<360	<340	NA	50,000	100,000a	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
56-55-3	**Benzo(a)Anthracene**	SVOC		<340	<340	**1,100**	<360	<340	NA	224 or MDL	1,000c	1,000f	1,000f	1,000f	5,600	11,000
50-32-8	**Benzo(a)Pyrene**	SVOC		<340	<340	**890**	<360	<340	NA	61 or MDL	1,000c	1,000f	1,000f	22,000	1,000f	1,100
205-99-2	**Benzo(b)Fluoroanthene**	SVOC		<340	<340	**1,400**	<360	<340	NA	1,100	1,000c	1,000f	1,000f	1,700	5600	11,000
207-08-9	**Benzo(k)Fluoroanthene**	SVOC		<340	<340	**520**	<360	<340	NA	1,100	800c	1,000	3,900	1,700	56,000	110,000
191-24-2	**Benzo(g,h,i)Perylene**	SVOC		<340	<340	**380**	<360	<340	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
218-01-9	**Chrysene**	SVOC		<340	<340	**1,100**	<360	<340	NA	400	1,000c	1,000f	3,900	1,000f	56,000	110,000
132-64-9	**Dibenzofuran**	SVOC		<340	<340	<340	<360	<340	NA	6,200	7,000	14,000	59,000	210,000	350,000	1,000,000c
206-44-0	**Fluoranthene**	SVOC		<340	<340	**2,100**	<360	<340	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
86-73-7	**Fluorene**	SVOC		<340	<340	<340	<360	<340	NA	50,000	30,000	100,000a	100,000a	386,000	500,000b	1,000,000c
193-39-5	**Indeno(1,2,3-c,d)Pyrene**	SVOC		<340	<340	<340	<360	<340	NA	3,200	500c	500f	500f	8,200	5,600	11,000
85-01-8	**Phenanthrene**	SVOC		<340	<340	**1,100**	<360	<340	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
129-00-0	**Pyrene**	SVOC		<340	<340	**2,000**	<360	<340	NA	50,000	100,000	100,000a	100,000a	1,000,000c	500,000b	1,000,000c
	Total					**10,590**										

Bold Font (Black) – Concentrations above MDL but within Recommended Soil Cleanup Objectives (TAGM) and/ or NYSDEC Background Levels limit
Bold Font (Red) – Concentrations above Recommended Soil Cleanup Objectives (TAGM)

Table III

Soil Sampling & Analysis – Pesticides and PCBs (EPA Method 8081/8082)

CAS Number	Parameter Name	Parameter ID	B-1.1 (.5'-2.5')	B-1.2 (20'-22')	B-2.1 (.5'-2.5')	B-2.2 (20'-22')	B-3.1 (.5'-2.5')	B-3.2 (20'-22')	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	NYCRR 375 Protection of Groundwater	NYCRR 375 Restricted-Commercial	NYCRR 375 Restricted-Industrial
	Sample ID / Unit		*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*
50-29-3	**4,4-DDT**	PESTICIDE	<2.06	<2.16	<2.12	<2.51	<2.05	<2.18	NA	2,100	3.3b	1,700	7,900	136,000	47,000	94,000
319-84-6	**alpha-BHC**	PESTICIDE	<2.06	<2.16	<2.12	<2.51	<2.05	<2.18	NA	110	20	97	480	20	3,400	6,800
7421-93-4	**Endrin Aldehyde**	PESTICIDE	**4.63**	<2.16	<2.12	<2.51	<2.05	<2.18	NA	NA	NA	NA	NA	NA	NA	NA
53494-70-5	**Endrin Ketone**	PESTICIDE	**30.5**	<2.16	<2.12	<2.51	<2.05	<2.18	NA	NA	NA	NA	NA	NA	NA	NA

CAS Number	Parameter Name	Parameter ID	B-4.1 (.5'-2.5')	B-4.2 (20'-22')	B-5.1 (.5'-2.5')	B-5.2 (20'-22')	B-6.1 (.5'-2.5')	B-6.2 (20'-22')	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	NYCRR 375 Protection of Groundwater	NYCRR 375 Restricted-Commercial	NYCRR 375 Restricted-Industrial
	Sample ID / Unit		*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*
50-29-3	**4,4-DDT**	PESTICIDE	<2.23	<2.34	**13.9**	<2.22	<2.09	<2.54	NA	2,100	3.3b	1,700	7,900	136,000	47,000	94,000
319-84-6	**alpha-BHC**	PESTICIDE	**3.88**	<2.34	<2.11	<2.22	<2.09	<2.54	NA	110	20	97	480	20	3,400	6,800
7421-93-4	**Endrin Aldehyde**	PESTICIDE	<2.23	<2.34	**2.7**	<2.22	<2.09	<2.54	NA	NA	NA	NA	NA	NA	NA	NA
53494-70-5	**Endrin Ketone**	PESTICIDE	<2.23	<2.34	**31.1**	<2.22	<2.09	<2.54	NA	NA	NA	NA	NA	NA	NA	NA

CAS Number	Parameter Name	Parameter ID		B-7.1 (.5'-2.5')	B-7.2 (20'-22')	B-8.1 (.5'-2.5')	B-8.2 (20'-22')	B-9.1 (.5'-2.5')	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	NYCRR 375 Protection of Groundwater	NYCRR 375 Restricted-Commercial	NYCRR 375 Restricted-Industrial
	Sample ID / Unit			*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*
50-29-3	**4,4-DDT**	PESTICIDE		<2.14	<2.55	<2.07	<2.14	<2.2	NA	2,100	3.3b	1,700	7,900	136,000	47,000	94,000
319-84-6	**alpha-BHC**	PESTICIDE		<2.14	<2.55	<2.07	<2.14	<2.2	NA	110	20	97	480	20	3,400	6,800
7421-93-4	**Endrin Aldehyde**	PESTICIDE		<2.14	<2.55	<2.07	<2.14	<2.2	NA	NA	NA	NA	NA	NA	NA	NA
53494-70-5	**Endrin Ketone**	PESTICIDE		<2.14	<2.55	<2.07	<2.14	<2.2	NA	NA	NA	NA	NA	NA	NA	NA

Bold Font (Black) – Concentrations above MDL but within Recommended Soil Cleanup Objectives (TAGM) and/ or NYSDEC Background Levels limit
Bold Font (Red) – Concentrations above Recommended Soil Cleanup Objectives (TAGM)

Table IV.A

Soil Sampling & Analysis – TAL Metals (EPA Method 6010/6020/7471)

CAS Number	Parameter Name	Parameter ID	B-1.1 (.5'-2.5')	B-1.2 (20'-22')	B-2.1 (.5'-2.5')	B-2.2 (20'-22')	B-3.1 (.5'-2.5')	B-3.2 (20'-22')	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	NYCRR 375 Protection of Groundwater	NYCRR 375 Restricted-Commercial	NYCRR 375 Restricted-Industrial
	Sample ID / Unit		*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*
7429-90-5	**Aluminum**	METAL	**5,559**	**52,588**	**6,093**	**7,779**	**5,605**	**4,638**	33,000	SB	NA	NA	NA	NA	NA	NA
7440-36-0	**Antimony**	METAL	0.682	3.65	0.745	1.06	0.344	0.218	NA	SB	NA	NA	NA	NA	NA	NA
7440-38-2	**Arsenic**	METAL	**1.79**	**2.01**	**2.1**	**0.432**	**0.617**	**0.308**	3.0-12	7.5 or SB	13c	16f	16f	16f	16f	16f
7440-39-3	**Barium**	METAL	**63.9**	**264**	**123**	**55.7**	**25.1**	**33.1**	15-600	300 or SB	350c	350f	400	820	400	10,000d
7440-41-7	**Beryllium**	METAL	**0.257**	**2.73**	**0.301**	**0.349**	**0.232**	**0.197**	0-1.75	.16 or SB	7.2	14	72	47	590	2,700
7440-43-9	**Cadmium**	METAL	**1.73**	**13.6**	**2.23**	**9.14**	**2.38**	**2.41**	0.1-1	1 or SB	2.5c	2.5f	4.3	7.5	9.3	60
7440-70-2	**Calcium**	METAL	**3,289**	**21,707**	**2,246**	**5,475**	**1,430**	**3,985**	130-35,000	SB	NA	NA	NA	NA	NA	NA
7440-47-3	**Chromium**	METAL	**14.5**	**165**	**16.3**	**19.6**	**11.3**	**11.3**	1.5-40	10 or SB	NA	NA	110	NA	NA	NA
16065-83-1	**Chromium, trivalent**	METAL	**14.5**	**165**	**16.3**	**19.6**	**11.3**	**11.3**	NA	NA	30c	36	180	NA	1,500	6,800
7440-48-4	**Cobalt**	METAL	**6.25**	**42.5**	**5.45**	**7.47**	**3.87**	**4.85**	2.5-60	30 or SB	NA	NA	NA	NA	NA	NA
7440-50-8	**Copper**	METAL	**85.2**	**106**	**27.4**	**22.1**	**13.9**	**11.8**	1.0-50	25 or SB	50	270	270	1,720	270	10,000d
7439-89-6	**Iron**	METAL	**9,662**	**86,383**	**11,725**	**23,455**	**8,796**	**8,523**	2,000-550,000	2,000 or SB	NA	NA	NA	NA	NA	NA
7439-92-1	**Lead**	METAL	**100**	**36.8**	**65.3**	**9.2**	**4.49**	**5.46**	4.0-61 or 200-500	SB	63c	400	400	450	1,000	3,900
7439-95-4	**Magnesium**	METAL	**2,192**	**25,431**	**2,582**	**5,436**	**2,923**	**3,189**	100-5,000	SB	NA	NA	NA	NA	NA	NA
7439-96-5	**Manganese**	METAL	**235**	**2,553**	**1,533**	**341**	**212**	**266**	50-5,000	SB	1,600c	2,000f	2,000f	2,000f	10,000d	10,000d
7439-97-6	**Mercury**	METAL	<0.1	**0.107**	**0.178**	**1.48**	<0.1	**0.11**	0.001-0.2	.1 or SB	.18c	0.81j	.81j	0.73	2.8j	5.7j
7440-02-0	**Nickel**	METAL	**12.3**	**102**	**11.3**	**15.2**	**9.16**	**9.2**	0.5-25	13 or SB	30	140	310	130	310	10,000d
7440-09-7	**Potassium**	METAL	**627**	**955**	**866**	**1,660**	**572**	**910**	8,500-43,000	SB	NA	NA	NA	NA	NA	NA
7440-22-4	**Silver**	METAL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA	SB	2	36	180	8.3	1,500	6,800
7440-23-5	**Sodium**	METAL	**95.6**	**1819**	**144**	**288**	**77.6**	**172**	6,000-8,000	SB	NA	NA	NA	NA	NA	NA
7440-28-0	**Thallium**	METAL	**0.191**	**0.715**	**0.393**	**3.03**	**0.421**	**0.418**	NA	SB	NA	NA	NA	NA	NA	NA
7440-62-2	**Vanadium**	METAL	**16.6**	**153**	**18**	**23.6**	**14.4**	**13.6**	1-300	150 or SB	NA	NA	NA	NA	NA	NA
7440-66-6	**Zinc**	METAL	**278**	**215**	**95.7**	**49.2**	**19.1**	**22.8**	9.0-50	20 or SB	109c	2,200	10,000d	2,480	10,000d	10,000d

Bold Font (Black) – Concentrations above MDL but within Recommended Soil Cleanup Objectives (TAGM) and/ or NYSDEC Background Levels limit
Bold Font (Red) – Concentrations above Recommended Soil Cleanup Objectives (TAGM)

Table IV.B

Soil Sampling & Analysis – TAL Metals (EPA Method 6010/6020/7471)

CAS Number	Parameter Name	Parameter ID	B-4.1 (.5'-2.5')	B-4.2 (20'-22')	B-5.1 (.5'-2.5')	B-5.2 (20'-22')	B-6.1 (.5'-2.5')	B-6.2 (20'-22')	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	NYCRR 375 Protection of Groundwater	NYCRR 375 Restricted-Commercial	NYCRR 375 Restricted-Industrial
	Sample ID / Unit		*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*
7429-90-5	**Aluminum**	METAL	**12,889**	**7,495**	**6,283**	**7,399**	**3,726**	**7,393**	33,000	SB	NA	NA	NA	NA	NA	NA
7440-36-0	**Antimony**	METAL	0.496	0.538	0.358	2.11	0.356	0.563	NA	SB	NA	NA	NA	NA	NA	NA
7440-38-2	**Arsenic**	METAL	**1.13**	**0.569**	**3.15**	<0.1	<0.1	<0.1	3.0-12	7.5 or SB	13c	16f	16f	16f	16f	16f
7440-39-3	**Barium**	METAL	**87.4**	**67.9**	**122**	**42.7**	**24.8**	**37**	15-600	300 or SB	350c	350f	400	820	400	10,000d
7440-41-7	**Beryllium**	METAL	**0.456**	**0.229**	**0.316**	**0.27**	**0.197**	**0.418**	0-1.75	.16 or SB	7.2	14	72	47	590	2,700
7440-43-9	**Cadmium**	METAL	**2.95**	**2.4**	**2.98**	**3.12**	**2.71**	**3.6**	0.1-1	1 or SB	2.5c	2.5f	4.3	7.5	9.3	60
7440-70-2	**Calcium**	METAL	**9,009**	**9,393**	**14,223**	**2,978**	**638**	**3,170**	130-35,000	SB	NA	NA	NA	NA	NA	NA
7440-47-3	**Chromium**	METAL	**25.5**	**21.4**	**15.1**	**20.6**	**10.7**	**16.6**	1.5-40	10 or SB	NA	NA	110	NA	NA	NA
16065-83-1	**Chromium, trivalent**	METAL	**25.5**	**21.4**	**15.1**	**20.6**	**10.7**	**16.6**	NA	NA	30c	36	180	NA	1,500	6,800
7440-48-4	**Cobalt**	METAL	**7.95**	**6.86**	**4.47**	**6.04**	**3.23**	**7.33**	2.5-60	30 or SB	NA	NA	NA	NA	NA	NA
7440-50-8	**Copper**	METAL	**33.8**	**23.4**	**48.6**	**16.9**	**9.97**	**15.4**	1.0-50	25 or SB	50	270	270	1,720	270	10,000d
7439-89-6	**Iron**	METAL	**16,513**	**13,849**	**10,300**	**14,049**	**6,663**	**14,644**	2,000-550,000	2,000 or SB	NA	NA	NA	NA	NA	NA
7439-92-1	**Lead**	METAL	**67.1**	**29.4**	**217**	**26.3**	**7.87**	**6.79**	4.0-61 or 200-500	SB	63c	400	400	450	1,000	3,900
7439-95-4	**Magnesium**	METAL	**3,211**	**6,762**	**3,723**	**3,759**	**1,612**	**4,076**	100-5,000	SB	NA	NA	NA	NA	NA	NA
7439-96-5	**Manganese**	METAL	**334**	**308**	**231**	**310**	**259**	**396**	50-5,000	SB	1,600c	2,000f	2,000f	2,000f	10,000d	10,000d
7439-97-6	**Mercury**	METAL	**0.156**	**0.112**	**0.235**	**0.111**	**0.101**	**0.125**	0.001-0.2	.1 or SB	.18c	0.81j	.81j	0.73	2.8j	5.7j
7440-02-0	**Nickel**	METAL	**16.5**	**15.2**	**13.9**	**12.9**	**7.15**	**14.3**	0.5-25	13 or SB	30	140	310	130	310	10,000d
7440-09-7	**Potassium**	METAL	**1,193**	**1,388**	**758**	**184**	**636**	**1,363**	8,500-43,000	SB	NA	NA	NA	NA	NA	NA
7440-22-4	**Silver**	METAL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA	SB	2	36	180	8.3	1,500	6,800
7440-23-5	**Sodium**	METAL	**494**	**349**	**189**	**130**	**119**	**192**	6,000-8,000	SB	NA	NA	NA	NA	NA	NA
7440-28-0	**Thallium**	METAL	**0.214**	**0.243**	<0.1	**1.27**	**0.493**	**0.263**	NA	SB	NA	NA	NA	NA	NA	NA
7440-62-2	**Vanadium**	METAL	**30.5**	**24**	**34.5**	**23.5**	**9.43**	**23.5**	1-300	150 or SB	NA	NA	NA	NA	NA	NA
7440-66-6	**Zinc**	METAL	**73.9**	**49.1**	**148**	**42.2**	**18.8**	**35**	9.0-50	20 or SB	109c	2,200	10,000d	2,480	10,000d	10,000d

Bold Font (Black) – Concentrations above MDL but within Recommended Soil Cleanup Objectives (TAGM) and/ or NYSDEC Background Levels limit
Bold Font (Red) – Concentrations above Recommended Soil Cleanup Objectives (TAGM)

Table IV.C

Soil Sampling & Analysis – TAL Metals (EPA Method 6010/6020/7471)

Parameter Name	Parameter ID	[redacted]	B-7.1 (.5'-2.5')	B-7.2 (20'-22')	B-8.1 (.5'-2.5')	B-8.2 (20'-22')	B-9.1 (.5'-2.5')	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	NYCRR 375 Protection of Groundwater	NYCRR 375 Restricted-Commercial	NYCRR 375 Restricted-Industrial
Sample ID / Unit			*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*
Aluminum	METAL		**6,011**	**7,109**	**4,564**	**6,097**	**4,571**	33,000	SB	NA	NA	NA	NA	NA	NA
Antimony	METAL		0.665	0.4	1.72	0.614	0.234	NA	SB	NA	NA	NA	NA	NA	NA
Arsenic	METAL		0.2	0.158	**0.744**	<0.1	**0.837**	3.0-12	7.5 or SB	13c	16f	16f	16f	16f	16f
Barium	METAL		**34.2**	**41.1**	**28.2**	**28.6**	**31.2**	15-600	300 or SB	350c	350f	400	820	400	10,000d
Beryllium	METAL		**0.268**	**0.261**	**0.206**	**0.319**	**0.23**	0-1.75	.16 or SB	7.2	14	72	47	590	2,700
Cadmium	METAL		**4.06**	**4.33**	**1.41**	**1.69**	**4.84**	0.1-1	1 or SB	2.5c	2.5f	4.3	7.5	9.3	60
Calcium	METAL		**2,076**	**3,428**	**1,410**	**2,121**	**1,733**	130-35,000	SB	NA	NA	NA	NA	NA	NA
Chromium	METAL		**17.4**	**17.3**	**11.1**	**16.1**	**10.4**	1.5-40	10 or SB	NA	NA	110	NA	NA	NA
Chromium, trivalent	METAL		**17.4**	**17.3**	**11.1**	**16.1**	**10.4**	NA	NA	30c	36	180	NA	1,500	6,800
Cobalt	METAL		**4.74**	**6.82**	**3.05**	**5.13**	**4.95**	2.5-60	30 or SB	NA	NA	NA	NA	NA	NA
Copper	METAL		**14.8**	**16.9**	**9.7**	**10.5**	**17.1**	1.0-50	25 or SB	50	270	270	1,720	270	10,000d
Iron	METAL		**9,932**	**13,384**	**7,800**	**10,735**	**7,484**	2,000-550,000	2,000 or SB	NA	NA	NA	NA	NA	NA
Lead	METAL		**7.1**	**7.81**	**16.8**	**4.73**	**20.9**	4.0-61 or 200-500	SB	63c	400	400	450	1,000	3,900
Magnesium	METAL		**2,432**	**4,318**	**1,743**	**2,930**	**1,785**	100-5,000	SB	NA	NA	NA	NA	NA	NA
Manganese	METAL		**268**	**320**	**146**	**327**	**245**	50-5,000	SB	1,600c	2,000f	2,000f	2,000f	10,000d	10,000d
Mercury	METAL		**0.106**	**0.125**	**0.101**	**0.103**	**0.106**	0.001-0.2	.1 or SB	.18c	0.81j	.81j	0.73	2.8j	5.7j
Nickel	METAL		**10.7**	**14.2**	**7.54**	**10.9**	**8.6**	0.5-25	13 or SB	30	140	310	130	310	10,000d
Potassium	METAL		**865**	**1,267**	**602**	**1,066**	**643**	8,500-43,000	SB	NA	NA	NA	NA	NA	NA
Silver	METAL		<0.1	<0.1	<0.1	<0.1	**0.263**	NA	SB	2	36	180	8.3	1,500	6,800
Sodium	METAL		**134**	**270**	**104**	**172**	**120**	6,000-8,000	SB	NA	NA	NA	NA	NA	NA
Thallium	METAL		**1.21**	**0.803**	**0.151**	<0.1	**2.13**	NA	SB	NA	NA	NA	NA	NA	NA
Vanadium	METAL		**15.4**	**23.6**	**12.2**	**17.4**	**11.1**	1-300	150 or SB	NA	NA	NA	NA	NA	NA
Zinc	METAL		**35.9**	**38.6**	**27.6**	**23.9**	**41.5**	9.0-50	20 or SB	109c	2,200	10,000d	2,480	10,000d	10,000d

Bold Font (Black) – Concentrations above MDL but within Recommended Soil Cleanup Objectives (TAGM) and/ or NYSDEC Background Levels limit
Bold Font (Red) – Concentrations above Recommended Soil Cleanup Objectives (TAGM)

Table V

Groundwater Sampling & Analysis – TAL Metals (EPA Method 6010/6020/7471)

CAS Number	Parameter Name / Sample ID	Parameter ID	MW-1	MW-1	MW-2	MW-2	MW-4	MW-4	MW-6	MW-6	MW-8	MW-8		NYSDEC TOGS 1.1.1. Ambient Water Quality Standards and Guidance Values
	Unit		*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*FILTERED*		*ug/L*
7429-90-5	**Aluminum, Al**	METAL	**29.5**	**1.82**	**112**	**8.94**	**40.7**	**0.506**	**37**	**0.24**	**7.85**	**0.177**		0.1
7440-36-0	**Antimony, Sb**	METAL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.003
7440-38-2	**Arsenic, As**	METAL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.025
7440-39-3	**Barium, Ba**	METAL	**0.262**	<0.1	**1.18**	<0.1	**0.647**	<0.1	**0.421**	<0.1	<0.1	<0.1		1
7440-41-7	**Beryllium, Be**	METAL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.003
7440-43-9	**Cadmium, Cd**	METAL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.005
7440-70-2	**Calcium, Ca**	METAL	**22.7**	**6.84**	**53.6**	**6.53**	**142**	**40.3**	**91.4**	**28.2**	**44.8**	**20.5**		NA
7440-47-3	**Chromium, Cr**	METAL	<0.1	<0.1	**0.289**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.05
16065-83-1	**Chromium, trivalent**	METAL	<0.1	<0.1	**0.289**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		NA
7440-48-4	**Cobalt, Co**	METAL	<0.1	<0.1	**0.161**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		NA
7440-50-8	**Copper, Cu**	METAL	**0.117**	<0.1	**0.483**	<0.1	**0.189**	<0.1	**0.172**	<0.1	<0.1	<0.1		0.2
7439-89-6	**Iron, Fe**	METAL	**52.4**	**1.65**	**228**	**8.77**	**74.3**	**0.707**	**91.9**	**0.38**	**14.7**	**0.303**		0.3
7439-92-1	**Lead, Pb**	METAL	**0.137**	<0.1	**0.203**	<0.1	**0.231**	<0.1	**0.16**	<0.1	<0.1	<0.1		0.025
7439-95-4	**Magnesium, Mg**	METAL	**19.7**	**3.09**	**79.9**	**3.67**	**50.9**	**8.04**	**38.6**	**8.93**	**11.7**	**4.54**		35
7439-96-5	**Manganese, Mn**	METAL	**3.06**	**0.109**	**11**	**0.393**	**2.19**	**0.149**	**3.91**	<0.1	**0.844**	<0.1		0.3
7439-97-6	**Mercury, Hg**	METAL	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		0.0007
7440-02-0	**Nickel, Ni**	METAL	<0.1	<0.1	**0.292**	<0.1	<0.1	<0.1	**0.103**	<0.1	<0.1	<0.1		0.1
7440-09-7	**Potassium, K**	METAL	**9.39**	**2.22**	**28**	**3.51**	**16.8**	**3.29**	**12.4**	**2.65**	**6.33**	**2.31**		NA
7782-49-2	**Selenium, Se**	METAL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.01
7440-22-4	**Silver, Ag**	METAL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.05
7440-23-5	**Sodium, Na**	METAL	**12.2**	**4.87**	**11.9**	**4.42**	**33.6**	**16**	**46.1**	**22.6**	**58**	**28.7**		20
7440-28-0	**Thallium, Ti**	METAL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.0005
7440-62-2	**Vanadium, V**	METAL	<0.1	<0.1	**0.288**	<0.1	**0.102**	<0.1	**0.101**	<0.1	<0.1	<0.1		NA
7440-66-6	**Zinc, Zn**	METAL	**0.232**	<0.1	**0.813**	<0.1	**0.392**	<0.1	**0.299**	<0.1	<0.1	<0.1		2

Bold Font (Black) – Concentrations above MDL but within Ambient Water Quality Standards and Guidance Values limit
Bold Font (Red) – Concentrations above Ambient Water Quality Standards and Guidance Values (NYS DEC TOGS)

APPENDIX IV

Additional Soil Sampling / Analytical Tables, Laboratory Report & COC

SUMMARY OF RESULTS FOR SAMPLES COLLECTED	Crescent Street, #579.2 9/15/2009				
MATRIX	Soil	293912.01	293912.02	293912.03	293912.04
ANALYTE	UNITS	B-1 (12'-15') Soil	B-1.1 (22'-25') Soil	B-2 (12'-15') Soil	B-3 (12'-15') Soil
124-Trimethylbenzene	ug/Kg	< 5.3	< 6.3	< 5.4	< 5.3
135-Trimethylbenzene	ug/Kg	< 5.3	< 6.3	< 5.4	< 5.3
Benzene	ug/Kg	< 5.3	< 6.3	< 5.4	< 5.3
Ethyl Benzene	ug/Kg	< 5.3	< 6.3	< 5.4	< 5.3
Isopropylbenzene	ug/Kg	< 5.3	< 6.3	< 5.4	< 5.3
m + p Xylene	ug/Kg	< 11	< 13	< 11	< 11
n-Butylbenzene	ug/Kg	< 5.3	< 6.3	< 5.4	< 5.3
n-Propylbenzene	ug/Kg	< 5.3	< 6.3	< 5.4	< 5.3
Naphthalene(v)	ug/Kg	< 5.3	< 6.3	< 5.4	< 5.3
o Xylene	ug/Kg	< 5.3	< 6.3	< 5.4	< 5.3
p-Isopropyltoluene	ug/Kg	< 5.3	< 6.3	< 5.4	< 5.3
sec-Butylbenzene	ug/Kg	< 5.3	< 6.3	< 5.4	< 5.3
ter.ButylMethylEther	ug/Kg	< 5.3	< 6.3	< 5.4	< 5.3
tert-Butylbenzene	ug/Kg	< 5.3	< 6.3	< 5.4	< 5.3
Toluene	ug/Kg	< 5.3	< 6.3	< 5.4	< 5.3
Xylene	ug/Kg	< 16	< 19	< 16	< 16
Acenaphthene	ug/Kg	< 110	< 130	< 110	< 110
Acenaphthylene	ug/Kg	< 110	< 130	< 110	< 110
Anthracene	ug/Kg	< 110	< 130	< 110	< 110
Benzo(a)anthracene	ug/Kg	< 110	< 130	< 110	< 110
Benzo(a)pyrene	ug/Kg	< 110	< 130	< 110	< 110
Benzo(b)fluoranthene	ug/Kg	< 110	< 130	< 110	< 110
Benzo(ghi)perylene	ug/Kg	< 110	< 130	< 110	< 110
Benzo(k)fluoranthene	ug/Kg	< 110	< 130	< 110	< 110
Chrysene	ug/Kg	< 110	< 130	< 110	< 110
Dibenzo(a,h)anthracene	ug/Kg	< 110	< 130	< 110	< 110
Fluoranthene	ug/Kg	< 110	< 130	< 110	< 110
Fluorene	ug/Kg	< 110	< 130	< 110	< 110
Indeno(1,2,3-cd)pyrene	ug/Kg	< 110	< 130	< 110	< 110
Naphthalene(sv)	ug/Kg	< 110	< 130	< 110	< 110
Phenanthrene	ug/Kg	< 110	< 130	< 110	< 110
Pyrene	ug/Kg	< 110	< 130	< 110	< 110
% Solids		94	79	92	94

EcoTest Laboratories Inc
377 Sheffield Ave
North Babylon, NY 11703
631 422-5777

LAB NO.293912.01 09/18/09

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: Crescent Street, #579.2
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:09/15/09 RECEIVED:09/15/09
TIME COL'D:0940
MATRIX:Soil SAMPLE: B-1 (12'-15')

Results reported on a dry weight basis

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
ter.ButylMethylEther	ug/Kg	< 5.3		091509	5.3191	EPA8260
Benzene	ug/Kg	< 5.3		091509	5.3191	EPA8260
Toluene	ug/Kg	< 5.3		091509	5.3191	EPA8260
Ethyl Benzene	ug/Kg	< 5.3		091509	5.3191	EPA8260
m + p Xylene	ug/Kg	< 11		091509	10.638	EPA8260
o Xylene	ug/Kg	< 5.3		091509	5.3191	EPA8260
Xylene	ug/Kg	< 16		091509	15.957	EPA8260
Isopropylbenzene	ug/Kg	< 5.3		091509	5.3191	EPA8260
n-Propylbenzene	ug/Kg	< 5.3		091509	5.3191	EPA8260
135-Trimethylbenzene	ug/Kg	< 5.3		091509	5.3191	EPA8260
124-Trimethylbenzene	ug/Kg	< 5.3		091509	5.3191	EPA8260
sec-Butylbenzene	ug/Kg	< 5.3		091509	5.3191	EPA8260
p-Isopropyltoluene	ug/Kg	< 5.3		091509	5.3191	EPA8260
n-Butylbenzene	ug/Kg	< 5.3		091509	5.3191	EPA8260
Naphthalene(v)	ug/Kg	< 5.3		091509	5.3191	EPA8260
tert-Butylbenzene	ug/Kg	< 5.3		091509	5.3191	EPA8260
% Solids		94		091609	0.1	182540G

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

EcoTest Laboratories Inc
377 Sheffield Ave
North Babylon, NY 11703
631 422-5777

LAB NO.293912.01 09/18/09

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: Crescent Street, #579.2
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:09/15/09 RECEIVED:09/15/09
TIME COL'D:0940
MATRIX:Soil SAMPLE: B-1 (12'-15')

Results reported on a dry weight basis

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
Naphthalene(sv)	ug/Kg	< 110		091709	106.38	EPA8270
Acenaphthylene	ug/Kg	< 110		091709	106.38	EPA8270
Acenaphthene	ug/Kg	< 110		091709	106.38	EPA8270
Fluorene	ug/Kg	< 110		091709	106.38	EPA8270
Phenanthrene	ug/Kg	< 110		091709	106.38	EPA8270
Anthracene	ug/Kg	< 110		091709	106.38	EPA8270
Fluoranthene	ug/Kg	< 110		091709	106.38	EPA8270
Pyrene	ug/Kg	< 110		091709	106.38	EPA8270
Benzo(a)anthracene	ug/Kg	< 110		091709	106.38	EPA8270
Chrysene	ug/Kg	< 110		091709	106.38	EPA8270
Benzo(b)fluoranthene	ug/Kg	< 110		091709	106.38	EPA8270
Benzo(k)fluoranthene	ug/Kg	< 110		091709	106.38	EPA8270
Benzo(a)pyrene	ug/Kg	< 110		091709	106.38	EPA8270
Indeno(1,2,3-cd)pyrene	ug/Kg	< 110		091709	106.38	EPA8270
Dibenzo(a,h)anthracene	ug/Kg	< 110		091709	106.38	EPA8270
Benzo(ghi)perylene	ug/Kg	< 110		091709	106.38	EPA8270

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

rn = 21831 NYSDOH ID # 10320

EcoTest Laboratories Inc
377 Sheffield Ave
North Babylon, NY 11703
631 422-5777

LAB NO.293912.02 09/18/09

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: Crescent Street, #579.2
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:09/15/09 RECEIVED:09/15/09
TIME COL'D:0953
MATRIX:Soil SAMPLE: B-1.1 (22'-25')

Results reported on a dry weight basis

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
ter.ButylMethylEther	ug/Kg	< 6.3		091509	6.3291	EPA8260
Benzene	ug/Kg	< 6.3		091509	6.3291	EPA8260
Toluene	ug/Kg	< 6.3		091509	6.3291	EPA8260
Ethyl Benzene	ug/Kg	< 6.3		091509	6.3291	EPA8260
m + p Xylene	ug/Kg	< 13		091509	12.658	EPA8260
o Xylene	ug/Kg	< 6.3		091509	6.3291	EPA8260
Xylene	ug/Kg	< 19		091509	18.987	EPA8260
Isopropylbenzene	ug/Kg	< 6.3		091509	6.3291	EPA8260
n-Propylbenzene	ug/Kg	< 6.3		091509	6.3291	EPA8260
135-Trimethylbenzene	ug/Kg	< 6.3		091509	6.3291	EPA8260
124-Trimethylbenzene	ug/Kg	< 6.3		091509	6.3291	EPA8260
sec-Butylbenzene	ug/Kg	< 6.3		091509	6.3291	EPA8260
p-Isopropyltoluene	ug/Kg	< 6.3		091509	6.3291	EPA8260
n-Butylbenzene	ug/Kg	< 6.3		091509	6.3291	EPA8260
Naphthalene(v)	ug/Kg	< 6.3		091509	6.3291	EPA8260
tert-Butylbenzene	ug/Kg	< 6.3		091509	6.3291	EPA8260
% Solids		79		091609	0.1	182540G

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

EcoTest Laboratories Inc
377 Sheffield Ave
North Babylon, NY 11703
631 422-5777

LAB NO.293912.02 09/18/09

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: Crescent Street, #579.2
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:09/15/09 RECEIVED:09/15/09
TIME COL'D:0953
MATRIX:Soil SAMPLE: B-1.1 (22'-25')

Results reported on a dry weight basis

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
Naphthalene(sv)	ug/Kg	< 130		091709	126.58	EPA8270
Acenaphthylene	ug/Kg	< 130		091709	126.58	EPA8270
Acenaphthene	ug/Kg	< 130		091709	126.58	EPA8270
Fluorene	ug/Kg	< 130		091709	126.58	EPA8270
Phenanthrene	ug/Kg	< 130		091709	126.58	EPA8270
Anthracene	ug/Kg	< 130		091709	126.58	EPA8270
Fluoranthene	ug/Kg	< 130		091709	126.58	EPA8270
Pyrene	ug/Kg	< 130		091709	126.58	EPA8270
Benzo(a)anthracene	ug/Kg	< 130		091709	126.58	EPA8270
Chrysene	ug/Kg	< 130		091709	126.58	EPA8270
Benzo(b)fluoranthene	ug/Kg	< 130		091709	126.58	EPA8270
Benzo(k)fluoranthene	ug/Kg	< 130		091709	126.58	EPA8270
Benzo(a)pyrene	ug/Kg	< 130		091709	126.58	EPA8270
Indeno(1,2,3-cd)pyrene	ug/Kg	< 130		091709	126.58	EPA8270
Dibenzo(a,h)anthracene	ug/Kg	< 130		091709	126.58	EPA8270
Benzo(ghi)perylene	ug/Kg	< 130		091709	126.58	EPA8270

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

EcoTest Laboratories Inc
377 Sheffield Ave
North Babylon, NY 11703
631 422-5777

LAB NO.293912.03 09/18/09

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: Crescent Street, #579.2
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:09/15/09 RECEIVED:09/15/09
TIME COL'D:1035
MATRIX:Soil SAMPLE: B-2 (12'-15')

Results reported on a dry weight basis

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
ter.ButylMethylEther	ug/Kg	< 5.4		091509	5.4347	EPA8260
Benzene	ug/Kg	< 5.4		091509	5.4347	EPA8260
Toluene	ug/Kg	< 5.4		091509	5.4347	EPA8260
Ethyl Benzene	ug/Kg	< 5.4		091509	5.4347	EPA8260
m + p Xylene	ug/Kg	< 11		091509	10.869	EPA8260
o Xylene	ug/Kg	< 5.4		091509	5.4347	EPA8260
Xylene	ug/Kg	< 16		091509	16.304	EPA8260
Isopropylbenzene	ug/Kg	< 5.4		091509	5.4347	EPA8260
n-Propylbenzene	ug/Kg	< 5.4		091509	5.4347	EPA8260
135-Trimethylbenzene	ug/Kg	< 5.4		091509	5.4347	EPA8260
124-Trimethylbenzene	ug/Kg	< 5.4		091509	5.4347	EPA8260
sec-Butylbenzene	ug/Kg	< 5.4		091509	5.4347	EPA8260
p-Isopropyltoluene	ug/Kg	< 5.4		091509	5.4347	EPA8260
n-Butylbenzene	ug/Kg	< 5.4		091509	5.4347	EPA8260
Naphthalene(v)	ug/Kg	< 5.4		091509	5.4347	EPA8260
tert-Butylbenzene	ug/Kg	< 5.4		091509	5.4347	EPA8260
% Solids		92		091609	0.1	182540G

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

rn = 21834 NYSDOH ID # 10320

EcoTest Laboratories Inc
377 Sheffield Ave
North Babylon, NY 11703
631 422-5777

LAB NO.293912.03 09/18/09

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: Crescent Street, #579.2
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:09/15/09 RECEIVED:09/15/09
TIME COL'D:1035
MATRIX:Soil SAMPLE: B-2 (12'-15')

Results reported on a dry weight basis

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
Naphthalene(sv)	ug/Kg	< 110		091709	108.69	EPA8270
Acenaphthylene	ug/Kg	< 110		091709	108.69	EPA8270
Acenaphthene	ug/Kg	< 110		091709	108.69	EPA8270
Fluorene	ug/Kg	< 110		091709	108.69	EPA8270
Phenanthrene	ug/Kg	< 110		091709	108.69	EPA8270
Anthracene	ug/Kg	< 110		091709	108.69	EPA8270
Fluoranthene	ug/Kg	< 110		091709	108.69	EPA8270
Pyrene	ug/Kg	< 110		091709	108.69	EPA8270
Benzo(a)anthracene	ug/Kg	< 110		091709	108.69	EPA8270
Chrysene	ug/Kg	< 110		091709	108.69	EPA8270
Benzo(b)fluoranthene	ug/Kg	< 110		091709	108.69	EPA8270
Benzo(k)fluoranthene	ug/Kg	< 110		091709	108.69	EPA8270
Benzo(a)pyrene	ug/Kg	< 110		091709	108.69	EPA8270
Indeno(1,2,3-cd)pyrene	ug/Kg	< 110		091709	108.69	EPA8270
Dibenzo(a,h)anthracene	ug/Kg	< 110		091709	108.69	EPA8270
Benzo(ghi)perylene	ug/Kg	< 110		091709	108.69	EPA8270

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

EcoTest Laboratories Inc
377 Sheffield Ave
North Babylon, NY 11703
631 422-5777

LAB NO.293912.04 09/18/09

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: Crescent Street, #579.2
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:09/15/09 RECEIVED:09/15/09
TIME COL'D:1015
MATRIX:Soil SAMPLE: B-3 (12'-15')

Results reported on a dry weight basis

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
ter.ButylMethylEther	ug/Kg	< 5.3		091509	5.3191	EPA8260
Benzene	ug/Kg	< 5.3		091509	5.3191	EPA8260
Toluene	ug/Kg	< 5.3		091509	5.3191	EPA8260
Ethyl Benzene	ug/Kg	< 5.3		091509	5.3191	EPA8260
m + p Xylene	ug/Kg	< 11		091509	10.638	EPA8260
o Xylene	ug/Kg	< 5.3		091509	5.3191	EPA8260
Xylene	ug/Kg	< 16		091509	15.957	EPA8260
Isopropylbenzene	ug/Kg	< 5.3		091509	5.3191	EPA8260
n-Propylbenzene	ug/Kg	< 5.3		091509	5.3191	EPA8260
135-Trimethylbenzene	ug/Kg	< 5.3		091509	5.3191	EPA8260
124-Trimethylbenzene	ug/Kg	< 5.3		091509	5.3191	EPA8260
sec-Butylbenzene	ug/Kg	< 5.3		091509	5.3191	EPA8260
p-Isopropyltoluene	ug/Kg	< 5.3		091509	5.3191	EPA8260
n-Butylbenzene	ug/Kg	< 5.3		091509	5.3191	EPA8260
Naphthalene(v)	ug/Kg	< 5.3		091509	5.3191	EPA8260
tert-Butylbenzene	ug/Kg	< 5.3		091509	5.3191	EPA8260
% Solids		94		091609	0.1	182540G

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

EcoTest Laboratories Inc
377 Sheffield Ave
North Babylon, NY 11703
631 422-5777

LAB NO.293912.04 09/18/09

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: Crescent Street, #579.2
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:09/15/09 RECEIVED:09/15/09
TIME COL'D:1015
MATRIX:Soil SAMPLE: B-3 (12'-15')

Results reported on a dry weight basis

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
Naphthalene(sv)	ug/Kg	< 110		091709	106.38	EPA8270
Acenaphthylene	ug/Kg	< 110		091709	106.38	EPA8270
Acenaphthene	ug/Kg	< 110		091709	106.38	EPA8270
Fluorene	ug/Kg	< 110		091709	106.38	EPA8270
Phenanthrene	ug/Kg	< 110		091709	106.38	EPA8270
Anthracene	ug/Kg	< 110		091709	106.38	EPA8270
Fluoranthene	ug/Kg	< 110		091709	106.38	EPA8270
Pyrene	ug/Kg	< 110		091709	106.38	EPA8270
Benzo(a)anthracene	ug/Kg	< 110		091709	106.38	EPA8270
Chrysene	ug/Kg	< 110		091709	106.38	EPA8270
Benzo(b)fluoranthene	ug/Kg	< 110		091709	106.38	EPA8270
Benzo(k)fluoranthene	ug/Kg	< 110		091709	106.38	EPA8270
Benzo(a)pyrene	ug/Kg	< 110		091709	106.38	EPA8270
Indeno(1,2,3-cd)pyrene	ug/Kg	< 110		091709	106.38	EPA8270
Dibenzo(a,h)anthracene	ug/Kg	< 110		091709	106.38	EPA8270
Benzo(ghi)perylene	ug/Kg	< 110		091709	106.38	EPA8270

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

ECO TEST LABORATORIES, INC. • ENVIRONMENTAL TESTING
377 Sheffield Avenue, North Babylon, New York 11703
(631) 422-5777 • FAX (631) 422-5770

CHAIN OF CUSTODY RECORD

293912 28

Client: Cosmos Environmental SVS.
Address: P.O. Box 349
Woodmere, NY 11598
Phone: 374-7890 FAX: 374-7891
Person receiving report: A. Avracen
Sampled by: A.A.
Source: Crescent Str.
Job No.: 579.2

MATRIX (Soil, Water, etc.)	COLLECTED DATE	COLLECTED TIME	SAMPLE IDENTIFICATION	TOTAL NUMBER OF CONTAINERS	TYPE & NUMBER OF CONTAINERS: STATE ONLY	REMARKS–TESTS REQUIRED, SPECIAL TURNAROUND, SPECIAL Q.C. etc
S	09.15	9:40	B-1 (12-15')	1	X	Results for Friday
S	09.15	9:53	B-1.1 (22-25')	1	X	
S	09.15	10:35	B-2 (12-15')	1	X	cesalex1@MSN.com
S	09.15	10:45	B-3 (12-15')	1	X	
						Temp = 3.8°C

Relinquished by: (Signature)	DATE/TIME	SEAL INTACT?	Received by: (Signature)	Relinquished by: (Signature)	DATE/TIME	SEAL INTACT?	Received by: (Signature)
Representing: COSMOS	09.15 13:00	YES NO NA	Representing:	Representing:	9/15/09 16:47	YES NO NA	Representing:
Relinquished by: (Signature)	DATE/TIME	SEAL INTACT?	Received by: (Signature)	Relinquished by: (Signature)	DATE/TIME	SEAL INTACT?	Received by: (Signature)
Representing:		YES NO NA	Representing:	Representing:		YES NO NA	Representing:

APPENDIX V

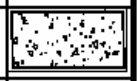
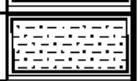
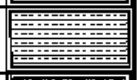
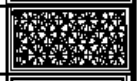
Boring Logs

COSMOS ENVIRONMENTAL SERVICES, INC.

SOIL BORING LOG/TEST HOLE — DATE: October 25, 2009

Client:	**FORTE ITALIA LLC** c/o Antonino Pecora	Boring ID.	**B-1 / MW-1**
Site Location:	41-02/10 Crescent Street, Long Island City, NY 11101	Boring Loc.:	**See site sketch**
Project No.	**579.2**	Surface Elev. (ft): NA DTW (ft) :	

Field Geologist:	Alexander I. Avracen	Drill Type:	Geoprobe 5400, Macro-core
Driller:	Jerry Rafaniello	Sample Type:	Split_____
Weather Cond.	Cloudy, Low Wind		Grab_____
Temp:	45-50 degrees F		**Core__X__**

SOIL TYPE CODES	
GW- Well graded gravels or gravel/sand mix	
GP- Poorly graded gravels or gravel/sand mix	
SW- Well graded sands, gravelly sands, no fines	
SP- Poorly graded sands, gravelly sands, no fines	
SM- Silty sands, sand silt mixtures	
ML- Inorganic silts, fine sand, silty-clayey fine sands	
CL- Inorganic clays, gravely/ sandy clays, silty clays	
OL- Organic silts, organic silty clays of low plasticity	
OH- Organic clays of med. to high plasticity, organic silts	
PT- Peat and other highly organic soils	
BD- Bedrock etc.	
Other (fill, etc) Specify	

Misc. Comments

Installed a temporary 1" OD groundwater monitoring well. 5' Screen & 17.5 Solid PVC

	Boring Profile*	Push Resistance	Description/Remarks (Odor, Rec., Soil Composition, etc.)
0	SW	MEDIUM	4" Asphalt, 4"-6" gravel base Dark brown fine sand and gravel
4	SW/ML	EASY	Light brown fine sand
8	SP	EASY	Light brown sand and gravel
12	SP	EASY	Light brown sand and gravel 4" band of sandy clay at 13'
16	SP/GP	EASY	Light brown coarse sand and gravel 16'-18' Coarse sand and gravel 18'-20'
20	SM	EASY	Light brown silty sand and silt 20'-22' END OF BORING
24			
28			
32			
34			
36			
40			
44			
48			
52			
56			

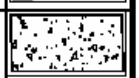
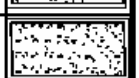
* =Depth relative to grade

COSMOS ENVIRONMENTAL SERVICES, INC.

SOIL BORING LOG/TEST HOLE DATE: October 25, 2009

Client:	**FORTE ITALIA LLC** c/o Antonino Pecora	Boring ID.	**B-2 / MW-2**
Site Location:	41-02/10 Crescent Street, Long Island City, NY 11101	Boring Loc.:	**See site sketch**
Project No.	**579.2**	Surface Elev. (ft): NA DTW (ft) :	

Field Geologist:	Alexander I. Avracen	Drill Type:	Geoprobe 5400, Macro-core
Driller:	Jerry Rafaniello	Sample Type:	Split_____
Weather Cond.	Cloudy, Low Wind		Grab_____
Temp:	45-50 degrees F		**Core__X__**

SOIL TYPE CODES	
GW- Well graded gravels or gravel/sand mix	
GP- Poorly graded gravels or gravel/sand mix	
SW- Well graded sands, gravelly sands, no fines	
SP- Poorly graded sands, gravelly sands, no fines	
SM- Silty sands, sand silt mixtures	
ML- Inorganic silts, fine sand, silty-clayey fine sands	
CL- Inorganic clays, gravely/ sandy clays, silty clays	
OL- Organic silts, organic silty clays of low plasticity	
OH- Organic clays of med. to high plasticity, organic silts	
PT- Peat and other highly organic soils	
BD- Bedrock etc.	
Other (fill, etc) Specify	

Misc. Comments

Installed a temporary 1" OD groundwater monitoring well. 7.5' Screen & 15.0 Solid PVC

	Boring Profile*	Push Resistance	Description/Remarks (Odor, Rec., Soil Composition, etc.)
0	SW	MEDIUM	4" Asphalt, 4"-6" gravel base Dark brown fine sand and gravel
4	SW/ML	EASY	Light brown fine sand
8	SP	EASY	Light brown sand and gravel
12	SP	EASY	Light brown sand and gravel 4" band of sandy clay at 13'
16	SP/GP	EASY	Light brown coarse sand and gravel 16'-18' Coarse sand and gravel 18'-20'
20	SM	EASY	Light brown silty sand and silt 20'-22' END OF BORING
24			
28			
32			
34			
36			
40			
44			
48			
52			
56			

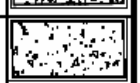
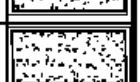
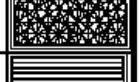
* =Depth relative to grade

COSMOS ENVIRONMENTAL SERVICES, INC.

SOIL BORING LOG/TEST HOLE — DATE: October 29, 2009

Client:	**FORTE ITALIA LLC** c/o Antonino Pecora	Boring ID.	**B-3 / MW-3**
Site Location:	41-02/10 Crescent Street, Long Island City, NY 11101	Boring Loc.:	**See site sketch**
Project No.	**579.2**	Surface Elev. (ft): NA DTW (ft) :	

Field Geologist:	Alexander I. Avracen	Drill Type:	Geoprobe 5400, Macro-core
Driller:	Jerry Rafaniello	Sample Type:	Split_____
Weather Cond.	Cloudy, Low Wind		Grab_____
Temp:	45-50 degrees F		**Core__X__**

SOIL TYPE CODES	
GW- Well graded gravels or gravel/sand mix	
GP- Poorly graded gravels or gravel/sand mix	
SW- Well graded sands, gravelly sands, no fines	
SP- Poorly graded sands, gravelly sands, no fines	
SM- Silty sands, sand silt mixtures	
ML- Inorganic silts, fine sand, silty-clayey fine sands	
CL- Inorganic clays, gravely/ sandy clays, silty clays	
OL- Organic silts, organic silty clays of low plasticity	
OH- Organic clays of med. to high plasticity, organic silts	
PT- Peat and other highly organic soils	
BD- Bedrock etc.	
Other (fill, etc) Specify	

Misc. Comments

Installed a temporary 1" OD groundwater monitoring well. 5' Screen & 17.5 Solid PVC

	Boring Profile*	Push Resistance	Description/Remarks (Odor, Rec., Soil Composition, etc.)
0	SW	MEDIUM	4" Asphalt, 4"-6" gravel base Dark brown fine sand and gravel
4	SW/ML	EASY	Light brown fine sand
8	SP	EASY	Light brown sand and gravel
12	SP	EASY	Light brown sand and gravel 4" band of sandy clay at 13'
16	SP/GP	EASY	Light brown coarse sand and gravel 16'-18' Coarse sand and gravel 18'-20'
20	SM	EASY	Light brown silty sand and silt 20'-22' END OF BORING
24			
28			
32			
34			
36			
40			
44			
48			
52			
56			

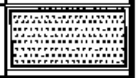
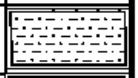
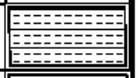
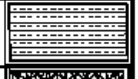
* =Depth relative to grade

COSMOS ENVIRONMENTAL SERVICES, INC.

SOIL BORING LOG/TEST HOLE DATE: October 29, 2009

Client:	**FORTE ITALIA LLC** c/o Antonino Pecora	Boring ID.	**B-4 / MW-3**
Site Location:	41-02/10 Crescent Street, Long Island City, NY 11101	Boring Loc.:	**See site sketch**
Project No.	**579.2**	Surface Elev. (ft): NA DTW (ft) :	

Field Geologist:	Alexander I. Avracen	Drill Type:	Geoprobe 5400, Macro-core
Driller:	Jerry Rafaniello	Sample Type:	Split_____
Weather Cond.	Cloudy, Low Wind		Grab_____
Temp:	45-50 degrees F		**Core__X__**

SOIL TYPE CODES			Boring Profile*	Push Resistance	Description/Remarks (Odor, Rec., Soil Composition, etc.)
GW- Well graded gravels or gravel/sand mix		0	SW	MEDIUM EASY	4" Asphalt, 4"-6" gravel base Dark brown fine sand and gravel
GP- Poorly graded gravels or gravel/sand mix		4	SW/ML	EASY	Light brown fine sand
SW- Well graded sands, gravelly sands, no fines		8	SP	EASY	Light brown sand and gravel
SP- Poorly graded sands, gravelly sands, no fines		12	SP	EASY	Light brown sand and gravel 4" band of sandy clay at 13'
SM- Silty sands, sand silt mixtures		16	SP/GP	EASY	Light brown coarse sand and gravel 16'-18' Coarse sand and gravel 18'-20'
ML- Inorganic silts, fine sand, silty-clayey fine sands		20	SM	EASY	Light brown silty sand and silt 20'-22' END OF BORING
CL- Inorganic clays, gravely/ sandy clays, silty clays		24			
OL- Organic silts, organic silty clays of low plasticity		28			
OH- Organic clays of med. to high plasticity, organic silts		32			
PT- Peat and other highly organic soils		34			
BD- Bedrock etc.		36			
Other (fill, etc) Specify		40			
		44			
Misc. Comments		48			
Installed a temporary 1" OD groundwater monitoring well. 7.5' Screen & 15.0 Solid PVC		52			
		56			

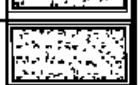
* =Depth relative to grade

COSMOS ENVIRONMENTAL SERVICES, INC.

SOIL BORING LOG/TEST HOLE — DATE: October 29, 2009

Client:	**FORTE ITALIA LLC** c/o Antonino Pecora	Boring ID.	**B-5**
Site Location:	41-02/10 Crescent Street, Long Island City, NY 11101	Boring Loc.:	**See site sketch**
Project No.	**579.2**	Surface Elev. (ft): NA DTW (ft) :	

Field Geologist:	Alexander I. Avracen	Drill Type:	Geoprobe 5400, Macro-core
Driller:	Jerry Rafaniello	Sample Type:	Split_____
Weather Cond.	Cloudy, Low Wind		Grab_____
Temp:	45-50 degrees F		**Core__X__**

SOIL TYPE CODES	
GW- Well graded gravels or gravel/sand mix	
GP- Poorly graded gravels or gravel/sand mix	
SW- Well graded sands, gravelly sands, no fines	
SP- Poorly graded sands, gravelly sands, no fines	
SM- Silty sands, sand silt mixtures	
ML- Inorganic silts, fine sand, silty-clayey fine sands	
CL- Inorganic clays, gravely/ sandy clays, silty clays	
OL- Organic silts, organic silty clays of low plasticity	
OH- Organic clays of med. to high plasticity, organic silts	
PT- Peat and other highly organic soils	
BD- Bedrock etc.	
Other (fill, etc) Specify	

Misc. Comments

	Boring Profile*	Push Resistance	Description/Remarks (Odor, Rec., Soil Composition, etc.)
0	SW	MEDIUM EASY	4" Asphalt, 4"-6" gravel base Dark brown fine sand and gravel
4	SW/ML	EASY	Light brown fine sand
8	SP	EASY	Light brown sand and gravel
12	SP	EASY	Light brown sand and gravel 4" band of sandy clay at 13'
16	SP/GP	EASY	Light brown coarse sand and gravel 16'-18' Coarse sand and gravel 18'-20'
20	SM	EASY	Light brown silty sand and silt 20'-22' END OF BORING
24			
28			
32			
34			
36			
40			
44			
48			
52			
56			

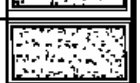
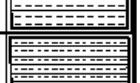
* =Depth relative to grade

COSMOS ENVIRONMENTAL SERVICES, INC.

SOIL BORING LOG/TEST HOLE DATE: October 25, 2009

Client:	**FORTE ITALIA LLC** c/o Antonino Pecora	Boring ID.	**B-6 / MW-6**
Site Location:	41-02/10 Crescent Street, Long Island City, NY 11101	Boring Loc.:	**See site sketch**
Project No.	**579.2**	Surface Elev. (ft): NA DTW (ft) :	

Field Geologist:	Alexander I. Avracen	Drill Type:	Geoprobe 5400, Macro-core
Driller:	Jerry Rafaniello	Sample Type:	Split_____
Weather Cond.	Cloudy, Low Wind		Grab_____
Temp:	45-50 degrees F		**Core__X__**

SOIL TYPE CODES			Boring Profile*	Push Resistance	Description/Remarks (Odor, Rec., Soil Composition, etc.)
GW- Well graded gravels or gravel/sand mix		0	SW	MEDIUM EASY	4" Asphalt, 4"-6" gravel base Dark brown fine sand and gravel
GP- Poorly graded gravels or gravel/sand mix		4	SW/ML	EASY	Light brown fine sand
SW- Well graded sands, gravelly sands, no fines		8	SP	EASY	Light brown sand and gravel
SP- Poorly graded sands, gravelly sands, no fines		12	SP	EASY	Light brown sand and gravel 4" band of sandy clay at 13'
SM- Silty sands, sand silt mixtures		16	SP/GP	EASY	Light brown coarse sand and gravel 16'-18' Coarse sand and gravel 18'-20'
ML- Inorganic silts, fine sand, silty-clayey fine sands		20	SM	EASY	Light brown silty sand and silt 20'-22' END OF BORING
CL- Inorganic clays, gravely/ sandy clays, silty clays		24			
OL- Organic silts, organic silty clays of low plasticity		28			
OH- Organic clays of med. to high plasticity, organic silts		32			
PT- Peat and other highly organic soils		34			
BD- Bedrock etc.		36			
Other (fill, etc) Specify		40			
		44			
Misc. Comments		48			
Installed a temporary 1" OD groundwater monitoring well. 5' Screen & 17.5 Solid PVC		52			
		56			

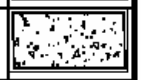
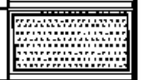
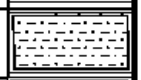
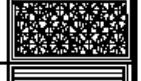
* =Depth relative to grade

COSMOS ENVIRONMENTAL SERVICES, INC.

SOIL BORING LOG/TEST HOLE — DATE: October 25, 2009

Client:	**FORTE ITALIA LLC** c/o Antonino Pecora	Boring ID.	**B-7**
Site Location:	41-02/10 Crescent Street, Long Island City, NY 11101	Boring Loc.:	**See site sketch**
Project No.	**579.2**	Surface Elev. (ft): NA DTW (ft) :	

Field Geologist:	Alexander I. Avracen	Drill Type:	Geoprobe 5400, Macro-core
Driller:	Jerry Rafaniello	Sample Type:	Split_____
Weather Cond.	Cloudy, Low Wind		Grab_____
Temp:	45-50 degrees F		**Core__X__**

SOIL TYPE CODES			Boring Profile*	Push Resistance	Description/Remarks (Odor, Rec., Soil Composition, etc.)
GW- Well graded gravels or gravel/sand mix		0	SW	MEDIUM EASY	4" Asphalt, 4"-6" gravel base Dark brown fine sand and gravel
GP- Poorly graded gravels or gravel/sand mix		4	SW/ML	EASY	Light brown fine sand
SW- Well graded sands, gravelly sands, no fines		8	SP	EASY	Light brown sand and gravel
SP- Poorly graded sands, gravelly sands, no fines		12	SP	EASY	Light brown sand and gravel 4" band of sandy clay at 13'
SM- Silty sands, sand silt mixtures		16	SP/GP	EASY	Light brown coarse sand and gravel 16'-18' Coarse sand and gravel 18'-20'
ML- Inorganic silts, fine sand, silty-clayey fine sands		20	SM	EASY	Light brown silty sand and silt 20'-22' END OF BORING
CL- Inorganic clays, gravely/ sandy clays, silty clays		24			
OL- Organic silts, organic silty clays of low plasticity		28			
OH- Organic clays of med. to high plasticity, organic silts		32			
PT- Peat and other highly organic soils		34			
BD- Bedrock etc.		36			
Other (fill, etc) Specify		40			
		44			
Misc. Comments		48			
		52			
		56			

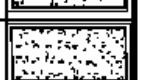
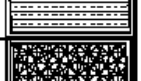
* =Depth relative to grade

COSMOS ENVIRONMENTAL SERVICES, INC.

SOIL BORING LOG/TEST HOLE — DATE: October 25, 2009

Client:	**FORTE ITALIA LLC** c/o Antonino Pecora	Boring ID.	**B-8 / MW-8**
Site Location:	41-02/10 Crescent Street, Long Island City, NY 11101	Boring Loc.:	**See site sketch**
		Surface Elev. (ft): NA	
Project No.	**579.2**	DTW (ft) :	

Field Geologist:	Alexander I. Avracen	Drill Type:	Geoprobe 5400, Macro-core
Driller:	Jerry Rafaniello	Sample Type:	Split_____
Weather Cond.	Cloudy, Low Wind		Grab_____
Temp:	45-50 degrees F		**Core__X__**

SOIL TYPE CODES	
GW- Well graded gravels or gravel/sand mix	
GP- Poorly graded gravels or gravel/sand mix	
SW- Well graded sands, gravelly sands, no fines	
SP- Poorly graded sands, gravelly sands, no fines	
SM- Silty sands, sand silt mixtures	
ML- Inorganic silts, fine sand, silty-clayey fine sands	
CL- Inorganic clays, gravely/ sandy clays, silty clays	
OL- Organic silts, organic silty clays of low plasticity	
OH- Organic clays of med. to high plasticity, organic silts	
PT- Peat and other highly organic soils	
BD- Bedrock etc.	
Other (fill, etc) Specify	

Misc. Comments

Installed a temporary 1" OD groundwater monitoring well. 7.5' Screen & 15.0 Solid PVC

	Boring Profile*	Push Resistance	Description/Remarks (Odor, Rec., Soil Composition, etc.)
0	SW	MEDIUM EASY	4" Asphalt, 4"-6" gravel base Dark brown fine sand and gravel
4	SW/ML	EASY	Light brown fine sand
8	SP	EASY	Light brown sand and gravel
12	SP	EASY	Light brown sand and gravel 4" band of sandy clay at 13'
16	SP/GP	EASY	Light brown coarse sand and gravel 16'-18' Coarse sand and gravel 18'-20'
20	SM	EASY	Light brown silty sand and silt 20'-22' END OF BORING
24			
28			
32			
34			
36			
40			
44			
48			
52			
56			

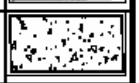
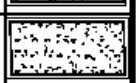
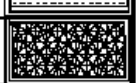
* =Depth relative to grade

COSMOS ENVIRONMENTAL SERVICES, INC.

SOIL BORING LOG/TEST HOLE DATE: October 25, 2009

Client:	**FORTE ITALIA LLC** c/o Antonino Pecora	Boring ID.	**B-9**
Site Location:	41-02/10 Crescent Street, Long Island City, NY 11101	Boring Loc.:	**See site sketch**
Project No.	**579.2**	Surface Elev. (ft): NA DTW (ft) :	

Field Geologist:	Alexander I. Avracen	Drill Type:	Geoprobe 5400, Macro-core
Driller:	Jerry Rafaniello	Sample Type:	Split_____
Weather Cond.	Cloudy, Low Wind		Grab_____
Temp:	45-50 degrees F		**Core__X__**

SOIL TYPE CODES			Boring Profile*	Push Resistance	Description/Remarks (Odor, Rec., Soil Composition, etc.)
GW- Well graded gravels or gravel/sand mix		0	**SW**	**HEAVY**	**4" Asphalt, 4"-6" gravel base, sand & gravel**
GP- Poorly graded gravels or gravel/sand mix				**EASY**	**Reinforced Concrete min.- 1.5' thick**
SW- Well graded sands, gravelly sands, no fines		4			**END OF BORING**
SP- Poorly graded sands, gravelly sands, no fines		8			
SM- Silty sands, sand silt mixtures		12			
ML- Inorganic silts, fine sand, silty-clayey fine sands		16			
CL- Inorganic clays, gravely/ sandy clays, silty clays		20			
OL- Organic silts, organic silty clays of low plasticity		24			
OH- Organic clays of med. to high plasticity, organic silts		28			
PT- Peat and other highly organic soils		32			
BD- Bedrock etc.		34			
Other (fill, etc) Specify		36			
		40			
Misc. Comments		44			
3 Subsequent attempts fail at the same depth of approximately 2.0-3.5 feet		48			
		52			
		56			

APPENDIX VI

Phase II Soil & Groundwater Analysis Analytical Tables, Laboratory Reports & COC

Project No. 579.2 / Forte Italia LLC | **SOIL** | **EPA Method 8260 - Volatile Organic Compounds**

CAS Number	Parameter Name	Parameter ID	B-3.1	B-3.2	B-5.1	B-5.2	B-4.1	B-4.2	B-1.1	B-1.2	B-8.1	B-8.2	B-2.1	B-2.2	B-9.1	B-7.1	B-7.2	B-6.1	B-6.2	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives
	Sample ID	Depth																			
	Unit		*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*
630-20-6	1,1,1,2-Tetrachloroethane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
71-55-6	1,1,1-Trichloroethane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	800
79-34-5	1,1,2,2-Tetrachloroethane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	600
79-00-5	1,1,2-Trichloroethane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
75-34-3	1,1-Dichloroethane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	200
75-35-4	1,1-Dichloroethene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	400
563-58-6	1,1-Dichloropropene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
87-61-6	1,2,3-Trichlorobenzene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
96-18-4	1,2,3-Trichloropropane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	400
95-63-6	1,2,4-Trimethylbenzene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	**45**	**11**	<5.6	<5.5	<6.3	<5.2	<6.2	NA	10,000
96-12-8	1,2-Dibromo-3-Chloropropane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
106-93-4	1,2-Dibromoethane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
95-50-1	1,2-Dichlorobenzene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	7,900
107-06-2	1,2-Dichloroethane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	100
78-87-5	1,2-Dichloropropane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
108-67-8	1,3,5-Trimethylbenzene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	**11**	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	3,300
541-73-1	1,3-Dichlorobenzene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	1,600
142-28-9	1,3-Dichloropropane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	300
542-75-6	1,3-Dichloropropene(cis and trans)	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
106-46-7	1,4-Dichlorobenzene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	8,500
594-20-7	2,2-Dichloropropane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
78-93-3	2-Butanone (MEK)	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	300
95-49-8	2-Chlorotoluene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
591-78-6	2-Hexanone	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
106-43-4	4-Chlorotoluene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
108-10-1	4-Methyl-2-Pentanone	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	1,000
67-64-1	Acetone	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	200
107-02-8	Acrolein	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
107-13-1	Acrylonitrile	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
71-43-2	Benzene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	60
108-86-1	Bromobenzene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
74-97-5	Bromochloromethane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
75-27-4	Bromodichloromethane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
75-25-2	Bromoform	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
74-83-9	Bromomethane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
75-15-0	Carbon Disulfide	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	2,700
56-23-5	Carbon Tetrachloride	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	600
108-90-7	Chlorobenzene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	1,700
124-48-1	Chlorodibromomethane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
75-00-3	Chloroethane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	1,900
67-66-3	Chloroform	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	300
74-87-3	Chloromethane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
156-59-2	cis-1,2-Dichloroethene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
10061-01-5	cis-1,3-Dichloropropene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
74-95-3	Dibromomethane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
124-48-1	Dibromochloromethane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
75-71-8	Dichlorodifluoromethane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA

Project No. 579.2 / Forte Italia LLC | **SOIL** | **EPA Method 8260 - Volatile Organic Compounds**

CAS Number	Parameter Name	Parameter ID	B-3.1	B-3.2	B-5.1	B-5.2	B-4.1	B-4.2	B-1.1	B-1.2	B-8.1	B-8.2	B-2.1	B-2.2	B-9.1	B-7.1	B-7.2	B-6.1	B-6.2	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives
	Sample ID	Depth																			
	Unit		*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*
100-41-4	Ethylbenzene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	**6.3**	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	5,500
87-68-3	Hexachlorobutadiene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
98-82-8	Isopropylbenzene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	2,300
108-10-1	Methyl Isobutyl Ketone (MIBK)	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
75-09-2	Methylene Chloride	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	100
1634-04-4	Methyl Tert-Butyl Ether (MTBE)	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	120
91-20-3	Naphthalene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	**33**	**9**	<5.6	<5.5	<6.3	<5.2	<6.2	NA	13,000
104-51-8	n-Butylbenzene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	10,000
103-65-1	n-Propylbenzene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	3,700
105-05-5	p-Diethylbenzene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
622-96-8	p-Ethyltoluene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
99-87-6	p-Isopropyltoluene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	10,000
135-98-8	sec-Butylbenzene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	10,000
100-42-5	Styrene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
98-06-6	tert-Butylbenzene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	10,000
127-18-4	Tetrachloroethene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	1,400
108-88-3	Toluene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	1,500
1330-20-7	Total Xylenes	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	**31.9**	**9.1**	<5.6	<5.5	<6.3	<5.2	<6.2	NA	1,200
156-60-5	trans-1,2-Dichloroethene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	300
10061-02-6	trans-1,3-Dichloropropene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
79-01-6	Trichloroethene	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	700
75-69-4	Trichlorofluoromethane	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
108-05-4	Vinyl Acetate	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	NA
75-01-4	Vinyl Chloride	**VOC**	<5.2	<5.6	<5.2	<5.6	<5.6	<5.9	<5.1	<5.3	<5.3	<5.1	<5.3	<6.4	<5.6	<5.5	<6.3	<5.2	<6.2	NA	200

Project No. 579.2 / Forte Italia LLC | **SOIL** | **EPA Method 8270 - Semi-Volatile Organic Compounds**

CAS Number	Parameter Name	Parameter ID	B-3.1	B-3.2	B-5.1	B-5.2	B-4.1	B-4.2	B-1.1	B-1.2	B-8.1	B-8.2	B-2.1	B-2.2	B-9.1	B-7.1	B-7.2	B-6.1	B-6.2	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives
	Sample ID	Depth																			
	Unit		*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*
122-66-7	1,2-Diphenylhydrazine	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
120-82-1	1,2,4-Trichlorobenzene	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	3,400
95-95-4	2,4,5-Trichlorophenol	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	100
88-06-2	2,4,6-Trichlorophenol	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
102-83-2	2,4-Dichlorophenol	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	400
105-67-9	2,4-Dimethylphenol	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
51-28-5	2,4-Dinitrophenol	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	200 or MDL
121-14-2	2,4-Dinitrotoluene	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
606-20-2	2,6-Dinitrotoluene	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	1,000
91-58-7	2-Chloronapthalene	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
95-57-8	2-Chlorophenol	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	800
91-57-6	2-Methylnaphthalene	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	36,400
95-48-7	2-Methylphenol (o-Cresol)	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	100 or MDL
88-74-4	2-Nitroaniline	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	430 or MDL
88-75-5	2-Nitrophenol	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	330 or MDL
15831-10-4	3+4 Methylphenol	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
91-94-1	3,3-Dichlorobenzidine	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
108-39-4	3-Methylphenol (m-Cresol)	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
99-09-2	3-Nitroaniline	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	500 or MDL
534-52-1	4,6-Dinitro-2-methylphenol	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
101-55-3	4-Bromophenyl-phenyl ether	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
59-50-7	4-Chloro-3-methylphenol	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	240 or MDL
106-47-8	4-Chloroaniline	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	220 or MDL
7005-72-3	4-Chlorophenyl phenyl ether	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
106-44-5	4-Methylphenol (p-Cresol)	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	900
100-01-6	4-Nitroaniline	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
100-02-7	4-Nitrophenol	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	100 or MDL
83-32-9	Acenaphthene	SVOC	<340	<360	<3500	<3700	<370	<390	**580**	<360	<340	<360	**610**	<340	<340	<340	<340	<350	<430	NA	50,000
208-96-8	Acenaphthylene	SVOC	<340	<360	<3500	<3700	<370	<390	**490**	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	41,000
98-86-2	Acetophenone	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
62-53-3	Aniline	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	100
120-12-7	Anthracene	SVOC	<340	<360	<3500	<3700	<370	<390	**1800**	<360	<340	<360	**1100**	<340	<340	<340	<340	<350	<430	NA	50,000
1912-24-9	Atrazine	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
100-52-7	Benzaldehyde	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
56-55-3	Benzo(a)Anthracene	SVOC	<340	<360	**6100**	<3700	<370	<390	**4800**	<360	**1100**	<360	**2800**	<340	<340	<340	<340	<350	<430	NA	224 or MDL
50-32-8	Benzo(a)Pyrene	SVOC	<340	<360	**6000**	<3700	<370	<390	**3800**	<360	**890**	<360	**2300**	<340	<340	<340	<340	<350	<430	NA	61 or MDL
205-99-2	Benzo(b)Fluoroanthene	SVOC	<340	<360	**11000**	<3700	<370	<390	**6700**	<360	**1400**	<360	**4200**	<340	<340	<340	<340	<350	<430	NA	1,100
207-08-9	Benzo(k)Fluoroanthene	SVOC	<340	<360	**3800**	<3700	<370	<390	**2300**	<360	**520**	<360	**1400**	<340	<340	<340	<340	<350	<430	NA	1,100
	Total SVOC's Backfill/Landfill		<340	<360	<3500	<3700	<370	<390	**<350**	<360	**<340**	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
	Total SVOCs	SVOC	<340	<360	<3500	<3700	<370	<390	**<350**	<360	**<340**	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
191-24-2	Benzo(g,h,i)Perylene	SVOC	<340	<360	<3500	<3700	<370	<390	**1300**	<360	**380**	<360	**780**	<340	<340	<340	<340	<350	<430	NA	50,000
65-85-0	Benzoic Acid	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	2,700
100-51-6	Benzyl Alcohol	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
111-91-1	Bis(2-Chloroethoxy)methane	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
111-44-4	Bis(2-Chloroethyl)ether	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
108-60-1	Bis(2-Chloroisopropyl)ether	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
117-81-7	Bis(2-Ethylhexyl)Phthalate	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	50,000
85-68-7	Butylbenzylphthalate	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	50,000

Project No. 579.2 / Forte Italia LLC | **SOIL** | **EPA Method 8270 - Semi-Volatile Organic Compounds**

CAS Number	Parameter Name	Parameter ID	B-3.1	B-3.2	B-5.1	B-5.2	B-4.1	B-4.2	B-1.1	B-1.2	B-8.1	B-8.2	B-2.1	B-2.2	B-9.1	B-7.1	B-7.2	B-6.1	B-6.2	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives
	Sample ID	Depth																			
	Unit		*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*
86-74-8	Carbazole	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
218-01-9	Chrysene	SVOC	<340	<360	**6600**	<3700	<370	<390	**4800**	<360	**1100**	<360	**3100**	<340	<340	<340	<340	<350	<430	NA	400
132-64-9	Dibenzofuran	SVOC	<340	<360	<3500	<3700	<370	<390	**590**	<360	<340	<360	**540**	<340	<340	<340	<340	<350	<430	NA	6,200
53-70-3	Dibenz(a,h)Anthracene	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	14 or MDL
84-66-2	Diethyl Phthalate	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	7,100
131-11-3	Dimethyl Phthalate	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	2,000
84-74-2	Di-n-Butyl Phthalate	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	8,100
25321-14-6	Dinitrotoluene(2,4-/2,6-)	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
117-84-0	Di-n-Octyl Phthalate	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	50,000
206-44-0	Fluoranthene	SVOC	<340	<360	**11000**	<3700	<370	**640**	**13000**	<360	2100	<360	**6400**	<340	<340	<340	<340	<350	<430	NA	50,000
86-73-7	Fluorene	SVOC	<340	<360	<3500	<3700	<370	<390	**840**	<360	<340	<360	**690**	<340	<340	<340	<340	<350	<430	NA	50,000
118-74-1	Hexachlorobenzene	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	410
77-47-4	Hexachlorocyclopentadiene	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
67-72-1	Hexachloroethane	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
193-39-5	Indeno(1,2,3-c,d)Pyrene	SVOC	<340	<360	<3500	<3700	<370	<390	**640**	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	3,200
78-59-1	Isophorone	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	4,400
98-95-3	Nitrobenzene	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	200 or MDL
62-75-9	N-Nitrosodimethylamine	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
621-64-7	N-Nitroso-di-n-Propylamine	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
86-30-6	N-Nitrosodiphenylamine	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	NA
87-86-5	Pentachlorophenol	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	1,000 or MDL
85-01-8	Phenanthrene	SVOC	<340	<360	**4300**	<3700	<370	**630**	**10000**	<360	**1100**	<360	**6500**	<340	<340	<340	<340	<350	<430	NA	50,000
108-95-2	Phenol	SVOC	<340	<360	<3500	<3700	<370	<390	<350	<360	<340	<360	<350	<340	<340	<340	<340	<350	<430	NA	30 or MDL
129-00-0	Pyrene	SVOC	<340	<360	**11000**	<3700	<370	**720**	**11000**	<360	**2000**	<360	**6900**	<340	<340	<340	<340	<350	<430	NA	50,000

Project No. 579.2 / Forte Italia LLC | **SOIL** | **EPA Method 8081/8082 - Pesticides & PCBs**

CAS Number	Parameter Name	Parameter ID	B-3.1	B-3.2	B-5.1	B-5.2	B-4.1	B-4.2	B-1.1	B-1.2	B-8.1	B-8.2	B-2.1	B-2.2	B-9.1	B-7.1	B-7.2	B-6.1	B-6.2	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives
	Sample ID	Depth																			
	Unit		*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*	*ug/kg*
72-54-8	4,4-DDD	PESTICIDE	<2.05	<2.18	<2.11	<2.22	<2.23	<2.34	<2.06	<2.16	<2.07	<2.14	<2.12	<2.51	<2.2	<2.14	<2.55	<2.09	<2.54	NA	2,900
72-55-9	4,4-DDE	PESTICIDE	<2.05	<2.18	<2.11	<2.22	<2.23	<2.34	<2.06	<2.16	<2.07	<2.14	<2.12	<2.51	<2.2	<2.14	<2.55	<2.09	<2.54	NA	2,100
50-29-3	4,4-DDT	PESTICIDE	<2.05	<2.18	**13.9**	<2.22	<2.23	<2.34	<2.06	<2.16	<2.07	<2.14	<2.12	<2.51	<2.2	<2.14	<2.55	<2.09	<2.54	NA	2,100
309-00-2	Aldrin	PESTICIDE	<2.05	<2.18	<2.11	<2.22	<2.23	<2.34	<2.06	<2.16	<2.07	<2.14	<2.12	<2.51	<2.2	<2.14	<2.55	<2.09	<2.54	NA	41
319-84-6	alpha-BHC	PESTICIDE	<2.05	<2.18	<2.11	<2.22	**3.88**	<2.34	<2.06	<2.16	<2.07	<2.14	<2.12	<2.51	<2.2	<2.14	<2.55	<2.09	<2.54	NA	110
12674-11-2	Aroclor 1016	PCB	<51.2	<54.4	<52.7	<55.4	<55.6	<58.6	<51.5	<53.9	<51.9	<53.4	<53.1	<62.7	<54.9	<53.6	<63.7	<52.3	<63.6	NA	NA
1104-28-2	Aroclor 1221	PCB	<51.2	<54.4	<52.7	<55.4	<55.6	<58.6	<51.5	<53.9	<51.9	<53.4	<53.1	<62.7	<54.9	<53.6	<63.7	<52.3	<63.6	NA	NA
11141-16-5	Aroclor 1232	PCB	<51.2	<54.4	<52.7	<55.4	<55.6	<58.6	<51.5	<53.9	<51.9	<53.4	<53.1	<62.7	<54.9	<53.6	<63.7	<52.3	<63.6	NA	NA
53469-21-9	Aroclor 1242	PCB	<51.2	<54.4	<52.7	<55.4	<55.6	<58.6	<51.5	<53.9	<51.9	<53.4	<53.1	<62.7	<54.9	<53.6	<63.7	<52.3	<63.6	NA	NA
12672-29-6	Aroclor 1248	PCB	<51.2	<54.4	<52.7	<55.4	<55.6	<58.6	<51.5	<53.9	<51.9	<53.4	<53.1	<62.7	<54.9	<53.6	<63.7	<52.3	<63.6	NA	NA
11097-69-1	Aroclor 1254	PCB	<51.2	<54.4	<52.7	<55.4	<55.6	<58.6	<51.5	<53.9	<51.9	<53.4	<53.1	<62.7	<54.9	<53.6	<63.7	<52.3	<63.6	NA	NA
11096-82-5	Aroclor 1260	PCB	<51.2	<54.4	<52.7	<55.4	<55.6	<58.6	<51.5	<53.9	<51.9	<53.4	<53.1	<62.7	<54.9	<53.6	<63.7	<52.3	<63.6	NA	NA
319-85-7	beta-BHC	PESTICIDE	<2.05	<2.18	<2.11	<2.22	<2.23	<2.34	<2.06	<2.16	<2.07	<2.14	<2.12	<2.51	<2.2	<2.14	<2.55	<2.09	<2.54	NA	200
5103-71-9	Chlordane	PESTICIDE	<2.05	<2.18	<2.11	<2.22	<2.23	<2.34	<2.06	<2.16	<2.07	<2.14	<2.12	<2.51	<2.2	<2.14	<2.55	<2.09	<2.54	NA	540
319-86-8	delta-BHC	PESTICIDE	<2.05	<2.18	<2.11	<2.22	<2.23	<2.34	<2.06	<2.16	<2.07	<2.14	<2.12	<2.51	<2.2	<2.14	<2.55	<2.09	<2.54	NA	300
60-57-1	Dieldrin	PESTICIDE	<2.05	<2.18	<2.11	<2.22	<2.23	<2.34	<2.06	<2.16	<2.07	<2.14	<2.12	<2.51	<2.2	<2.14	<2.55	<2.09	<2.54	NA	44
115-29-7	Endosulfan	PESTICIDE	<2.05	<2.18	<2.11	<2.22	<2.23	<2.34	<2.06	<2.16	<2.07	<2.14	<2.12	<2.51	<2.2	<2.14	<2.55	<2.09	<2.54	NA	NA
959-98-8	Endosulfan I	PESTICIDE	<2.05	<2.18	<2.11	<2.22	<2.23	<2.34	<2.06	<2.16	<2.07	<2.14	<2.12	<2.51	<2.2	<2.14	<2.55	<2.09	<2.54	NA	900
33213-65-9	Endosulfan II	PESTICIDE	<2.05	<2.18	<2.11	<2.22	<2.23	<2.34	<2.06	<2.16	<2.07	<2.14	<2.12	<2.51	<2.2	<2.14	<2.55	<2.09	<2.54	NA	900
1031-07-8	Endosulfan Sulfate	PESTICIDE	<2.05	<2.18	<2.11	<2.22	<2.23	<2.34	<2.06	<2.16	<2.07	<2.14	<2.12	<2.51	<2.2	<2.14	<2.55	<2.09	<2.54	NA	1,000
72-20-8	Endrin	PESTICIDE	<2.05	<2.18	<2.11	<2.22	<2.23	<2.34	<2.06	<2.16	<2.07	<2.14	<2.12	<2.51	<2.2	<2.14	<2.55	<2.09	<2.54	NA	100
7421-93-4	Endrin Aldehyde	PESTICIDE	<2.05	<2.18	**2.7**	<2.22	<2.23	<2.34	**4.63**	<2.16	<2.07	<2.14	<2.12	<2.51	<2.2	<2.14	<2.55	<2.09	<2.54	NA	NA
53494-70-5	Endrin Ketone	PESTICIDE	<2.05	<2.18	**31.1**	<2.22	<2.23	<2.34	**30.5**	<2.16	<2.07	<2.14	<2.12	<2.51	<2.2	<2.14	<2.55	<2.09	<2.54	NA	NA
58-89-9	gamma-BHC (Lindane)	PESTICIDE	<2.05	<2.18	<2.11	<2.22	<2.23	<2.34	<2.06	<2.16	<2.07	<2.14	<2.12	<2.51	<2.2	<2.14	<2.55	<2.09	<2.54	NA	60
76-44-8	Heptachlor	PESTICIDE	<2.05	<2.18	<2.11	<2.22	<2.23	<2.34	<2.06	<2.16	<2.07	<2.14	<2.12	<2.51	<2.2	<2.14	<2.55	<2.09	<2.54	NA	100
1024-57-3	Heptachlor Epoxide	PESTICIDE	<2.05	<2.18	<2.11	<2.22	<2.23	<2.34	<2.06	<2.16	<2.07	<2.14	<2.12	<2.51	<2.2	<2.14	<2.55	<2.09	<2.54	NA	20
72-43-5	Methoxychlor	PESTICIDE	<2.05	<2.18	<2.11	<2.22	<2.23	<2.34	<2.06	<2.16	<2.07	<2.14	<2.12	<2.51	<2.2	<2.14	<2.55	<2.09	<2.54	NA	***
53-17-0	Mitotane	PESTICIDE	<2.05	<2.18	<2.11	<2.22	<2.23	<2.34	<2.06	<2.16	<2.07	<2.14	<2.12	<2.51	<2.2	<2.14	<2.55	<2.09	<2.54	NA	NA
8001-35-2	Toxaphene	PESTICIDE	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	NA	NA

Project No. 579.2 / Forte Italia LLC | **SOIL** | **EPA Method 6010/6020/7471 - TAL Metals**

CAS Number	Parameter Name	Parameter ID	B-3.1	B-3.2	B-5.1	B-5.2	B-4.1	B-4.2	B-1.1	B-1.2	B-8.1	B-8.2	B-2.1	B-2.2	B-9.1	B-7.1	B-7.2	B-6.1	B-6.2	NYSDEC Background Levels	NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives
	Sample ID	Depth																			
	Unit		*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*
7429-90-5	Aluminum	METAL	5605	4638	6283	7399	12889	7495	5559	52588	4564	6097	6093	7779	4571	6011	7109	3726	7393	33,000	SB
7440-36-0	Antimony	METAL	0.344	0.218	0.358	2.11	0.496	0.538	0.682	3.65	1.72	0.614	0.745	1.06	0.234	0.665	0.4	0.356	0.563	NA	SB
7440-38-2	Arsenic	METAL	0.617	0.308	3.15	<0.1	1.13	0.569	1.79	2.01	0.744	<0.1	2.1	0.432	0.837	0.2	0.158	<0.1	<0.1	3.0-12	7.5 or SB
7440-39-3	Barium	METAL	25.1	33.1	122	42.7	87.4	67.9	63.9	264	28.2	28.6	123	55.7	31.2	34.2	41.1	24.8	37	15-600	300 or SB
7440-41-7	Beryllium	METAL	0.232	0.197	0.316	0.27	0.456	0.229	0.257	2.73	0.206	0.319	0.301	0.349	0.23	0.268	0.261	0.197	0.418	0-1.75	.16 or SB
7440-43-9	Cadmium	METAL	2.38	2.41	2.98	3.12	2.95	2.4	1.73	13.6	1.41	1.69	2.23	9.14	4.84	4.06	4.33	2.71	3.6	0.1-1	1 or SB
7440-70-2	Calcium	METAL	1430	3985	14223	2978	9009	9393	3289	21707	1410	2121	2246	5475	1733	2076	3428	638	3170	130-35,000	SB
7440-47-3	Chromium	METAL	11.3	11.3	15.1	20.6	25.5	21.4	14.5	165	11.1	16.1	16.3	19.6	10.4	17.4	17.3	10.7	16.6	1.5-40	10 or SB
16065-83-1	Chromium, trivalent	METAL	11.3	11.3	15.1	20.6	25.5	21.4	14.5	165	11.1	16.1	16.3	19.6	10.4	17.4	17.3	10.7	16.6	NA	NA
7440-48-4	Cobalt	METAL	3.87	4.85	4.47	6.04	7.95	6.86	6.25	42.5	3.05	5.13	5.45	7.47	4.95	4.74	6.82	3.23	7.33	2.5-60	30 or SB
7440-50-8	Copper	METAL	13.9	11.8	48.6	16.9	33.8	23.4	85.2	106	9.7	10.5	27.4	22.1	17.1	14.8	16.9	9.97	15.4	1.0-50	25 or SB
7439-89-6	Iron	METAL	8796	8523	10300	14049	16513	13849	9662	86383	7800	10735	11725	23455	7484	9932	13384	6663	14644	2,000-550,000	2,000 or SB
7439-92-1	Lead	METAL	4.49	5.46	217	26.3	67.1	29.4	100	36.8	16.8	4.73	65.3	9.2	20.9	7.1	7.81	7.87	6.79	4.0-61 or 200-500	SB
7439-95-4	Magnesium	METAL	2923	3189	3723	3759	3211	6762	2192	25431	1743	2930	2582	5436	1785	2432	4318	1612	4076	100-5,000	SB
7439-96-5	Manganese	METAL	212	266	231	310	334	308	235	2553	146	327	1533	341	245	268	320	259	396	50-5,000	SB
7439-97-6	Mercury	METAL	<0.1	**0.11**	**0.235**	**0.111**	**0.156**	**0.112**	<0.1	**0.107**	**0.101**	**0.103**	**0.178**	**1.48**	**0.106**	**0.106**	**0.125**	**0.101**	**0.125**	0.001-0.2	.1 or SB
7440-02-0	Nickel	METAL	9.16	9.2	13.9	12.9	16.5	15.2	12.3	102	7.54	10.9	11.3	15.2	8.6	10.7	14.2	7.15	14.3	0.5-25	13 or SB
7440-09-7	Potassium	METAL	572	910	758	184	1193	1388	627	955	602	1066	866	1660	643	865	1267	636	1363	8,500-43,000	SB
7782-49-2	Selenium	METAL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1-3.9	2 or SB
7440-22-4	Silver	METAL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.263	<0.1	<0.1	<0.1	<0.1	NA	SB
7440-23-5	Sodium	METAL	77.6	172	189	130	494	349	95.6	1819	104	172	144	288	120	134	270	119	192	6,000-8,000	SB
7440-28-0	Thallium	METAL	0.421	0.418	<0.1	1.27	0.214	0.243	0.191	0.715	0.151	<0.1	0.393	3.03	2.13	1.21	0.803	0.493	0.263	NA	SB
7440-62-2	Vanadium	METAL	14.4	13.6	34.5	23.5	30.5	24	16.6	153	12.2	17.4	18	23.6	11.1	15.4	23.6	9.43	23.5	1-300	150 or SB
7440-66-6	Zinc	METAL	19.1	22.8	148	42.2	73.9	49.1	278	215	27.6	23.9	95.7	49.2	41.5	35.9	38.6	18.8	35	9.0-50	20 or SB

Project No. 579.2 / Forte Italia LLC			GROUNDWATER			EPA Method 8260 - Volatile Organic Compounds								
CAS Number	Parameter Name	Parameter ID												**NYSDEC** TOGS 1.1.1. Ambient Water Quality Standards and Guidance Values
	Sample ID		MW-1	MW-1	MW-2	MW-2	MW-4	MW-4	MW-6	MW-6	MW-8	MW-8	MW-FB	
	Unit		*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*ug/L*
630-20-6	1,1,1,2-Tetrachloroethane	**VOC**	<5		<5		<5		<5		<5		<5	5
71-55-6	1,1,1-Trichloroethane	**VOC**	<5		<5		<5		<5		<5		<5	5
79-34-5	1,1,2,2-Tetrachloroethane	**VOC**	<5		<5		<5		<5		<5		<5	5
79-00-5	1,1,2-Trichloroethane	**VOC**	<5		<5		<5		<5		<5		<5	1
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	**VOC**	<5		<5		<5		<5		<5		<5	5
92-52-4	1-1-Biphenyl	**VOC**	<5		<5		<5		<5		<5		<5	NA
75-34-3	1,1-Dichloroethane	**VOC**	<5		<5		<5		<5		<5		<5	5
75-35-4	1,1-Dichloroethene	**VOC**	<5		<5		<5		<5		<5		<5	5
563-58-6	1,1-Dichloropropene	**VOC**	<5		<5		<5		<5		<5		<5	5
87-61-6	1,2,3-Trichlorobenzene	**VOC**	<5		<5		<5		<5		<5		<5	5
96-18-4	1,2,3-Trichloropropane	**VOC**	<5		<5		<5		<5		<5		<5	0.04
95-93-2	1,2,4,5-Tetramethylbenzene	**VOC**	<5		<5		<5		<5		<5		<5	5
120-82-1	1,2,4-Trichlorobenzene	**VOC**	<5		<5		<5		<5		<5		<5	5
95-63-6	1,2,4-Trimethylbenzene	**VOC**	<5		<5		<5		<5		<5		<5	5
96-12-8	1,2-Dibromo-3-Chloropropane	**VOC**	<5		<5		<5		<5		<5		<5	0.04
106-93-4	1,2-Dibromoethane	**VOC**	<5		<5		<5		<5		<5		<5	0.0006
95-50-1	1,2-Dichlorobenzene	**VOC**	<5		<5		<5		<5		<5		<5	3
107-06-2	1,2-Dichloroethane	**VOC**	<5		<5		<5		<5		<5		<5	0.6
78-87-5	1,2-Dichloropropane	**VOC**	<5		<5		<5		<5		<5		<5	1
108-67-8	1,3,5-Trimethylbenzene	**VOC**	<5		<5		<5		<5		<5		<5	5
541-73-1	1,3-Dichlorobenzene	**VOC**	<5		<5		<5		<5		<5		<5	3
142-28-9	1,3-Dichloropropane	**VOC**	<5		<5		<5		<5		<5		<5	5
542-75-6	1,3-Dichloropropene(cis and trans)	**VOC**	<5		<5		<5		<5		<5		<5	NA
106-46-7	1,4-Dichlorobenzene	**VOC**	<5		<5		<5		<5		<5		<5	3
123-91-1	1,4-Dioxane	**VOC**	<5		<5		<5		<5		<5		<5	NA
594-20-7	2,2-Dichloropropane	**VOC**	<5		<5		<5		<5		<5		<5	5
78-93-3	2-Butanone (MEK)	**VOC**	<5		<5		<5		<5		<5		<5	50
95-49-8	2-Chlorotoluene	**VOC**	<5		<5		<5		<5		<5		<5	5
591-78-6	2-Hexanone	**VOC**	<5		<5		<5		<5		<5		<5	50
110-75-8	2-Chloroethyl vinyl ether	**VOC**	<5		<5		<5		<5		<5		<5	NA
106-43-4	4-Chlorotoluene	**VOC**	<5		<5		<5		<5		<5		<5	5
108-10-1	4-Methyl-2-Pentanone	**VOC**	<5		<5		<5		<5		<5		<5	NA
67-64-1	Acetone	**VOC**	<5		<5		<5		<5		<5		<5	50
107-02-8	Acrolein	**VOC**	<5		<5		<5		<5		<5		<5	NA
107-13-1	Acrylonitrile	**VOC**	<5		<5		<5		<5		<5		<5	5
71-43-2	Benzene	**VOC**	<5		<5		<5		<5		<5		<5	1
92-87-5	Benzidine	**VOC**	<5		<5		<5		<5		<5		<5	NA
65-85-0	Benzoic Acid	**VOC**	<5		<5		<5		<5		<5		<5	NA
108-86-1	Bromobenzene	**VOC**	<5		<5		<5		<5		<5		<5	5
74-97-5	Bromochloromethane	**VOC**	<5		<5		<5		<5		<5		<5	5
75-27-4	Bromodichloromethane	**VOC**	<5		<5		<5		<5		<5		<5	50
75-25-2	Bromoform	**VOC**	<5		<5		<5		<5		<5		<5	50
74-83-9	Bromomethane	**VOC**	<5		<5		<5		<5		<5		<5	5
75-15-0	Carbon Disulfide	**VOC**	<5		<5		<5		<5		<5		<5	60
56-23-5	Carbon Tetrachloride	**VOC**	<5		<5		<5		<5		<5		<5	5

Project No. 579.2 / Forte Italia LLC | **GROUNDWATER** | **EPA Method 8260 - Volatile Organic Compounds**

CAS Number	Parameter Name	Parameter ID												**NYSDEC** TOGS 1.1.1. Ambient Water Quality Standards and Guidance Values
	Sample ID		**MW-1**	**MW-1**	**MW-2**	**MW-2**	**MW-4**	**MW-4**	**MW-6**	**MW-6**	**MW-8**	**MW-8**	**MW-FB**	
	Unit		*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*ug/L*
108-90-7	Chlorobenzene	**VOC**	<5		<5		<5		<5		<5		<5	5
124-48-1	Chlorodibromomethane	**VOC**	<5		<5		<5		<5		<5		<5	50
75-00-3	Chloroethane	**VOC**	<5		<5		<5		<5		<5		<5	5
67-66-3	Chloroform	**VOC**	<5		<5		<5		<5		<5		<5	7
74-87-3	Chloromethane	**VOC**	<5		<5		<5		<5		<5		<5	5
156-59-2	cis-1,2-Dichloroethene	**VOC**	<5		<5		<5		<5		<5		<5	5
10061-01-5	cis-1,3-Dichloropropene	**VOC**	<5		<5		<5		<5		<5		<5	0.4
74-95-3	Dibromomethane	**VOC**	<5		<5		<5		<5		<5		<5	5
124-48-1	Dibromochloromethane	**VOC**	<5		<5		<5		<5		<5		<5	50
75-71-8	Dichlorodifluoromethane	**VOC**	<5		<5		<5		<5		<5		<5	5
100-41-4	Ethylbenzene	**VOC**	<5		<5		<5		<5		<5		<5	5
118-74-1	Hexachlorobenzene	**VOC**	<5		<5		<5		<5		<5		<5	0.04
87-68-3	Hexachlorobutadiene	**VOC**	<5		<5		<5		<5		<5		<5	0.01
98-82-8	Isopropylbenzene	**VOC**	<5		<5		<5		<5		<5		<5	5
79-20-9	Methyl Acetate	**VOC**	<5		<5		<5		<5		<5		<5	NA
108-10-1	Methyl Isobutyl Ketone (MIBK)	**VOC**	<5		<5		<5		<5		<5		<5	NA
75-09-2	Methylene Chloride	**VOC**	<5		<5		<5		<5		<5		<5	5
1634-04-4	Methyl Tert-Butyl Ether (MTBE)	**VOC**	<5		<5		<5		<5		<5		<5	10
91-20-3	Naphthalene	**VOC**	<5		<5		<5		<5		<5		<5	NA
104-51-8	n-Butylbenzene	**VOC**	<5		<5		<5		<5		<5		<5	5
103-65-1	n-Propylbenzene	**VOC**	<5		<5		<5		<5		<5		<5	5
105-05-5	p-Diethylbenzene	**VOC**	<5		<5		<5		<5		<5		<5	NA
622-96-8	p-Ethyltoluene	**VOC**	<5		<5		<5		<5		<5		<5	NA
99-87-6	p-Isopropyltoluene	**VOC**	<5		<5		<5		<5		<5		<5	5
135-98-8	sec-Butylbenzene	**VOC**	<5		<5		<5		<5		<5		<5	5
100-42-5	Styrene	**VOC**	<5		<5		<5		<5		<5		<5	5
98-06-6	tert-Butylbenzene	**VOC**	<5		<5		<5		<5		<5		<5	NA
75-65-0	Tertiary Butyl Alcohol (TBA)	**VOC**	<5		<5		<5		<5		<5		<5	NA
127-18-4	Tetrachloroethene	**VOC**	<5		<5		<5		<5		<5		<5	5
108-88-3	Toluene	**VOC**	<5		<5		<5		<5		<5		<5	5
1330-20-7	Total Xylenes	**VOC**	<5		<5		<5		<5		<5		<5	5
156-60-5	trans-1,2-Dichloroethene	**VOC**	<5		<5		<5		<5		<5		<5	5
10061-02-6	trans-1,3-Dichloropropene	**VOC**	<5		<5		<5		<5		<5		<5	0.4
79-01-6	Trichloroethene	**VOC**	<5		<5		<5		<5		<5		<5	5
75-69-4	Trichlorofluoromethane	**VOC**	<5		<5		<5		<5		<5		<5	5
108-05-4	Vinyl Acetate	**VOC**	<5		<5		<5		<5		<5		<5	NA
75-01-4	Vinyl Chloride	**VOC**	<5		<5		<5		<5		<5		<5	2

Project No. 579.2 / Forte Italia LLC | **GROUNDWATER** | **EPA Method 8260 - Semi-Volatile Organic Compounds**

CAS Number	Parameter Name	Parameter ID	MW-1	MW-1	MW-2	MW-2	MW-4	MW-4	MW-6	MW-6	MW-8	MW-8	MW-FB	**NYSDEC** TOGS 1.1.1. Ambient Water Quality Standards and Guidance Values
	Sample ID		**MW-1**	**MW-1**	**MW-2**	**MW-2**	**MW-4**	**MW-4**	**MW-6**	**MW-6**	**MW-8**	**MW-8**	**MW-FB**	
	Unit		*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*ug/L*
95-50-1	1,2-Dichlorobenzene	**SVOC**	<5		<5		<5		<5		<5		<5	3
122-66-7	1,2-Diphenylhydrazine	**SVOC**	<5		<5		<5		<5		<5		<5	NA
120-82-1	1,2,4-Trichlorobenzene	**SVOC**	<5		<5		<5		<5		<5		<5	5
541-73-1	1,3-Dichlorobenzene	**SVOC**	<5		<5		<5		<5		<5		<5	3
106-46-7	1,4-Dichlorobenzene	**SVOC**	<5		<5		<5		<5		<5		<5	3
95-95-4	2,4,5-Trichlorophenol	**SVOC**	<5		<5		<5		<5		<5		<5	NA
88-06-2	2,4,6-Trichlorophenol	**SVOC**	<5		<5		<5		<5		<5		<5	NA
102-83-2	2,4-Dichlorophenol	**SVOC**	<5		<5		<5		<5		<5		<5	NA
105-67-9	2,4-Dimethylphenol	**SVOC**	<5		<5		<5		<5		<5		<5	NA
51-28-5	2,4-Dinitrophenol	**SVOC**	<5		<5		<5		<5		<5		<5	10
121-14-2	2,4-Dinitrotoluene	**SVOC**	<5		<5		<5		<5		<5		<5	5
606-20-2	2,6-Dinitrotoluene	**SVOC**	<5		<5		<5		<5		<5		<5	5
91-58-7	2-Chloronapthalene	**SVOC**	<5		<5		<5		<5		<5		<5	10
95-57-8	2-Chlorophenol	**SVOC**	<5		<5		<5		<5		<5		<5	NA
91-57-6	2-Methylnaphthalene	**SVOC**	<5		<5		<5		<5		<5		<5	NA
95-48-7	2-Methylphenol (o-Cresol)	**SVOC**	<5		<5		<5		<5		<5		<5	NA
88-74-4	2-Nitroaniline	**SVOC**	<5		<5		<5		<5		<5		<5	5
88-75-5	2-Nitrophenol	**SVOC**	<5		<5		<5		<5		<5		<5	NA
15831-10-4	3+4 Methylphenol	**SVOC**	<5		<5		<5		<5		<5		<5	NA
91-94-1	3,3-Dichlorobenzidine	**SVOC**	<5		<5		<5		<5		<5		<5	5
99-09-2	3-Nitroaniline	**SVOC**	<5		<5		<5		<5		<5		<5	5
534-52-1	4,6-Dinitro-2-methylphenol	**SVOC**	<5		<5		<5		<5		<5		<5	NA
101-55-3	4-Bromophenyl-phenyl ether	**SVOC**	<5		<5		<5		<5		<5		<5	NA
59-50-7	4-Chloro-3-methylphenol	**SVOC**	<5		<5		<5		<5		<5		<5	NA
106-47-8	4-Chloroaniline	**SVOC**	<5		<5		<5		<5		<5		<5	5
7005-72-3	4-Chlorophenyl phenyl ether	**SVOC**	<5		<5		<5		<5		<5		<5	NA
106-44-5	4-Methylphenol (p-Cresol)	**SVOC**	<5		<5		<5		<5		<5		<5	NA
100-01-6	4-Nitroaniline	**SVOC**	<5		<5		<5		<5		<5		<5	5
100-02-7	4-Nitrophenol	**SVOC**	<5		<5		<5		<5		<5		<5	NA
83-32-9	Acenaphthene	**SVOC**	<5		<5		<5		<5		<5		<5	20
208-96-8	Acenaphthylene	**SVOC**	<5		<5		<5		<5		<5		<5	NA
98-86-2	Acetophenone	**SVOC**	<5		<5		<5		<5		<5		<5	NA
62-53-3	Aniline	**SVOC**	<5		<5		<5		<5		<5		<5	5
120-12-7	Anthracene	**SVOC**	<5		<5		<5		<5		<5		<5	50
1912-24-9	Atrazine	**SVOC**	<5		<5		<5		<5		<5		<5	NA
100-52-7	Benzaldehyde	**SVOC**	<5		<5		<5		<5		<5		<5	NA
56-55-3	Benzo-a-Anthracene	**SVOC**	<5		<5		<5		<5		<5		<5	0.002
50-32-8	Benzo-a-Pyrene	**SVOC**	<5		<5		<5		<5		<5		<5	MDL
205-99-2	Benzo-b-Fluoroanthene	**SVOC**	<5		<5		<5		<5		<5		<5	0.002
207-08-9	Benzo-k-Fluoroanthene	**SVOC**	<5		<5		<5		<5		<5		<5	0.002
191-24-2	Benzo-g,h,i-Perylene	**SVOC**	<5		<5		<5		<5		<5		<5	NA
65-85-0	Benzoic Acid	**SVOC**	<5		<5		<5		<5		<5		<5	NA
100-51-6	Benzyl Alcohol	**SVOC**	<5		<5		<5		<5		<5		<5	NA
111-91-1	Bis(2-Chloroethoxy)methane	**SVOC**	<5		<5		<5		<5		<5		<5	5

Project No. 579.2 / Forte Italia LLC | **GROUNDWATER** | **EPA Method 8081/8082 - Pesticides & PCBs**

CAS Number	Parameter Name	Parameter ID												NYSDEC TOGS 1.1.1. Ambient Water Quality Standards and Guidance Values
	Sample ID		MW-1	MW-1	MW-2	MW-2	MW-4	MW-4	MW-6	MW-6	MW-8	MW-8	MW-FB	
	Unit		*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*FILTERED*	*ug/L*	*ug/L*
72-54-8	4,4-DDD	**PESTICIDE**	<0.02		<0.02		<0.02		<0.02		<0.02			0.3
72-55-9	4,4-DDE	**PESTICIDE**	<0.02		<0.02		<0.02		<0.02		<0.02			0.2
50-29-3	4,4-DDT	**PESTICIDE**	<0.02		<0.02		<0.02		<0.02		<0.02			0.2
309-00-2	Aldrin	**PESTICIDE**	<0.02		<0.02		<0.02		<0.02		<0.02			MDL
319-84-6	alpha-BHC	**PESTICIDE**	<0.02		<0.02		<0.02		<0.02		<0.02			0.01
12674-11-2	Aroclor 1016	**PCB**	<0.5		<0.5		<0.5		<0.5		<0.5			NA
1104-28-2	Aroclor 1221	**PCB**	<0.5		<0.5		<0.5		<0.5		<0.5			NA
11141-16-5	Aroclor 1232	**PCB**	<0.5		<0.5		<0.5		<0.5		<0.5			NA
53469-21-9	Aroclor 1242	**PCB**	<0.5		<0.5		<0.5		<0.5		<0.5			NA
12672-29-6	Aroclor 1248	**PCB**	<0.5		<0.5		<0.5		<0.5		<0.5			NA
11097-69-1	Aroclor 1254	**PCB**	<0.5		<0.5		<0.5		<0.5		<0.5			NA
11096-82-5	Aroclor 1260	**PCB**	<0.5		<0.5		<0.5		<0.5		<0.5			NA
319-85-7	beta-BHC	**PESTICIDE**	<0.02		<0.02		<0.02		<0.02		<0.02			0.04
5103-71-9	Chlordane	**PESTICIDE**	<0.02		<0.02		<0.02		<0.02		<0.02			NA
319-86-8	delta-BHC	**PESTICIDE**	<0.02		<0.02		<0.02		<0.02		<0.02			0.04
60-57-1	Dieldrin	**PESTICIDE**	<0.02		<0.02		<0.02		<0.02		<0.02			0.004
115-29-7	Endosulfan	**PESTICIDE**	<0.02		<0.02		<0.02		<0.02		<0.02			NA
959-98-8	Endosulfan I	**PESTICIDE**	<0.02		<0.02		<0.02		<0.02		<0.02			NA
33213-65-9	Endosulfan II	**PESTICIDE**	<0.02		<0.02		<0.02		<0.02		<0.02			NA
1031-07-8	Endosulfan Sulfate	**PESTICIDE**	<0.02		<0.02		<0.02		<0.02		<0.02			NA
72-20-8	Endrin	**PESTICIDE**	<0.02		<0.02		<0.02		<0.02		<0.02			MDL
7421-93-4	Endrin Aldehyde	**PESTICIDE**	<0.02		<0.02		<0.02		<0.02		<0.02			5
53494-70-5	Endrin Ketone	**PESTICIDE**	<0.02		<0.02		<0.02		<0.02		<0.02			5
58-89-9	gamma-BHC (Lindane)	**PESTICIDE**	<0.02		<0.02		<0.02		<0.02		<0.02			0.05
76-44-8	Heptachlor	**PESTICIDE**	<0.02		<0.02		<0.02		<0.02		<0.02			0.04
1024-57-3	Heptachlor Epoxide	**PESTICIDE**	<0.02		<0.02		<0.02		<0.02		<0.02			0.03
72-43-5	Methoxychlor	**PESTICIDE**	<0.02		<0.02		<0.02		<0.02		<0.02			35
53-17-0	Mitotane	**PESTICIDE**	<0.02		<0.02		<0.02		<0.02		<0.02			NA
8001-35-2	Toxaphene	**PESTICIDE**	<1		<1		<1		<1		<1			0.06

Project No. 579.2 / Forte Italia LLC			GROUNDWATER			EPA Method 6010/6020/7471 - TAL Metals								
CAS Number	Parameter Name	Parameter ID		FILTERED		FILTERED		FILTERED		FILTERED		FILTERED		**NYSDEC** TOGS 1.1.1. Ambient Water Quality Standards and Guidance Values
	Sample ID		MW-1	MW-1	MW-2	MW-2	MW-4	MW-4	MW-6	MW-6	MW-8	MW-8	MW-FB	
	Unit		*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
7429-90-5	Aluminum, Al	**METAL**	29.5	1.82	112	8.94	40.7	0.506	37	0.24	7.85	0.177		0.1
7440-36-0	Antimony, Sb	**METAL**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.003
7440-38-2	Arsenic, As	**METAL**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.025
7440-39-3	Barium, Ba	**METAL**	0.262	<0.1	1.18	<0.1	0.647	<0.1	0.421	<0.1	<0.1	<0.1		1
7440-41-7	Beryllium, Be	**METAL**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.003
7440-43-9	Cadmium, Cd	**METAL**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.005
7440-70-2	Calcium, Ca	**METAL**	22.7	6.84	53.6	6.53	142	40.3	91.4	28.2	44.8	20.5		NA
7440-47-3	Chromium, Cr	**METAL**	<0.1	<0.1	0.289	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.05
16065-83-1	Chromium, trivalent	**METAL**	<0.1	<0.1	0.289	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		NA
7440-48-4	Cobalt, Co	**METAL**	<0.1	<0.1	0.161	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		NA
7440-50-8	Copper, Cu	**METAL**	0.117	<0.1	0.483	<0.1	0.189	<0.1	0.172	<0.1	<0.1	<0.1		0.2
7439-89-6	Iron, Fe	**METAL**	52.4	1.65	228	8.77	74.3	0.707	91.9	0.38	14.7	0.303		0.3
7439-92-1	Lead, Pb	**METAL**	0.137	<0.1	0.203	<0.1	0.231	<0.1	0.16	<0.1	<0.1	<0.1		0.025
7439-95-4	Magnesium, Mg	**METAL**	19.7	3.09	79.9	3.67	50.9	8.04	38.6	8.93	11.7	4.54		35
7439-96-5	Manganese, Mn	**METAL**	3.06	0.109	11	0.393	2.19	0.149	3.91	<0.1	0.844	<0.1		0.3
7439-97-6	Mercury, Hg	**METAL**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		0.0007
7440-02-0	Nickel, Ni	**METAL**	<0.1	<0.1	0.292	<0.1	<0.1	<0.1	0.103	<0.1	<0.1	<0.1		0.1
7440-09-7	Potassium, K	**METAL**	9.39	2.22	28	3.51	16.8	3.29	12.4	2.65	6.33	2.31		NA
7782-49-2	Selenium, Se	**METAL**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.01
7440-22-4	Silver, Ag	**METAL**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.05
7440-23-5	Sodium, Na	**METAL**	12.2	4.87	11.9	4.42	33.6	16	46.1	22.6	58	28.7		20
7440-28-0	Thallium, Ti	**METAL**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.0005
7440-62-2	Vanadium, V	**METAL**	<0.1	<0.1	0.288	<0.1	0.102	<0.1	0.101	<0.1	<0.1	<0.1		NA
7440-66-6	Zinc, Zn	**METAL**	0.232	<0.1	0.813	<0.1	0.392	<0.1	0.299	<0.1	<0.1	<0.1		2

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue
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Analytical Report

Cosmos Environmental Services Inc: 579.2
PO Box 349
Woodmere, NY 11598

Report Date: 11/9/2009

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue
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Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087509

Sample's Information:
Sample ID: B-3.1

Site: B-3.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 8:20:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908522

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	1,2,4-Trichlorobenzene	<340 ppb		8270
11/06/09	1,2-Dichlorobenzene	<340 ppb		8270
11/06/09	1,3-Dichlorobenzene	<340 ppb		8270
11/06/09	1,4-Dichlorobenzene	<340 ppb		8270
11/06/09	2,4,5-Trichlorophenol	<340 ppb		8270
11/06/09	2,4,6-Trichlorophenol	<340 ppb		8270
11/06/09	2,4-Dichlorophenol	<340 ppb		8270
11/06/09	2,4-Dimethylphenol	<340 ppb		8270
11/06/09	2,4-Dinitrophenol	<340 ppb		8270
11/06/09	2,4-Dinitrotoluene	<340 ppb		8270
11/06/09	2,6-Dichlorophenol	<340 ppb		8270
11/06/09	2,6-Dinitrotoluene	<340 ppb		8270
11/06/09	2-Chloronaphthalene	<340 ppb		8270
11/06/09	2-Chlorophenol	<340 ppb		8270
11/06/09	2-Methyl-4,6-dinitrophenol	<340 ppb		8270
11/06/09	2-Methylnaphthalene	<340 ppb		8270
11/06/09	2-Methylphenol (o-Cresol)	<340 ppb		8270
11/06/09	2-Nitroaniline	<340 ppb		8270
11/06/09	2-Nitrophenol	<340 ppb		8270
11/06/09	3&4-Methylphenol (m,p-Cresol)	<340 ppb		8270
11/06/09	3,3'-Dichlorobenzidine	<340 ppb		8270
11/06/09	3-Nitroaniline	<340 ppb		8270
11/06/09	4-Bromophenyl Phenyl Ether	<340 ppb		8270
11/06/09	4-Chloro-3-Methylphenol	<340 ppb		8270
11/06/09	4-Chloroaniline	<340 ppb		8270
11/06/09	4-Chlorophenylphenyl ether	<340 ppb		8270
11/06/09	4-Nitroaniline	<340 ppb		8270
11/06/09	4-Nitrophenol	<340 ppb		8270
11/06/09	Acenaphthene	<340 ppb		8270
11/06/09	Acenaphthylene	<340 ppb		8270
11/06/09	Aniline	<340 ppb		8270

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Collector's Information:
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Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087509

Sample's Information: **Sample ID:** B-3.1

Site: B-3.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 8:20:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908522

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Anthracene	<340 ppb		8270
11/06/09	Benzidine	<340 ppb		8270
11/06/09	Benzo(a)anthracene	<340 ppb		8270
11/06/09	Benzo(a)pyrene	<340 ppb		8270
11/06/09	Benzo(b)fluoranthene	<340 ppb		8270
11/06/09	Benzo(g,h,i)perylene	<340 ppb		8270
11/06/09	Benzo(k)fluoranthene	<340 ppb		8270
11/06/09	Benzoic Acid	<340 ppb		8270
11/06/09	Benzyl Alcohol	<340 ppb		8270
11/06/09	Benzyl Butyl Phthalate	<340 ppb		8270
11/06/09	bis(2-Chloroethoxy)methane	<340 ppb		8270
11/06/09	bis(2-Chloroethyl) ether	<340 ppb		8270
11/06/09	bis(2-Chloroisopropyl) ether	<340 ppb		8270
11/06/09	bis(2-ethylhexyl)phthalate	<340 ppb		8270
11/06/09	Chrysene	<340 ppb		8270
11/06/09	Dibenz(a,h)anthracene	<340 ppb		8270
11/06/09	Dibenzofuran	<340 ppb		8270
11/06/09	Diethyl Phthalate	<340 ppb		8270
11/06/09	Dimethyl Phthalate	<340 ppb		8270
11/06/09	Di-n-Butyl phthalate	<340 ppb		8270
11/06/09	Di-n-octyl phthalate	<340 ppb		8270
11/06/09	Fluoranthene	<340 ppb		8270
11/06/09	Fluorene	<340 ppb		8270
11/06/09	Hexachlorobenzene	<340 ppb		8270
11/06/09	Hexachlorobutadiene	<340 ppb		8270
11/06/09	Hexachlorocyclopentadiene	<340 ppb		8270
11/06/09	Hexachloroethane	<340 ppb		8270
11/06/09	Indeno(1,2,3-cd)pyrene	<340 ppb		8270
11/06/09	Isophorone	<340 ppb		8270
11/06/09	m-Cresol	<340 ppb		8270
11/06/09	Naphthalene	<340 ppb		8270

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Collector's Information: **JMS ID:** 087509
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

Sample's Information: **Sample ID:** B-3.1

Site: B-3.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 8:20:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908522

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Nitrobenzene	<340 ppb		8270
11/06/09	n-Nitrosodimethylamine	<340 ppb		8270
11/06/09	n-Nitrosodi-n-propylamine	<340 ppb		8270
11/06/09	n-Nitrosodiphenylamine	<340 ppb		8270
11/06/09	Pentachlorophenol	<340 ppb		8270
11/06/09	Phenanthrene	<340 ppb		8270
11/06/09	Phenol	<340 ppb		8270
11/06/09	Pyrene	<340 ppb		8270
11/03/09	1,1,1,2-Tetrachloroethane	<5.2 ppb		EPA 8260
11/03/09	1,1,1-Trichloroethane	<5.2 ppb		EPA 8260
11/03/09	1,1,2,2-Tetrachloroethane	<5.2 ppb		EPA 8260
11/03/09	1,1,2-Trichloroethane	<5.2 ppb		EPA 8260
11/03/09	1,1-Dichloroethane	<5.2 ppb		EPA 8260
11/03/09	1,1-Dichloroethene	<5.2 ppb		EPA 8260
11/03/09	1,1-Dichloropropene	<5.2 ppb		EPA 8260
11/03/09	1,2,3-Trichlorobenzene	<5.2 ppb		EPA 8260
11/03/09	1,2,3-Trichloropropane	<5.2 ppb		EPA 8260
11/03/09	1,2,4-Trichlorobenzene	<5.2 ppb		EPA 8260
11/03/09	1,2,4-Trimethylbenzene	<5.2 ppb		EPA 8260
11/03/09	1,2-Dibromo-3-Chloropropane	<5.2 ppb		EPA 8260
11/03/09	1,2-Dibromoethane	<5.2 ppb		EPA 8260
11/03/09	1,2-Dichlorobenzene	<5.2 ppb		EPA 8260
11/03/09	1,2-Dichloroethane	<5.2 ppb		EPA 8260
11/03/09	1,2-Dichloropropane	<5.2 ppb		EPA 8260
11/03/09	1,3,5-Trimethylbenzene	<5.2 ppb		EPA 8260
11/03/09	1,3-Dichlorobenzene	<5.2 ppb		EPA 8260
11/03/09	1,3-Dichloropropane	<5.2 ppb		EPA 8260
11/03/09	1,4-Dichlorobenzene	<5.2 ppb		EPA 8260
11/03/09	2,2-Dichloropropane	<5.2 ppb		EPA 8260
11/03/09	2-Butanone (MEK)	<5.2 ppb		EPA 8260

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JMS ID: 087509

Sample's Information: **Sample ID:** B-3.1

Site: B-3.1
Preservative: N/A
Temperature:
Matrix: Soil

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Date Analyzed	Test Name	Result	MCL	Method
11/03/09	2-Chlorotoluene	<5.2 ppb		EPA 8260
11/03/09	2-Hexanone	<5.2 ppb		EPA 8260
11/03/09	4-Chlorotoluene	<5.2 ppb		EPA 8260
11/03/09	4-Methyl-2-pentanone (MIBK)	<5.2 ppb		EPA 8260
11/03/09	Acetone	<5.2 ppb		EPA 8260
11/03/09	Acrolein	<5.2 ppb		EPA 8260
11/03/09	Acrylonitrile	<5.2 ppb		EPA 8260
11/03/09	Benzene	<5.2 ppb		EPA 8260
11/03/09	Bromobenzene	<5.2 ppb		EPA 8260
11/03/09	Bromochloromethane	<5.2 ppb		EPA 8260
11/03/09	Bromodichloromethane	<5.2 ppb		EPA 8260
11/03/09	Bromoform	<5.2 ppb		EPA 8260
11/03/09	Bromomethane	<5.2 ppb		EPA 8260
11/03/09	Carbon disulfide	<5.2 ppb		EPA 8260
11/03/09	Carbon tetrachloride	<5.2 ppb		EPA 8260
11/03/09	Chlorobenzene	<5.2 ppb		EPA 8260
11/03/09	Chlorodibromomethane	<5.2 ppb		EPA 8260
11/03/09	Chloroethane	<5.2 ppb		EPA 8260
11/03/09	Chloroform	<5.2 ppb		EPA 8260
11/03/09	Chloromethane	<5.2 ppb		EPA 8260
11/03/09	cis-1,2-Dichloroethene	<5.2 ppb		EPA 8260
11/03/09	cis-1,3-Dichloropropene	<5.2 ppb		EPA 8260
11/03/09	Dibromomethane	<5.2 ppb		EPA 8260
11/03/09	Dichlorodifluoromethane	<5.2 ppb		EPA 8260
11/03/09	Ethylbenzene	<5.2 ppb		EPA 8260
11/03/09	Isopropylbenzene	<5.2 ppb		EPA 8260
11/03/09	m&p xylene	<5.2 ppb		EPA 8260
11/03/09	Methylene Chloride	<5.2 ppb		EPA 8260
11/03/09	MTBE	<5.2 ppb		EPA 8260
11/03/09	Naphthalene	<5.2 ppb		EPA 8260
11/03/09	n-Butylbenzene	<5.2 ppb		EPA 8260

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087509

Sample's Information: **Sample ID:** B-3.1

Site: B-3.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 8:20:00 AM

Date Received: 11/2/2009
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Lab No.: J0908522

Date Analyzed	Test Name	Result	MCL	Method
11/03/09	n-Propylbenzene	<5.2 ppb		EPA 8260
11/03/09	o-Xylene	<5.2 ppb		EPA 8260
11/03/09	p-Isoproplytoluene	<5.2 ppb		EPA 8260
11/03/09	sec-Butylbenzene	<5.2 ppb		EPA 8260
11/03/09	Styrene	<5.2 ppb		EPA 8260
11/03/09	tert-Butylbenzene	<5.2 ppb		EPA 8260
11/03/09	Tetrachloroethene	<5.2 ppb		EPA 8260
11/03/09	Toluene	<5.2 ppb		EPA 8260
11/03/09	trans-1,2-Dichloroethene	<5.2 ppb		EPA 8260
11/03/09	trans-1,3-Dichloropropene	<5.2 ppb		EPA 8260
11/03/09	Trichloroethene	<5.2 ppb		EPA 8260
11/03/09	Trichlorofluoromethane	<5.2 ppb		EPA 8260
11/03/09	Vinyl Acetate	<5.2 ppb		EPA 8260
11/03/09	Vinyl chloride	<5.2 ppb		EPA 8260
11/07/09	PCB-1016	<51.2 ppb		SW 8082
11/07/09	PCB-1221	<51.2 ppb		SW 8082
11/07/09	PCB-1232	<51.2 ppb		SW 8082
11/07/09	PCB-1242	<51.2 ppb		SW 8082
11/07/09	PCB-1248	<51.2 ppb		SW 8082
11/07/09	PCB-1254	<51.2 ppb		SW 8082
11/07/09	PCB-1260	<51.2 ppb		SW 8082
11/07/09	PCB-1262	<51.2 ppb		SW 8082
11/07/09	PCB-1268	<51.2 ppb		SW 8082
11/07/09	4,4'-DDD	<2.05 ppb		SW8081
11/07/09	4,4'-DDE	<2.05 ppb		SW8081
11/07/09	4,4'-DDT	<2.05 ppb		SW8081
11/07/09	a-BHC	<2.05 ppb		SW8081
11/07/09	Aldrin	<2.05 ppb		SW8081
11/07/09	b-BHC	<2.05 ppb		SW8081

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Cosmos Environmental Services Inc: 579.2

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087509

Sample's Information: **Sample ID:** B-3.1

Site: B-3.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 8:20:00 AM

Date Received: 11/2/2009
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Lab No.: J0908522

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	Chlordane	<2.05 ppb		SW8081
11/07/09	d-BHC	<2.05 ppb		SW8081
11/07/09	Dieldrin	<2.05 ppb		SW8081
11/07/09	Endosulfan I	<2.05 ppb		SW8081
11/07/09	Endosulfan II	<2.05 ppb		SW8081
11/07/09	Endosulfan Sulfate	<2.05 ppb		SW8081
11/07/09	Endrin	<2.05 ppb		SW8081
11/07/09	Endrin Aldehyde	<2.05 ppb		SW8081
11/07/09	Endrin Ketone	<2.05 ppb		SW8081
11/07/09	g-BHC	<2.05 ppb		SW8081
11/07/09	Heptachlor	<2.05 ppb		SW8081
11/07/09	Heptachlor epoxide	<2.05 ppb		SW8081
11/07/09	Methoxychlor	<2.05 ppb		SW8081
11/07/09	Mitotane	<2.05 ppb		SW8081
11/07/09	Toxaphene	<100 ppb		SW8081
11/06/09	Zinc	19.1 ppm	N/A	6010/E200.7
11/06/09	Vanadium	14.4 ppm	N/A	6010/E200.7
11/06/09	Thallium	0.421 ppm	N/A	6010/E200.7
11/06/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/06/09	Antimony	0.344 ppm	N/A	6010/E200.7
11/06/09	Lead	4.49 ppm	N/A	6010/E200.7
11/06/09	Nickel	9.16 ppm	N/A	6010/E200.7
11/06/09	Sodium	77.6 ppm	N/A	6010/E200.7
11/06/09	Manganese	212 ppm	N/A	6010/E200.7
11/06/09	Magnesium	2923 ppm	N/A	6010/E200.7
11/06/09	Potassium	572 ppm	N/A	6010/E200.7
11/05/09	Mercury	<0.1 ppm	N/A	SW-7471
11/06/09	Iron	8796 ppm	N/A	6010/E200.7
11/06/09	Copper	13.9 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent	11.3 ppm	N/A	6010/E200.7

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State: NY **Zip:**
Phone:

JMS ID: 087509

Sample's Information:
Sample ID: B-3.1

Site: B-3.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 8:20:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908522

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chromium	11.3 ppm	N/A	6010/E200.7
11/06/09	Cobalt	3.87 ppm	N/A	6010/E200.7
11/06/09	Cadmium	2.38 ppm	N/A	6010/E200.7
11/06/09	Calcium	1430 ppm	N/A	6010/E200.7
11/06/09	Beryllium	0.232 ppm	N/A	6010/E200.7
11/06/09	Barium	25.1 ppm	N/A	6010/E200.7
11/06/09	Arsenic	0.617 ppm	N/A	6010/E200.7
11/06/09	Aluminum	5605 ppm	N/A	6010/E200.7
11/06/09	Silver	<0.1 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue
Danbury, Connecticut 06810 | Telephone 203-798-2229

Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087510

Sample's Information:
Sample ID: B-3.2

Site: B-3.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 9:25:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908523

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	1,2,4-Trichlorobenzene	<360 ppb		8270
11/06/09	1,2-Dichlorobenzene	<360 ppb		8270
11/06/09	1,3-Dichlorobenzene	<360 ppb		8270
11/06/09	1,4-Dichlorobenzene	<360 ppb		8270
11/06/09	2,4,5-Trichlorophenol	<360 ppb		8270
11/06/09	2,4,6-Trichlorophenol	<360 ppb		8270
11/06/09	2,4-Dichlorophenol	<360 ppb		8270
11/06/09	2,4-Dimethylphenol	<360 ppb		8270
11/06/09	2,4-Dinitrophenol	<360 ppb		8270
11/06/09	2,4-Dinitrotoluene	<360 ppb		8270
11/06/09	2,6-Dichlorophenol	<360 ppb		8270
11/06/09	2,6-Dinitrotoluene	<360 ppb		8270
11/06/09	2-Chloronaphthalene	<360 ppb		8270
11/06/09	2-Chlorophenol	<360 ppb		8270
11/06/09	2-Methyl-4,6-dinitrophenol	<360 ppb		8270
11/06/09	2-Methylnaphthalene	<360 ppb		8270
11/06/09	2-Methylphenol (o-Cresol)	<360 ppb		8270
11/06/09	2-Nitroaniline	<360 ppb		8270
11/06/09	2-Nitrophenol	<360 ppb		8270
11/06/09	3&4-Methylphenol (m,p-Cresol)	<360 ppb		8270
11/06/09	3,3'-Dichlorobenzidine	<360 ppb		8270
11/06/09	3-Nitroaniline	<360 ppb		8270
11/06/09	4-Bromophenyl Phenyl Ether	<360 ppb		8270
11/06/09	4-Chloro-3-Methylphenol	<360 ppb		8270
11/06/09	4-Chloroaniline	<360 ppb		8270
11/06/09	4-Chlorophenylphenyl ether	<360 ppb		8270
11/06/09	4-Nitroaniline	<360 ppb		8270
11/06/09	4-Nitrophenol	<360 ppb		8270
11/06/09	Acenaphthene	<360 ppb		8270
11/06/09	Acenaphthylene	<360 ppb		8270
11/06/09	Aniline	<360 ppb		8270

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Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087510

Sample's Information:
Sample ID: B-3.2

Site: B-3.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 9:25:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908523

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Anthracene	<360 ppb		8270
11/06/09	Benzidine	<360 ppb		8270
11/06/09	Benzo(a)anthracene	<360 ppb		8270
11/06/09	Benzo(a)pyrene	<360 ppb		8270
11/06/09	Benzo(b)fluoranthene	<360 ppb		8270
11/06/09	Benzo(g,h,i)perylene	<360 ppb		8270
11/06/09	Benzo(k)fluoranthene	<360 ppb		8270
11/06/09	Benzoic Acid	<360 ppb		8270
11/06/09	Benzyl Alcohol	<360 ppb		8270
11/06/09	Benzyl Butyl Phthalate	<360 ppb		8270
11/06/09	bis(2-Chloroethoxy)methane	<360 ppb		8270
11/06/09	bis(2-Chloroethyl) ether	<360 ppb		8270
11/06/09	bis(2-Chloroisopropyl) ether	<360 ppb		8270
11/06/09	bis(2-ethylhexyl)phthalate	<360 ppb		8270
11/06/09	Chrysene	<360 ppb		8270
11/06/09	Dibenz(a,h)anthracene	<360 ppb		8270
11/06/09	Dibenzofuran	<360 ppb		8270
11/06/09	Diethyl Phthalate	<360 ppb		8270
11/06/09	Dimethyl Phthalate	<360 ppb		8270
11/06/09	Di-n-Butyl phthalate	<360 ppb		8270
11/06/09	Di-n-octyl phthalate	<360 ppb		8270
11/06/09	Fluoranthene	<360 ppb		8270
11/06/09	Fluorene	<360 ppb		8270
11/06/09	Hexachlorobenzene	<360 ppb		8270
11/06/09	Hexachlorobutadiene	<360 ppb		8270
11/06/09	Hexachlorocyclopentadiene	<360 ppb		8270
11/06/09	Hexachloroethane	<360 ppb		8270
11/06/09	Indeno(1,2,3-cd)pyrene	<360 ppb		8270
11/06/09	Isophorone	<360 ppb		8270
11/06/09	m-Cresol	<360 ppb		8270
11/06/09	Naphthalene	<360 ppb		8270

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Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information: **JMS ID:** 087510
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

Sample's Information: **Sample ID:** B-3.2

Site: B-3.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 9:25:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908523

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Nitrobenzene	<360 ppb		8270
11/06/09	n-Nitrosodimethylamine	<360 ppb		8270
11/06/09	n-Nitrosodi-n-propylamine	<360 ppb		8270
11/06/09	n-Nitrosodiphenylamine	<360 ppb		8270
11/06/09	Pentachlorophenol	<360 ppb		8270
11/06/09	Phenanthrene	<360 ppb		8270
11/06/09	Phenol	<360 ppb		8270
11/06/09	Pyrene	<360 ppb		8270
11/03/09	1,1,1,2-Tetrachloroethane	<5.6 ppb		EPA 8260
11/03/09	1,1,1-Trichloroethane	<5.6 ppb		EPA 8260
11/03/09	1,1,2,2-Tetrachloroethane	<5.6 ppb		EPA 8260
11/03/09	1,1,2-Trichloroethane	<5.6 ppb		EPA 8260
11/03/09	1,1-Dichloroethane	<5.6 ppb		EPA 8260
11/03/09	1,1-Dichloroethene	<5.6 ppb		EPA 8260
11/03/09	1,1-Dichloropropene	<5.6 ppb		EPA 8260
11/03/09	1,2,3-Trichlorobenzene	<5.6 ppb		EPA 8260
11/03/09	1,2,3-Trichloropropane	<5.6 ppb		EPA 8260
11/03/09	1,2,4-Trichlorobenzene	<5.6 ppb		EPA 8260
11/03/09	1,2,4-Trimethylbenzene	<5.6 ppb		EPA 8260
11/03/09	1,2-Dibromo-3-Chloropropane	<5.6 ppb		EPA 8260
11/03/09	1,2-Dibromoethane	<5.6 ppb		EPA 8260
11/03/09	1,2-Dichlorobenzene	<5.6 ppb		EPA 8260
11/03/09	1,2-Dichloroethane	<5.6 ppb		EPA 8260
11/03/09	1,2-Dichloropropane	<5.6 ppb		EPA 8260
11/03/09	1,3,5-Trimethylbenzene	<5.6 ppb		EPA 8260
11/03/09	1,3-Dichlorobenzene	<5.6 ppb		EPA 8260
11/03/09	1,3-Dichloropropane	<5.6 ppb		EPA 8260
11/03/09	1,4-Dichlorobenzene	<5.6 ppb		EPA 8260
11/03/09	2,2-Dichloropropane	<5.6 ppb		EPA 8260
11/03/09	2-Butanone (MEK)	<5.6 ppb		EPA 8260

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Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087510

Sample's Information: **Sample ID:** B-3.2

Site: B-3.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 9:25:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908523

Date Analyzed	Test Name	Result	MCL	Method
11/03/09	2-Chlorotoluene	<5.6 ppb		EPA 8260
11/03/09	2-Hexanone	<5.6 ppb		EPA 8260
11/03/09	4-Chlorotoluene	<5.6 ppb		EPA 8260
11/03/09	4-Methyl-2-pentanone (MIBK)	<5.6 ppb		EPA 8260
11/03/09	Acetone	<5.6 ppb		EPA 8260
11/03/09	Acrolein	<5.6 ppb		EPA 8260
11/03/09	Acrylonitrile	<5.6 ppb		EPA 8260
11/03/09	Benzene	<5.6 ppb		EPA 8260
11/03/09	Bromobenzene	<5.6 ppb		EPA 8260
11/03/09	Bromochloromethane	<5.6 ppb		EPA 8260
11/03/09	Bromodichloromethane	<5.6 ppb		EPA 8260
11/03/09	Bromoform	<5.6 ppb		EPA 8260
11/03/09	Bromomethane	<5.6 ppb		EPA 8260
11/03/09	Carbon disulfide	<5.6 ppb		EPA 8260
11/03/09	Carbon tetrachloride	<5.6 ppb		EPA 8260
11/03/09	Chlorobenzene	<5.6 ppb		EPA 8260
11/03/09	Chlorodibromomethane	<5.6 ppb		EPA 8260
11/03/09	Chloroethane	<5.6 ppb		EPA 8260
11/03/09	Chloroform	<5.6 ppb		EPA 8260
11/03/09	Chloromethane	<5.6 ppb		EPA 8260
11/03/09	cis-1,2-Dichloroethene	<5.6 ppb		EPA 8260
11/03/09	cis-1,3-Dichloropropene	<5.6 ppb		EPA 8260
11/03/09	Dibromomethane	<5.6 ppb		EPA 8260
11/03/09	Dichlorodifluoromethane	<5.6 ppb		EPA 8260
11/03/09	Ethylbenzene	<5.6 ppb		EPA 8260
11/03/09	Isopropylbenzene	<5.6 ppb		EPA 8260
11/03/09	m&p xylene	<5.6 ppb		EPA 8260
11/03/09	Methylene Chloride	<5.6 ppb		EPA 8260
11/03/09	MTBE	<5.6 ppb		EPA 8260
11/03/09	Naphthalene	<5.6 ppb		EPA 8260
11/03/09	n-Butylbenzene	<5.6 ppb		EPA 8260

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Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087510

Sample's Information: **Sample ID:** B-3.2

Site: B-3.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 9:25:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908523

Date Analyzed	Test Name	Result	MCL	Method
11/03/09	n-Propylbenzene	<5.6 ppb		EPA 8260
11/03/09	o-Xylene	<5.6 ppb		EPA 8260
11/03/09	p-Isoproplytoluene	<5.6 ppb		EPA 8260
11/03/09	sec-Butylbenzene	<5.6 ppb		EPA 8260
11/03/09	Styrene	<5.6 ppb		EPA 8260
11/03/09	tert-Butylbenzene	<5.6 ppb		EPA 8260
11/03/09	Tetrachloroethene	<5.6 ppb		EPA 8260
11/03/09	Toluene	<5.6 ppb		EPA 8260
11/03/09	trans-1,2-Dichloroethene	<5.6 ppb		EPA 8260
11/03/09	trans-1,3-Dichloropropene	<5.6 ppb		EPA 8260
11/03/09	Trichloroethene	<5.6 ppb		EPA 8260
11/03/09	Trichlorofluoromethane	<5.6 ppb		EPA 8260
11/03/09	Vinyl Acetate	<5.6 ppb		EPA 8260
11/03/09	Vinyl chloride	<5.6 ppb		EPA 8260
11/07/09	PCB-1016	<54.4 ppb		SW 8082
11/07/09	PCB-1221	<54.4 ppb		SW 8082
11/07/09	PCB-1232	<54.4 ppb		SW 8082
11/07/09	PCB-1242	<54.4 ppb		SW 8082
11/07/09	PCB-1248	<54.4 ppb		SW 8082
11/07/09	PCB-1254	<54.4 ppb		SW 8082
11/07/09	PCB-1260	<54.4 ppb		SW 8082
11/07/09	PCB-1262	<54.4 ppb		SW 8082
11/07/09	PCB-1268	<54.4 ppb		SW 8082
11/07/09	4,4'-DDD	<2.18 ppb		SW8081
11/07/09	4,4'-DDE	<2.18 ppb		SW8081
11/07/09	4,4'-DDT	<2.18 ppb		SW8081
11/07/09	a-BHC	<2.18 ppb		SW8081
11/07/09	Aldrin	<2.18 ppb		SW8081
11/07/09	b-BHC	<2.18 ppb		SW8081

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Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087510

Sample's Information: **Sample ID:** B-3.2

Site: B-3.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 9:25:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908523

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	Chlordane	<2.18 ppb		SW8081
11/07/09	d-BHC	<2.18 ppb		SW8081
11/07/09	Dieldrin	<2.18 ppb		SW8081
11/07/09	Endosulfan I	<2.18 ppb		SW8081
11/07/09	Endosulfan II	<2.18 ppb		SW8081
11/07/09	Endosulfan Sulfate	<2.18 ppb		SW8081
11/07/09	Endrin	<2.18 ppb		SW8081
11/07/09	Endrin Aldehyde	<2.18 ppb		SW8081
11/07/09	Endrin Ketone	<2.18 ppb		SW8081
11/07/09	g-BHC	<2.18 ppb		SW8081
11/07/09	Heptachlor	<2.18 ppb		SW8081
11/07/09	Heptachlor epoxide	<2.18 ppb		SW8081
11/07/09	Methoxychlor	<2.18 ppb		SW8081
11/07/09	Mitotane	<2.18 ppb		SW8081
11/07/09	Toxaphene	<100 ppb		SW8081
11/06/09	Zinc	22.8 ppm	N/A	6010/E200.7
11/06/09	Vanadium	13.6 ppm	N/A	6010/E200.7
11/06/09	Thallium	0.418 ppm	N/A	6010/E200.7
11/06/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/06/09	Antimony	0.218 ppm	N/A	6010/E200.7
11/06/09	Lead	5.46 ppm	N/A	6010/E200.7
11/06/09	Nickel	9.2 ppm	N/A	6010/E200.7
11/06/09	Sodium	172 ppm	N/A	6010/E200.7
11/06/09	Manganese	266 ppm	N/A	6010/E200.7
11/06/09	Magnesium	3189 ppm	N/A	6010/E200.7
11/06/09	Potassium	910 ppm	N/A	6010/E200.7
11/05/09	Mercury	0.11 ppm	N/A	SW-7471
11/06/09	Iron	8523 ppm	N/A	6010/E200.7
11/06/09	Copper	11.8 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent	11.3 ppm	N/A	6010/E200.7

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Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087510

Sample's Information: **Sample ID:** B-3.2

Site: B-3.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 9:25:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908523

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chromium	11.3 ppm	N/A	6010/E200.7
11/06/09	Cobalt	4.85 ppm	N/A	6010/E200.7
11/06/09	Cadmium	2.41 ppm	N/A	6010/E200.7
11/06/09	Calcium	3985 ppm	N/A	6010/E200.7
11/06/09	Beryllium	0.197 ppm	N/A	6010/E200.7
11/06/09	Barium	33.1 ppm	N/A	6010/E200.7
11/06/09	Arsenic	0.308 ppm	N/A	6010/E200.7
11/06/09	Aluminum	4638 ppm	N/A	6010/E200.7
11/06/09	Silver	<0.1 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

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Mailing Information:
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Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087511

Sample's Information: **Sample ID:** B-5.1

Site: B-5.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 11:30:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908524

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	1,2,4-Trichlorobenzene	<3500 ppb		8270
11/07/09	1,2-Dichlorobenzene	<3500 ppb		8270
11/07/09	1,3-Dichlorobenzene	<3500 ppb		8270
11/07/09	1,4-Dichlorobenzene	<3500 ppb		8270
11/07/09	2,4,5-Trichlorophenol	<3500 ppb		8270
11/07/09	2,4,6-Trichlorophenol	<3500 ppb		8270
11/07/09	2,4-Dichlorophenol	<3500 ppb		8270
11/07/09	2,4-Dimethylphenol	<3500 ppb		8270
11/07/09	2,4-Dinitrophenol	<3500 ppb		8270
11/07/09	2,4-Dinitrotoluene	<3500 ppb		8270
11/07/09	2,6-Dichlorophenol	<3500 ppb		8270
11/07/09	2,6-Dinitrotoluene	<3500 ppb		8270
11/07/09	2-Chloronaphthalene	<3500 ppb		8270
11/07/09	2-Chlorophenol	<3500 ppb		8270
11/07/09	2-Methyl-4,6-dinitrophenol	<3500 ppb		8270
11/07/09	2-Methylnaphthalene	<3500 ppb		8270
11/07/09	2-Methylphenol (o-Cresol)	<3500 ppb		8270
11/07/09	2-Nitroaniline	<3500 ppb		8270
11/07/09	2-Nitrophenol	<3500 ppb		8270
11/07/09	3&4-Methylphenol (m,p-Cresol)	<3500 ppb		8270
11/07/09	3,3'-Dichlorobenzidine	<3500 ppb		8270
11/07/09	3-Nitroaniline	<3500 ppb		8270
11/07/09	4-Bromophenyl Phenyl Ether	<3500 ppb		8270
11/07/09	4-Chloro-3-Methylphenol	<3500 ppb		8270
11/07/09	4-Chloroaniline	<3500 ppb		8270
11/07/09	4-Chlorophenylphenyl ether	<3500 ppb		8270
11/07/09	4-Nitroaniline	<3500 ppb		8270
11/07/09	4-Nitrophenol	<3500 ppb		8270
11/07/09	Acenaphthene	<3500 ppb		8270
11/07/09	Acenaphthylene	<3500 ppb		8270
11/07/09	Aniline	<3500 ppb		8270

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue
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Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087511

Sample's Information: **Sample ID:** B-5.1

Site: B-5.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 11:30:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908524

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	Anthracene	<3500 ppb		8270
11/07/09	Benzidine	<3500 ppb		8270
11/07/09	Benzo(a)anthracene	6100 ppb		8270
11/07/09	Benzo(a)pyrene	6000 ppb		8270
11/07/09	Benzo(b)fluoranthene	11000 ppb		8270
11/07/09	Benzo(g,h,i)perylene	<3500 ppb		8270
11/07/09	Benzo(k)fluoranthene	3800 ppb		8270
11/07/09	Benzoic Acid	<3500 ppb		8270
11/07/09	Benzyl Alcohol	<3500 ppb		8270
11/07/09	Benzyl Butyl Phthalate	<3500 ppb		8270
11/07/09	bis(2-Chloroethoxy)methane	<3500 ppb		8270
11/07/09	bis(2-Chloroethyl) ether	<3500 ppb		8270
11/07/09	bis(2-Chloroisopropyl) ether	<3500 ppb		8270
11/07/09	bis(2-ethylhexyl)phthalate	<3500 ppb		8270
11/07/09	Chrysene	6600 ppb		8270
11/07/09	Dibenz(a,h)anthracene	<3500 ppb		8270
11/07/09	Dibenzofuran	<3500 ppb		8270
11/07/09	Diethyl Phthalate	<3500 ppb		8270
11/07/09	Dimethyl Phthalate	<3500 ppb		8270
11/07/09	Di-n-Butyl phthalate	<3500 ppb		8270
11/07/09	Di-n-octyl phthalate	<3500 ppb		8270
11/07/09	Fluoranthene	11000 ppb		8270
11/07/09	Fluorene	<3500 ppb		8270
11/07/09	Hexachlorobenzene	<3500 ppb		8270
11/07/09	Hexachlorobutadiene	<3500 ppb		8270
11/07/09	Hexachlorocyclopentadiene	<3500 ppb		8270
11/07/09	Hexachloroethane	<3500 ppb		8270
11/07/09	Indeno(1,2,3-cd)pyrene	<3500 ppb		8270
11/07/09	Isophorone	<3500 ppb		8270
11/07/09	m-Cresol	<3500 ppb		8270
11/07/09	Naphthalene	<3500 ppb		8270

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Name: Cosmos Environmental Services Inc
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City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information: **JMS ID:** 087511
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

Sample's Information: **Sample ID:** B-5.1

Site: B-5.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 11:30:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908524

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	Nitrobenzene	<3500 ppb		8270
11/07/09	n-Nitrosodimethylamine	<3500 ppb		8270
11/07/09	n-Nitrosodi-n-propylamine	<3500 ppb		8270
11/07/09	n-Nitrosodiphenylamine	<3500 ppb		8270
11/07/09	Pentachlorophenol	<3500 ppb		8270
11/07/09	Phenanthrene	4300 ppb		8270
11/07/09	Phenol	<3500 ppb		8270
11/07/09	Pyrene	11000 ppb		8270
11/03/09	1,1,1,2-Tetrachloroethane	<5.2 ppb		EPA 8260
11/03/09	1,1,1-Trichloroethane	<5.2 ppb		EPA 8260
11/03/09	1,1,2,2-Tetrachloroethane	<5.2 ppb		EPA 8260
11/03/09	1,1,2-Trichloroethane	<5.2 ppb		EPA 8260
11/03/09	1,1-Dichloroethane	<5.2 ppb		EPA 8260
11/03/09	1,1-Dichloroethene	<5.2 ppb		EPA 8260
11/03/09	1,1-Dichloropropene	<5.2 ppb		EPA 8260
11/03/09	1,2,3-Trichlorobenzene	<5.2 ppb		EPA 8260
11/03/09	1,2,3-Trichloropropane	<5.2 ppb		EPA 8260
11/03/09	1,2,4-Trichlorobenzene	<5.2 ppb		EPA 8260
11/03/09	1,2,4-Trimethylbenzene	<5.2 ppb		EPA 8260
11/03/09	1,2-Dibromo-3-Chloropropane	<5.2 ppb		EPA 8260
11/03/09	1,2-Dibromoethane	<5.2 ppb		EPA 8260
11/03/09	1,2-Dichlorobenzene	<5.2 ppb		EPA 8260
11/03/09	1,2-Dichloroethane	<5.2 ppb		EPA 8260
11/03/09	1,2-Dichloropropane	<5.2 ppb		EPA 8260
11/03/09	1,3,5-Trimethylbenzene	<5.2 ppb		EPA 8260
11/03/09	1,3-Dichlorobenzene	<5.2 ppb		EPA 8260
11/03/09	1,3-Dichloropropane	<5.2 ppb		EPA 8260
11/03/09	1,4-Dichlorobenzene	<5.2 ppb		EPA 8260
11/03/09	2,2-Dichloropropane	<5.2 ppb		EPA 8260
11/03/09	2-Butanone (MEK)	<5.2 ppb		EPA 8260

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087511

Sample's Information: **Sample ID:** B-5.1

Site: B-5.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 11:30:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908524

Date Analyzed	Test Name	Result	MCL	Method
11/03/09	2-Chlorotoluene	<5.2 ppb		EPA 8260
11/03/09	2-Hexanone	<5.2 ppb		EPA 8260
11/03/09	4-Chlorotoluene	<5.2 ppb		EPA 8260
11/03/09	4-Methyl-2-pentanone (MIBK)	<5.2 ppb		EPA 8260
11/03/09	Acetone	<5.2 ppb		EPA 8260
11/03/09	Acrolein	<5.2 ppb		EPA 8260
11/03/09	Acrylonitrile	<5.2 ppb		EPA 8260
11/03/09	Benzene	<5.2 ppb		EPA 8260
11/03/09	Bromobenzene	<5.2 ppb		EPA 8260
11/03/09	Bromochloromethane	<5.2 ppb		EPA 8260
11/03/09	Bromodichloromethane	<5.2 ppb		EPA 8260
11/03/09	Bromoform	<5.2 ppb		EPA 8260
11/03/09	Bromomethane	<5.2 ppb		EPA 8260
11/03/09	Carbon disulfide	<5.2 ppb		EPA 8260
11/03/09	Carbon tetrachloride	<5.2 ppb		EPA 8260
11/03/09	Chlorobenzene	<5.2 ppb		EPA 8260
11/03/09	Chlorodibromomethane	<5.2 ppb		EPA 8260
11/03/09	Chloroethane	<5.2 ppb		EPA 8260
11/03/09	Chloroform	<5.2 ppb		EPA 8260
11/03/09	Chloromethane	<5.2 ppb		EPA 8260
11/03/09	cis-1,2-Dichloroethene	<5.2 ppb		EPA 8260
11/03/09	cis-1,3-Dichloropropene	<5.2 ppb		EPA 8260
11/03/09	Dibromomethane	<5.2 ppb		EPA 8260
11/03/09	Dichlorodifluoromethane	<5.2 ppb		EPA 8260
11/03/09	Ethylbenzene	<5.2 ppb		EPA 8260
11/03/09	Isopropylbenzene	<5.2 ppb		EPA 8260
11/03/09	m&p xylene	<5.2 ppb		EPA 8260
11/03/09	Methylene Chloride	<5.2 ppb		EPA 8260
11/03/09	MTBE	<5.2 ppb		EPA 8260
11/03/09	Naphthalene	<5.2 ppb		EPA 8260
11/03/09	n-Butylbenzene	<5.2 ppb		EPA 8260

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Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087511

Sample's Information: **Sample ID:** B-5.1

Site: B-5.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 11:30:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908524

Date Analyzed	Test Name	Result	MCL	Method
11/03/09	n-Propylbenzene	<5.2 ppb		EPA 8260
11/03/09	o-Xylene	<5.2 ppb		EPA 8260
11/03/09	p-Isoproplytoluene	<5.2 ppb		EPA 8260
11/03/09	sec-Butylbenzene	<5.2 ppb		EPA 8260
11/03/09	Styrene	<5.2 ppb		EPA 8260
11/03/09	tert-Butylbenzene	<5.2 ppb		EPA 8260
11/03/09	Tetrachloroethene	<5.2 ppb		EPA 8260
11/03/09	Toluene	<5.2 ppb		EPA 8260
11/03/09	trans-1,2-Dichloroethene	<5.2 ppb		EPA 8260
11/03/09	trans-1,3-Dichloropropene	<5.2 ppb		EPA 8260
11/03/09	Trichloroethene	<5.2 ppb		EPA 8260
11/03/09	Trichlorofluoromethane	<5.2 ppb		EPA 8260
11/03/09	Vinyl Acetate	<5.2 ppb		EPA 8260
11/03/09	Vinyl chloride	<5.2 ppb		EPA 8260
11/07/09	PCB-1016	<52.7 ppb		SW 8082
11/07/09	PCB-1221	<52.7 ppb		SW 8082
11/07/09	PCB-1232	<52.7 ppb		SW 8082
11/07/09	PCB-1242	<52.7 ppb		SW 8082
11/07/09	PCB-1248	<52.7 ppb		SW 8082
11/07/09	PCB-1254	<52.7 ppb		SW 8082
11/07/09	PCB-1260	<52.7 ppb		SW 8082
11/07/09	PCB-1262	<52.7 ppb		SW 8082
11/07/09	PCB-1268	<52.7 ppb		SW 8082
11/07/09	4,4'-DDD	<2.11 ppb		SW8081
11/07/09	4,4'-DDE	<2.11 ppb		SW8081
11/07/09	4,4'-DDT	13.9 ppb		SW8081
11/07/09	a-BHC	<2.11 ppb		SW8081
11/07/09	Aldrin	<2.11 ppb		SW8081
11/07/09	b-BHC	<2.11 ppb		SW8081

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Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087511

Sample's Information: **Sample ID:** B-5.1

Site: B-5.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 11:30:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908524

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	Chlordane	<2.11 ppb		SW8081
11/07/09	d-BHC	<2.11 ppb		SW8081
11/07/09	Dieldrin	<2.11 ppb		SW8081
11/07/09	Endosulfan I	<2.11 ppb		SW8081
11/07/09	Endosulfan II	<2.11 ppb		SW8081
11/07/09	Endosulfan Sulfate	<2.11 ppb		SW8081
11/07/09	Endrin	<2.11 ppb		SW8081
11/07/09	Endrin Aldehyde	2.7 ppb		SW8081
11/07/09	Endrin Ketone	31.1 ppb		SW8081
11/07/09	g-BHC	<2.11 ppb		SW8081
11/07/09	Heptachlor	<2.11 ppb		SW8081
11/07/09	Heptachlor epoxide	<2.11 ppb		SW8081
11/07/09	Methoxychlor	<2.11 ppb		SW8081
11/07/09	Mitotane	<2.11 ppb		SW8081
11/07/09	Toxaphene	<100 ppb		SW8081
11/06/09	Zinc	148 ppm	N/A	6010/E200.7
11/06/09	Vanadium	34.5 ppm	N/A	6010/E200.7
11/06/09	Thallium	<0.1 ppm	N/A	6010/E200.7
11/06/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/06/09	Antimony	0.358 ppm	N/A	6010/E200.7
11/06/09	Lead	217 ppm	N/A	6010/E200.7
11/06/09	Nickel	13.9 ppm	N/A	6010/E200.7
11/06/09	Sodium	189 ppm	N/A	6010/E200.7
11/06/09	Manganese	231 ppm	N/A	6010/E200.7
11/06/09	Magnesium	3723 ppm	N/A	6010/E200.7
11/06/09	Potassium	758 ppm	N/A	6010/E200.7
11/05/09	Mercury	0.235 ppm	N/A	SW-7471
11/06/09	Iron	10300 ppm	N/A	6010/E200.7
11/06/09	Copper	48.6 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent	15.1 ppm	N/A	6010/E200.7

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Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087511

Sample's Information:

Sample ID: B-5.1

Site: B-5.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 11:30:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908524

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chromium	15.1 ppm	N/A	6010/E200.7
11/06/09	Cobalt	4.47 ppm	N/A	6010/E200.7
11/06/09	Cadmium	2.98 ppm	N/A	6010/E200.7
11/06/09	Calcium	14223 ppm	N/A	6010/E200.7
11/06/09	Beryllium	0.316 ppm	N/A	6010/E200.7
11/06/09	Barium	122 ppm	N/A	6010/E200.7
11/06/09	Arsenic	3.15 ppm	N/A	6010/E200.7
11/06/09	Aluminum	6283 ppm	N/A	6010/E200.7
11/06/09	Silver	<0.1 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

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Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087512

Sample's Information: **Sample ID:** B-5.2

Site: B-5.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 12:05:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908525

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	1,2,4-Trichlorobenzene	<3700 ppb		8270
11/07/09	1,2-Dichlorobenzene	<3700 ppb		8270
11/07/09	1,3-Dichlorobenzene	<3700 ppb		8270
11/07/09	1,4-Dichlorobenzene	<3700 ppb		8270
11/07/09	2,4,5-Trichlorophenol	<3700 ppb		8270
11/07/09	2,4,6-Trichlorophenol	<3700 ppb		8270
11/07/09	2,4-Dichlorophenol	<3700 ppb		8270
11/07/09	2,4-Dimethylphenol	<3700 ppb		8270
11/07/09	2,4-Dinitrophenol	<3700 ppb		8270
11/07/09	2,4-Dinitrotoluene	<3700 ppb		8270
11/07/09	2,6-Dichlorophenol	<3700 ppb		8270
11/07/09	2,6-Dinitrotoluene	<3700 ppb		8270
11/07/09	2-Chloronaphthalene	<3700 ppb		8270
11/07/09	2-Chlorophenol	<3700 ppb		8270
11/07/09	2-Methyl-4,6-dinitrophenol	<3700 ppb		8270
11/07/09	2-Methylnaphthalene	<3700 ppb		8270
11/07/09	2-Methylphenol (o-Cresol)	<3700 ppb		8270
11/07/09	2-Nitroaniline	<3700 ppb		8270
11/07/09	2-Nitrophenol	<3700 ppb		8270
11/07/09	3&4-Methylphenol (m,p-Cresol)	<3700 ppb		8270
11/07/09	3,3'-Dichlorobenzidine	<3700 ppb		8270
11/07/09	3-Nitroaniline	<3700 ppb		8270
11/07/09	4-Bromophenyl Phenyl Ether	<3700 ppb		8270
11/07/09	4-Chloro-3-Methylphenol	<3700 ppb		8270
11/07/09	4-Chloroaniline	<3700 ppb		8270
11/07/09	4-Chlorophenylphenyl ether	<3700 ppb		8270
11/07/09	4-Nitroaniline	<3700 ppb		8270
11/07/09	4-Nitrophenol	<3700 ppb		8270
11/07/09	Acenaphthene	<3700 ppb		8270
11/07/09	Acenaphthylene	<3700 ppb		8270
11/07/09	Aniline	<3700 ppb		8270

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State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information: **JMS ID:** 087512
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

Sample's Information: **Sample ID:** B-5.2

Site: B-5.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 12:05:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908525

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	Anthracene	<3700 ppb		8270
11/07/09	Benzidine	<3700 ppb		8270
11/07/09	Benzo(a)anthracene	<3700 ppb		8270
11/07/09	Benzo(a)pyrene	<3700 ppb		8270
11/07/09	Benzo(b)fluoranthene	<3700 ppb		8270
11/07/09	Benzo(g,h,i)perylene	<3700 ppb		8270
11/07/09	Benzo(k)fluoranthene	<3700 ppb		8270
11/07/09	Benzoic Acid	<3700 ppb		8270
11/07/09	Benzyl Alcohol	<3700 ppb		8270
11/07/09	Benzyl Butyl Phthalate	<3700 ppb		8270
11/07/09	bis(2-Chloroethoxy)methane	<3700 ppb		8270
11/07/09	bis(2-Chloroethyl) ether	<3700 ppb		8270
11/07/09	bis(2-Chloroisopropyl) ether	<3700 ppb		8270
11/07/09	bis(2-ethylhexyl)phthalate	<3700 ppb		8270
11/07/09	Chrysene	<3700 ppb		8270
11/07/09	Dibenz(a,h)anthracene	<3700 ppb		8270
11/07/09	Dibenzofuran	<3700 ppb		8270
11/07/09	Diethyl Phthalate	<3700 ppb		8270
11/07/09	Dimethyl Phthalate	<3700 ppb		8270
11/07/09	Di-n-Butyl phthalate	<3700 ppb		8270
11/07/09	Di-n-octyl phthalate	<3700 ppb		8270
11/07/09	Fluoranthene	<3700 ppb		8270
11/07/09	Fluorene	<3700 ppb		8270
11/07/09	Hexachlorobenzene	<3700 ppb		8270
11/07/09	Hexachlorobutadiene	<3700 ppb		8270
11/07/09	Hexachlorocyclopentadiene	<3700 ppb		8270
11/07/09	Hexachloroethane	<3700 ppb		8270
11/07/09	Indeno(1,2,3-cd)pyrene	<3700 ppb		8270
11/07/09	Isophorone	<3700 ppb		8270
11/07/09	m-Cresol	<3700 ppb		8270
11/07/09	Naphthalene	<3700 ppb		8270

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue
Danbury, Connecticut 06810 | Telephone 203-798-2229

Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information: **JMS ID:** 087512
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

Sample's Information: **Sample ID:** B-5.2

Site: B-5.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 12:05:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908525

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	Nitrobenzene	<3700 ppb		8270
11/07/09	n-Nitrosodimethylamine	<3700 ppb		8270
11/07/09	n-Nitrosodi-n-propylamine	<3700 ppb		8270
11/07/09	n-Nitrosodiphenylamine	<3700 ppb		8270
11/07/09	Pentachlorophenol	<3700 ppb		8270
11/07/09	Phenanthrene	<3700 ppb		8270
11/07/09	Phenol	<3700 ppb		8270
11/07/09	Pyrene	<3700 ppb		8270
11/03/09	1,1,1,2-Tetrachloroethane	<5.6 ppb		EPA 8260
11/03/09	1,1,1-Trichloroethane	<5.6 ppb		EPA 8260
11/03/09	1,1,2,2-Tetrachloroethane	<5.6 ppb		EPA 8260
11/03/09	1,1,2-Trichloroethane	<5.6 ppb		EPA 8260
11/03/09	1,1-Dichloroethane	<5.6 ppb		EPA 8260
11/03/09	1,1-Dichloroethene	<5.6 ppb		EPA 8260
11/03/09	1,1-Dichloropropene	<5.6 ppb		EPA 8260
11/03/09	1,2,3-Trichlorobenzene	<5.6 ppb		EPA 8260
11/03/09	1,2,3-Trichloropropane	<5.6 ppb		EPA 8260
11/03/09	1,2,4-Trichlorobenzene	<5.6 ppb		EPA 8260
11/03/09	1,2,4-Trimethylbenzene	<5.6 ppb		EPA 8260
11/03/09	1,2-Dibromo-3-Chloropropane	<5.6 ppb		EPA 8260
11/03/09	1,2-Dibromoethane	<5.6 ppb		EPA 8260
11/03/09	1,2-Dichlorobenzene	<5.6 ppb		EPA 8260
11/03/09	1,2-Dichloroethane	<5.6 ppb		EPA 8260
11/03/09	1,2-Dichloropropane	<5.6 ppb		EPA 8260
11/03/09	1,3,5-Trimethylbenzene	<5.6 ppb		EPA 8260
11/03/09	1,3-Dichlorobenzene	<5.6 ppb		EPA 8260
11/03/09	1,3-Dichloropropane	<5.6 ppb		EPA 8260
11/03/09	1,4-Dichlorobenzene	<5.6 ppb		EPA 8260
11/03/09	2,2-Dichloropropane	<5.6 ppb		EPA 8260
11/03/09	2-Butanone (MEK)	<5.6 ppb		EPA 8260

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City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087512

Sample's Information: **Sample ID:** B-5.2

Site: B-5.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 12:05:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908525

Date Analyzed	Test Name	Result	MCL	Method
11/03/09	2-Chlorotoluene	<5.6 ppb		EPA 8260
11/03/09	2-Hexanone	<5.6 ppb		EPA 8260
11/03/09	4-Chlorotoluene	<5.6 ppb		EPA 8260
11/03/09	4-Methyl-2-pentanone (MIBK)	<5.6 ppb		EPA 8260
11/03/09	Acetone	<5.6 ppb		EPA 8260
11/03/09	Acrolein	<5.6 ppb		EPA 8260
11/03/09	Acrylonitrile	<5.6 ppb		EPA 8260
11/03/09	Benzene	<5.6 ppb		EPA 8260
11/03/09	Bromobenzene	<5.6 ppb		EPA 8260
11/03/09	Bromochloromethane	<5.6 ppb		EPA 8260
11/03/09	Bromodichloromethane	<5.6 ppb		EPA 8260
11/03/09	Bromoform	<5.6 ppb		EPA 8260
11/03/09	Bromomethane	<5.6 ppb		EPA 8260
11/03/09	Carbon disulfide	<5.6 ppb		EPA 8260
11/03/09	Carbon tetrachloride	<5.6 ppb		EPA 8260
11/03/09	Chlorobenzene	<5.6 ppb		EPA 8260
11/03/09	Chlorodibromomethane	<5.6 ppb		EPA 8260
11/03/09	Chloroethane	<5.6 ppb		EPA 8260
11/03/09	Chloroform	<5.6 ppb		EPA 8260
11/03/09	Chloromethane	<5.6 ppb		EPA 8260
11/03/09	cis-1,2-Dichloroethene	<5.6 ppb		EPA 8260
11/03/09	cis-1,3-Dichloropropene	<5.6 ppb		EPA 8260
11/03/09	Dibromomethane	<5.6 ppb		EPA 8260
11/03/09	Dichlorodifluoromethane	<5.6 ppb		EPA 8260
11/03/09	Ethylbenzene	<5.6 ppb		EPA 8260
11/03/09	Isopropylbenzene	<5.6 ppb		EPA 8260
11/03/09	m&p xylene	<5.6 ppb		EPA 8260
11/03/09	Methylene Chloride	<5.6 ppb		EPA 8260
11/03/09	MTBE	<5.6 ppb		EPA 8260
11/03/09	Naphthalene	<5.6 ppb		EPA 8260
11/03/09	n-Butylbenzene	<5.6 ppb		EPA 8260

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City: Woodmere
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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087512

Sample's Information: **Sample ID:** B-5.2

Site: B-5.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 12:05:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908525

Date Analyzed	Test Name	Result	MCL	Method
11/03/09	n-Propylbenzene	<5.6 ppb		EPA 8260
11/03/09	o-Xylene	<5.6 ppb		EPA 8260
11/03/09	p-Isoproplytoluene	<5.6 ppb		EPA 8260
11/03/09	sec-Butylbenzene	<5.6 ppb		EPA 8260
11/03/09	Styrene	<5.6 ppb		EPA 8260
11/03/09	tert-Butylbenzene	<5.6 ppb		EPA 8260
11/03/09	Tetrachloroethene	<5.6 ppb		EPA 8260
11/03/09	Toluene	<5.6 ppb		EPA 8260
11/03/09	trans-1,2-Dichloroethene	<5.6 ppb		EPA 8260
11/03/09	trans-1,3-Dichloropropene	<5.6 ppb		EPA 8260
11/03/09	Trichloroethene	<5.6 ppb		EPA 8260
11/03/09	Trichlorofluoromethane	<5.6 ppb		EPA 8260
11/03/09	Vinyl Acetate	<5.6 ppb		EPA 8260
11/03/09	Vinyl chloride	<5.6 ppb		EPA 8260
11/07/09	PCB-1016	<55.4 ppb		SW 8082
11/07/09	PCB-1221	<55.4 ppb		SW 8082
11/07/09	PCB-1232	<55.4 ppb		SW 8082
11/07/09	PCB-1242	<55.4 ppb		SW 8082
11/07/09	PCB-1248	<55.4 ppb		SW 8082
11/07/09	PCB-1254	<55.4 ppb		SW 8082
11/07/09	PCB-1260	<55.4 ppb		SW 8082
11/07/09	PCB-1262	<55.4 ppb		SW 8082
11/07/09	PCB-1268	<55.4 ppb		SW 8082
11/07/09	4,4'-DDD	<2.22 ppb		SW8081
11/07/09	4,4'-DDE	<2.22 ppb		SW8081
11/07/09	4,4'-DDT	<2.22 ppb		SW8081
11/07/09	a-BHC	<2.22 ppb		SW8081
11/07/09	Aldrin	<2.22 ppb		SW8081
11/07/09	b-BHC	<2.22 ppb		SW8081

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Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087512

Sample's Information: **Sample ID:** B-5.2

Site: B-5.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 12:05:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908525

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	Chlordane	<2.22 ppb		SW8081
11/07/09	d-BHC	<2.22 ppb		SW8081
11/07/09	Dieldrin	<2.22 ppb		SW8081
11/07/09	Endosulfan I	<2.22 ppb		SW8081
11/07/09	Endosulfan II	<2.22 ppb		SW8081
11/07/09	Endosulfan Sulfate	<2.22 ppb		SW8081
11/07/09	Endrin	<2.22 ppb		SW8081
11/07/09	Endrin Aldehyde	<2.22 ppb		SW8081
11/07/09	Endrin Ketone	<2.22 ppb		SW8081
11/07/09	g-BHC	<2.22 ppb		SW8081
11/07/09	Heptachlor	<2.22 ppb		SW8081
11/07/09	Heptachlor epoxide	<2.22 ppb		SW8081
11/07/09	Methoxychlor	<2.22 ppb		SW8081
11/07/09	Mitotane	<2.22 ppb		SW8081
11/07/09	Toxaphene	<100 ppb		SW8081
11/06/09	Zinc	42.2 ppm	N/A	6010/E200.7
11/06/09	Vanadium	23.5 ppm	N/A	6010/E200.7
11/06/09	Thallium	1.27 ppm	N/A	6010/E200.7
11/06/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/06/09	Antimony	2.11 ppm	N/A	6010/E200.7
11/06/09	Lead	26.3 ppm	N/A	6010/E200.7
11/06/09	Nickel	12.9 ppm	N/A	6010/E200.7
11/06/09	Sodium	130 ppm	N/A	6010/E200.7
11/06/09	Manganese	310 ppm	N/A	6010/E200.7
11/06/09	Magnesium	3759 ppm	N/A	6010/E200.7
11/06/09	Potassium	184 ppm	N/A	6010/E200.7
11/05/09	Mercury	0.111 ppm	N/A	SW-7471
11/06/09	Iron	14049 ppm	N/A	6010/E200.7
11/06/09	Copper	16.9 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent	20.6 ppm	N/A	6010/E200.7

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Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087512

Sample's Information: **Sample ID:** B-5.2

Site: B-5.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 12:05:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908525

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chromium	20.6 ppm	N/A	6010/E200.7
11/06/09	Cobalt	6.04 ppm	N/A	6010/E200.7
11/06/09	Cadmium	3.12 ppm	N/A	6010/E200.7
11/06/09	Calcium	2978 ppm	N/A	6010/E200.7
11/06/09	Beryllium	0.27 ppm	N/A	6010/E200.7
11/06/09	Barium	42.7 ppm	N/A	6010/E200.7
11/06/09	Arsenic	<0.1 ppm	N/A	6010/E200.7
11/06/09	Aluminum	7399 ppm	N/A	6010/E200.7
11/06/09	Silver	<0.1 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

JMS Environmental Services, Inc.
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Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087513

Sample's Information: **Sample ID:** B-4.1

Site: B-4.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 3:00:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908526

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	1,2,4-Trichlorobenzene	<370 ppb		8270
11/06/09	1,2-Dichlorobenzene	<370 ppb		8270
11/06/09	1,3-Dichlorobenzene	<370 ppb		8270
11/06/09	1,4-Dichlorobenzene	<370 ppb		8270
11/06/09	2,4,5-Trichlorophenol	<370 ppb		8270
11/06/09	2,4,6-Trichlorophenol	<370 ppb		8270
11/06/09	2,4-Dichlorophenol	<370 ppb		8270
11/06/09	2,4-Dimethylphenol	<370 ppb		8270
11/06/09	2,4-Dinitrophenol	<370 ppb		8270
11/06/09	2,4-Dinitrotoluene	<370 ppb		8270
11/06/09	2,6-Dichlorophenol	<370 ppb		8270
11/06/09	2,6-Dinitrotoluene	<370 ppb		8270
11/06/09	2-Chloronaphthalene	<370 ppb		8270
11/06/09	2-Chlorophenol	<370 ppb		8270
11/06/09	2-Methyl-4,6-dinitrophenol	<370 ppb		8270
11/06/09	2-Methylnaphthalene	<370 ppb		8270
11/06/09	2-Methylphenol (o-Cresol)	<370 ppb		8270
11/06/09	2-Nitroaniline	<370 ppb		8270
11/06/09	2-Nitrophenol	<370 ppb		8270
11/06/09	3&4-Methylphenol (m,p-Cresol)	<370 ppb		8270
11/06/09	3,3'-Dichlorobenzidine	<370 ppb		8270
11/06/09	3-Nitroaniline	<370 ppb		8270
11/06/09	4-Bromophenyl Phenyl Ether	<370 ppb		8270
11/06/09	4-Chloro-3-Methylphenol	<370 ppb		8270
11/06/09	4-Chloroaniline	<370 ppb		8270
11/06/09	4-Chlorophenylphenyl ether	<370 ppb		8270
11/06/09	4-Nitroaniline	<370 ppb		8270
11/06/09	4-Nitrophenol	<370 ppb		8270
11/06/09	Acenaphthene	<370 ppb		8270
11/06/09	Acenaphthylene	<370 ppb		8270
11/06/09	Aniline	<370 ppb		8270

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Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087513

Sample's Information:
Sample ID: B-4.1

Site: B-4.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 3:00:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908526

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Anthracene	<370 ppb		8270
11/06/09	Benzidine	<370 ppb		8270
11/06/09	Benzo(a)anthracene	<370 ppb		8270
11/06/09	Benzo(a)pyrene	<370 ppb		8270
11/06/09	Benzo(b)fluoranthene	<370 ppb		8270
11/06/09	Benzo(g,h,i)perylene	<370 ppb		8270
11/06/09	Benzo(k)fluoranthene	<370 ppb		8270
11/06/09	Benzoic Acid	<370 ppb		8270
11/06/09	Benzyl Alcohol	<370 ppb		8270
11/06/09	Benzyl Butyl Phthalate	<370 ppb		8270
11/06/09	bis(2-Chloroethoxy)methane	<370 ppb		8270
11/06/09	bis(2-Chloroethyl) ether	<370 ppb		8270
11/06/09	bis(2-Chloroisopropyl) ether	<370 ppb		8270
11/06/09	bis(2-ethylhexyl)phthalate	<370 ppb		8270
11/06/09	Chrysene	<370 ppb		8270
11/06/09	Dibenz(a,h)anthracene	<370 ppb		8270
11/06/09	Dibenzofuran	<370 ppb		8270
11/06/09	Diethyl Phthalate	<370 ppb		8270
11/06/09	Dimethyl Phthalate	<370 ppb		8270
11/06/09	Di-n-Butyl phthalate	<370 ppb		8270
11/06/09	Di-n-octyl phthalate	<370 ppb		8270
11/06/09	Fluoranthene	<370 ppb		8270
11/06/09	Fluorene	<370 ppb		8270
11/06/09	Hexachlorobenzene	<370 ppb		8270
11/06/09	Hexachlorobutadiene	<370 ppb		8270
11/06/09	Hexachlorocyclopentadiene	<370 ppb		8270
11/06/09	Hexachloroethane	<370 ppb		8270
11/06/09	Indeno(1,2,3-cd)pyrene	<370 ppb		8270
11/06/09	Isophorone	<370 ppb		8270
11/06/09	m-Cresol	<370 ppb		8270
11/06/09	Naphthalene	<370 ppb		8270

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Collector's Information: **JMS ID:** 087513
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

Sample's Information: **Sample ID:** B-4.1

Site: B-4.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 3:00:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908526

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Nitrobenzene	<370 ppb		8270
11/06/09	n-Nitrosodimethylamine	<370 ppb		8270
11/06/09	n-Nitrosodi-n-propylamine	<370 ppb		8270
11/06/09	n-Nitrosodiphenylamine	<370 ppb		8270
11/06/09	Pentachlorophenol	<370 ppb		8270
11/06/09	Phenanthrene	<370 ppb		8270
11/06/09	Phenol	<370 ppb		8270
11/06/09	Pyrene	<370 ppb		8270
11/04/09	1,1,1,2-Tetrachloroethane	<5.6 ppb		EPA 8260
11/04/09	1,1,1-Trichloroethane	<5.6 ppb		EPA 8260
11/04/09	1,1,2,2-Tetrachloroethane	<5.6 ppb		EPA 8260
11/04/09	1,1,2-Trichloroethane	<5.6 ppb		EPA 8260
11/04/09	1,1-Dichloroethane	<5.6 ppb		EPA 8260
11/04/09	1,1-Dichloroethene	<5.6 ppb		EPA 8260
11/04/09	1,1-Dichloropropene	<5.6 ppb		EPA 8260
11/04/09	1,2,3-Trichlorobenzene	<5.6 ppb		EPA 8260
11/04/09	1,2,3-Trichloropropane	<5.6 ppb		EPA 8260
11/04/09	1,2,4-Trichlorobenzene	<5.6 ppb		EPA 8260
11/04/09	1,2,4-Trimethylbenzene	<5.6 ppb		EPA 8260
11/04/09	1,2-Dibromo-3-Chloropropane	<5.6 ppb		EPA 8260
11/04/09	1,2-Dibromoethane	<5.6 ppb		EPA 8260
11/04/09	1,2-Dichlorobenzene	<5.6 ppb		EPA 8260
11/04/09	1,2-Dichloroethane	<5.6 ppb		EPA 8260
11/04/09	1,2-Dichloropropane	<5.6 ppb		EPA 8260
11/04/09	1,3,5-Trimethylbenzene	<5.6 ppb		EPA 8260
11/04/09	1,3-Dichlorobenzene	<5.6 ppb		EPA 8260
11/04/09	1,3-Dichloropropane	<5.6 ppb		EPA 8260
11/04/09	1,4-Dichlorobenzene	<5.6 ppb		EPA 8260
11/04/09	2,2-Dichloropropane	<5.6 ppb		EPA 8260
11/04/09	2-Butanone (MEK)	<5.6 ppb		EPA 8260

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue
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Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087513

Sample's Information: **Sample ID:** B-4.1

Site: B-4.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 3:00:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908526

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	2-Chlorotoluene	<5.6 ppb		EPA 8260
11/04/09	2-Hexanone	<5.6 ppb		EPA 8260
11/04/09	4-Chlorotoluene	<5.6 ppb		EPA 8260
11/04/09	4-Methyl-2-pentanone (MIBK)	<5.6 ppb		EPA 8260
11/04/09	Acetone	<5.6 ppb		EPA 8260
11/04/09	Acrolein	<5.6 ppb		EPA 8260
11/04/09	Acrylonitrile	<5.6 ppb		EPA 8260
11/04/09	Benzene	<5.6 ppb		EPA 8260
11/04/09	Bromobenzene	<5.6 ppb		EPA 8260
11/04/09	Bromochloromethane	<5.6 ppb		EPA 8260
11/04/09	Bromodichloromethane	<5.6 ppb		EPA 8260
11/04/09	Bromoform	<5.6 ppb		EPA 8260
11/04/09	Bromomethane	<5.6 ppb		EPA 8260
11/04/09	Carbon disulfide	<5.6 ppb		EPA 8260
11/04/09	Carbon tetrachloride	<5.6 ppb		EPA 8260
11/04/09	Chlorobenzene	<5.6 ppb		EPA 8260
11/04/09	Chlorodibromomethane	<5.6 ppb		EPA 8260
11/04/09	Chloroethane	<5.6 ppb		EPA 8260
11/04/09	Chloroform	<5.6 ppb		EPA 8260
11/04/09	Chloromethane	<5.6 ppb		EPA 8260
11/04/09	cis-1,2-Dichloroethene	<5.6 ppb		EPA 8260
11/04/09	cis-1,3-Dichloropropene	<5.6 ppb		EPA 8260
11/04/09	Dibromomethane	<5.6 ppb		EPA 8260
11/04/09	Dichlorodifluoromethane	<5.6 ppb		EPA 8260
11/04/09	Ethylbenzene	<5.6 ppb		EPA 8260
11/04/09	Isopropylbenzene	<5.6 ppb		EPA 8260
11/04/09	m&p xylene	<5.6 ppb		EPA 8260
11/04/09	Methylene Chloride	<5.6 ppb		EPA 8260
11/04/09	MTBE	<5.6 ppb		EPA 8260
11/04/09	Naphthalene	<5.6 ppb		EPA 8260
11/04/09	n-Butylbenzene	<5.6 ppb		EPA 8260

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087513

Sample's Information: **Sample ID:** B-4.1

Site: B-4.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 3:00:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908526

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	n-Propylbenzene	<5.6 ppb		EPA 8260
11/04/09	o-Xylene	<5.6 ppb		EPA 8260
11/04/09	p-Isoproplytoluene	<5.6 ppb		EPA 8260
11/04/09	sec-Butylbenzene	<5.6 ppb		EPA 8260
11/04/09	Styrene	<5.6 ppb		EPA 8260
11/04/09	tert-Butylbenzene	<5.6 ppb		EPA 8260
11/04/09	Tetrachloroethene	<5.6 ppb		EPA 8260
11/04/09	Toluene	<5.6 ppb		EPA 8260
11/04/09	trans-1,2-Dichloroethene	<5.6 ppb		EPA 8260
11/04/09	trans-1,3-Dichloropropene	<5.6 ppb		EPA 8260
11/04/09	Trichloroethene	<5.6 ppb		EPA 8260
11/04/09	Trichlorofluoromethane	<5.6 ppb		EPA 8260
11/04/09	Vinyl Acetate	<5.6 ppb		EPA 8260
11/04/09	Vinyl chloride	<5.6 ppb		EPA 8260
11/07/09	PCB-1016	<55.6 ppb		SW 8082
11/07/09	PCB-1221	<55.6 ppb		SW 8082
11/07/09	PCB-1232	<55.6 ppb		SW 8082
11/07/09	PCB-1242	<55.6 ppb		SW 8082
11/07/09	PCB-1248	<55.6 ppb		SW 8082
11/07/09	PCB-1254	<55.6 ppb		SW 8082
11/07/09	PCB-1260	<55.6 ppb		SW 8082
11/07/09	PCB-1262	<55.6 ppb		SW 8082
11/07/09	PCB-1268	<55.6 ppb		SW 8082
11/07/09	4,4'-DDD	<2.23 ppb		SW8081
11/07/09	4,4'-DDE	<2.23 ppb		SW8081
11/07/09	4,4'-DDT	<2.23 ppb		SW8081
11/07/09	a-BHC	3.88 ppb		SW8081
11/07/09	Aldrin	<2.23 ppb		SW8081
11/07/09	b-BHC	<2.23 ppb		SW8081

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087513

Sample's Information: **Sample ID:** B-4.1

Site: B-4.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 3:00:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908526

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	Chlordane	<2.23 ppb		SW8081
11/07/09	d-BHC	<2.23 ppb		SW8081
11/07/09	Dieldrin	<2.23 ppb		SW8081
11/07/09	Endosulfan I	<2.23 ppb		SW8081
11/07/09	Endosulfan II	<2.23 ppb		SW8081
11/07/09	Endosulfan Sulfate	<2.23 ppb		SW8081
11/07/09	Endrin	<2.23 ppb		SW8081
11/07/09	Endrin Aldehyde	<2.23 ppb		SW8081
11/07/09	Endrin Ketone	<2.23 ppb		SW8081
11/07/09	g-BHC	<2.23 ppb		SW8081
11/07/09	Heptachlor	<2.23 ppb		SW8081
11/07/09	Heptachlor epoxide	<2.23 ppb		SW8081
11/07/09	Methoxychlor	<2.23 ppb		SW8081
11/07/09	Mitotane	<2.23 ppb		SW8081
11/07/09	Toxaphene	<100 ppb		SW8081
11/06/09	Zinc	73.9 ppm	N/A	6010/E200.7
11/06/09	Vanadium	30.5 ppm	N/A	6010/E200.7
11/06/09	Thallium	0.214 ppm	N/A	6010/E200.7
11/06/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/06/09	Antimony	0.496 ppm	N/A	6010/E200.7
11/06/09	Lead	67.1 ppm	N/A	6010/E200.7
11/06/09	Nickel	16.5 ppm	N/A	6010/E200.7
11/06/09	Sodium	494 ppm	N/A	6010/E200.7
11/06/09	Manganese	334 ppm	N/A	6010/E200.7
11/06/09	Magnesium	3211 ppm	N/A	6010/E200.7
11/06/09	Potassium	1193 ppm	N/A	6010/E200.7
11/05/09	Mercury	0.156 ppm	N/A	SW-7471
11/06/09	Iron	16513 ppm	N/A	6010/E200.7
11/06/09	Copper	33.8 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent	25.5 ppm	N/A	6010/E200.7

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City: Woodmere
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Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087513

Sample's Information:
Sample ID: B-4.1

Site: B-4.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 3:00:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908526

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chromium	25.5 ppm	N/A	6010/E200.7
11/06/09	Cobalt	7.95 ppm	N/A	6010/E200.7
11/06/09	Cadmium	2.95 ppm	N/A	6010/E200.7
11/06/09	Calcium	9009 ppm	N/A	6010/E200.7
11/06/09	Beryllium	0.456 ppm	N/A	6010/E200.7
11/06/09	Barium	87.4 ppm	N/A	6010/E200.7
11/06/09	Arsenic	1.13 ppm	N/A	6010/E200.7
11/06/09	Aluminum	12889 ppm	N/A	6010/E200.7
11/06/09	Silver	<0.1 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

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Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087514

Sample's Information:
Sample ID: B-4.2

Site: B-4.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 4:10:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908527

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	1,2,4-Trichlorobenzene	<390 ppb		8270
11/06/09	1,2-Dichlorobenzene	<390 ppb		8270
11/06/09	1,3-Dichlorobenzene	<390 ppb		8270
11/06/09	1,4-Dichlorobenzene	<390 ppb		8270
11/06/09	2,4,5-Trichlorophenol	<390 ppb		8270
11/06/09	2,4,6-Trichlorophenol	<390 ppb		8270
11/06/09	2,4-Dichlorophenol	<390 ppb		8270
11/06/09	2,4-Dimethylphenol	<390 ppb		8270
11/06/09	2,4-Dinitrophenol	<390 ppb		8270
11/06/09	2,4-Dinitrotoluene	<390 ppb		8270
11/06/09	2,6-Dichlorophenol	<390 ppb		8270
11/06/09	2,6-Dinitrotoluene	<390 ppb		8270
11/06/09	2-Chloronaphthalene	<390 ppb		8270
11/06/09	2-Chlorophenol	<390 ppb		8270
11/06/09	2-Methyl-4,6-dinitrophenol	<390 ppb		8270
11/06/09	2-Methylnaphthalene	<390 ppb		8270
11/06/09	2-Methylphenol (o-Cresol)	<390 ppb		8270
11/06/09	2-Nitroaniline	<390 ppb		8270
11/06/09	2-Nitrophenol	<390 ppb		8270
11/06/09	3&4-Methylphenol (m,p-Cresol)	<390 ppb		8270
11/06/09	3,3'-Dichlorobenzidine	<390 ppb		8270
11/06/09	3-Nitroaniline	<390 ppb		8270
11/06/09	4-Bromophenyl Phenyl Ether	<390 ppb		8270
11/06/09	4-Chloro-3-Methylphenol	<390 ppb		8270
11/06/09	4-Chloroaniline	<390 ppb		8270
11/06/09	4-Chlorophenylphenyl ether	<390 ppb		8270
11/06/09	4-Nitroaniline	<390 ppb		8270
11/06/09	4-Nitrophenol	<390 ppb		8270
11/06/09	Acenaphthene	<390 ppb		8270
11/06/09	Acenaphthylene	<390 ppb		8270
11/06/09	Aniline	<390 ppb		8270

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Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087514

Sample's Information: **Sample ID:** B-4.2

Site: B-4.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 4:10:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908527

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Anthracene	<390 ppb		8270
11/06/09	Benzidine	<390 ppb		8270
11/06/09	Benzo(a)anthracene	<390 ppb		8270
11/06/09	Benzo(a)pyrene	<390 ppb		8270
11/06/09	Benzo(b)fluoranthene	<390 ppb		8270
11/06/09	Benzo(g,h,i)perylene	<390 ppb		8270
11/06/09	Benzo(k)fluoranthene	<390 ppb		8270
11/06/09	Benzoic Acid	<390 ppb		8270
11/06/09	Benzyl Alcohol	<390 ppb		8270
11/06/09	Benzyl Butyl Phthalate	<390 ppb		8270
11/06/09	bis(2-Chloroethoxy)methane	<390 ppb		8270
11/06/09	bis(2-Chloroethyl) ether	<390 ppb		8270
11/06/09	bis(2-Chloroisopropyl) ether	<390 ppb		8270
11/06/09	bis(2-ethylhexyl)phthalate	<390 ppb		8270
11/06/09	Chrysene	<390 ppb		8270
11/06/09	Dibenz(a,h)anthracene	<390 ppb		8270
11/06/09	Dibenzofuran	<390 ppb		8270
11/06/09	Diethyl Phthalate	<390 ppb		8270
11/06/09	Dimethyl Phthalate	<390 ppb		8270
11/06/09	Di-n-Butyl phthalate	<390 ppb		8270
11/06/09	Di-n-octyl phthalate	<390 ppb		8270
11/06/09	Fluoranthene	640 ppb		8270
11/06/09	Fluorene	<390 ppb		8270
11/06/09	Hexachlorobenzene	<390 ppb		8270
11/06/09	Hexachlorobutadiene	<390 ppb		8270
11/06/09	Hexachlorocyclopentadiene	<390 ppb		8270
11/06/09	Hexachloroethane	<390 ppb		8270
11/06/09	Indeno(1,2,3-cd)pyrene	<390 ppb		8270
11/06/09	Isophorone	<390 ppb		8270
11/06/09	m-Cresol	<390 ppb		8270
11/06/09	Naphthalene	<390 ppb		8270

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Collector's Information: **JMS ID:** 087514
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

Sample's Information: **Sample ID:** B-4.2

Site: B-4.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 4:10:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908527

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Nitrobenzene	<390 ppb		8270
11/06/09	n-Nitrosodimethylamine	<390 ppb		8270
11/06/09	n-Nitrosodi-n-propylamine	<390 ppb		8270
11/06/09	n-Nitrosodiphenylamine	<390 ppb		8270
11/06/09	Pentachlorophenol	<390 ppb		8270
11/06/09	Phenanthrene	630 ppb		8270
11/06/09	Phenol	<390 ppb		8270
11/06/09	Pyrene	720 ppb		8270
11/04/09	1,1,1,2-Tetrachloroethane	<5.9 ppb		EPA 8260
11/04/09	1,1,1-Trichloroethane	<5.9 ppb		EPA 8260
11/04/09	1,1,2,2-Tetrachloroethane	<5.9 ppb		EPA 8260
11/04/09	1,1,2-Trichloroethane	<5.9 ppb		EPA 8260
11/04/09	1,1-Dichloroethane	<5.9 ppb		EPA 8260
11/04/09	1,1-Dichloroethene	<5.9 ppb		EPA 8260
11/04/09	1,1-Dichloropropene	<5.9 ppb		EPA 8260
11/04/09	1,2,3-Trichlorobenzene	<5.9 ppb		EPA 8260
11/04/09	1,2,3-Trichloropropane	<5.9 ppb		EPA 8260
11/04/09	1,2,4-Trichlorobenzene	<5.9 ppb		EPA 8260
11/04/09	1,2,4-Trimethylbenzene	<5.9 ppb		EPA 8260
11/04/09	1,2-Dibromo-3-Chloropropane	<5.9 ppb		EPA 8260
11/04/09	1,2-Dibromoethane	<5.9 ppb		EPA 8260
11/04/09	1,2-Dichlorobenzene	<5.9 ppb		EPA 8260
11/04/09	1,2-Dichloroethane	<5.9 ppb		EPA 8260
11/04/09	1,2-Dichloropropane	<5.9 ppb		EPA 8260
11/04/09	1,3,5-Trimethylbenzene	<5.9 ppb		EPA 8260
11/04/09	1,3-Dichlorobenzene	<5.9 ppb		EPA 8260
11/04/09	1,3-Dichloropropane	<5.9 ppb		EPA 8260
11/04/09	1,4-Dichlorobenzene	<5.9 ppb		EPA 8260
11/04/09	2,2-Dichloropropane	<5.9 ppb		EPA 8260
11/04/09	2-Butanone (MEK)	<5.9 ppb		EPA 8260

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JMS ID: 087514

Sample's Information: **Sample ID:** B-4.2

Site: B-4.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 4:10:00 PM

Date Received: 11/2/2009
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Lab No.: J0908527

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	2-Chlorotoluene	<5.9 ppb		EPA 8260
11/04/09	2-Hexanone	<5.9 ppb		EPA 8260
11/04/09	4-Chlorotoluene	<5.9 ppb		EPA 8260
11/04/09	4-Methyl-2-pentanone (MIBK)	<5.9 ppb		EPA 8260
11/04/09	Acetone	<5.9 ppb		EPA 8260
11/04/09	Acrolein	<5.9 ppb		EPA 8260
11/04/09	Acrylonitrile	<5.9 ppb		EPA 8260
11/04/09	Benzene	<5.9 ppb		EPA 8260
11/04/09	Bromobenzene	<5.9 ppb		EPA 8260
11/04/09	Bromochloromethane	<5.9 ppb		EPA 8260
11/04/09	Bromodichloromethane	<5.9 ppb		EPA 8260
11/04/09	Bromoform	<5.9 ppb		EPA 8260
11/04/09	Bromomethane	<5.9 ppb		EPA 8260
11/04/09	Carbon disulfide	<5.9 ppb		EPA 8260
11/04/09	Carbon tetrachloride	<5.9 ppb		EPA 8260
11/04/09	Chlorobenzene	<5.9 ppb		EPA 8260
11/04/09	Chlorodibromomethane	<5.9 ppb		EPA 8260
11/04/09	Chloroethane	<5.9 ppb		EPA 8260
11/04/09	Chloroform	<5.9 ppb		EPA 8260
11/04/09	Chloromethane	<5.9 ppb		EPA 8260
11/04/09	cis-1,2-Dichloroethene	<5.9 ppb		EPA 8260
11/04/09	cis-1,3-Dichloropropene	<5.9 ppb		EPA 8260
11/04/09	Dibromomethane	<5.9 ppb		EPA 8260
11/04/09	Dichlorodifluoromethane	<5.9 ppb		EPA 8260
11/04/09	Ethylbenzene	<5.9 ppb		EPA 8260
11/04/09	Isopropylbenzene	<5.9 ppb		EPA 8260
11/04/09	m&p xylene	<5.9 ppb		EPA 8260
11/04/09	Methylene Chloride	<5.9 ppb		EPA 8260
11/04/09	MTBE	<5.9 ppb		EPA 8260
11/04/09	Naphthalene	<5.9 ppb		EPA 8260
11/04/09	n-Butylbenzene	<5.9 ppb		EPA 8260

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue
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Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087514

Sample's Information: **Sample ID:** B-4.2

Site: B-4.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 4:10:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908527

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	n-Propylbenzene	<5.9 ppb		EPA 8260
11/04/09	o-Xylene	<5.9 ppb		EPA 8260
11/04/09	p-Isoproplytoluene	<5.9 ppb		EPA 8260
11/04/09	sec-Butylbenzene	<5.9 ppb		EPA 8260
11/04/09	Styrene	<5.9 ppb		EPA 8260
11/04/09	tert-Butylbenzene	<5.9 ppb		EPA 8260
11/04/09	Tetrachloroethene	<5.9 ppb		EPA 8260
11/04/09	Toluene	<5.9 ppb		EPA 8260
11/04/09	trans-1,2-Dichloroethene	<5.9 ppb		EPA 8260
11/04/09	trans-1,3-Dichloropropene	<5.9 ppb		EPA 8260
11/04/09	Trichloroethene	<5.9 ppb		EPA 8260
11/04/09	Trichlorofluoromethane	<5.9 ppb		EPA 8260
11/04/09	Vinyl Acetate	<5.9 ppb		EPA 8260
11/04/09	Vinyl chloride	<5.9 ppb		EPA 8260
11/07/09	PCB-1016	<58.6 ppb		SW 8082
11/07/09	PCB-1221	<58.6 ppb		SW 8082
11/07/09	PCB-1232	<58.6 ppb		SW 8082
11/07/09	PCB-1242	<58.6 ppb		SW 8082
11/07/09	PCB-1248	<58.6 ppb		SW 8082
11/07/09	PCB-1254	<58.6 ppb		SW 8082
11/07/09	PCB-1260	<58.6 ppb		SW 8082
11/07/09	PCB-1262	<58.6 ppb		SW 8082
11/07/09	PCB-1268	<58.6 ppb		SW 8082
11/07/09	4,4'-DDD	<2.34 ppb		SW8081
11/07/09	4,4'-DDE	<2.34 ppb		SW8081
11/07/09	4,4'-DDT	<2.34 ppb		SW8081
11/07/09	a-BHC	<2.34 ppb		SW8081
11/07/09	Aldrin	<2.34 ppb		SW8081
11/07/09	b-BHC	<2.34 ppb		SW8081

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087514

Sample's Information: **Sample ID:** B-4.2

Site: B-4.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 4:10:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908527

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	Chlordane	<2.34 ppb		SW8081
11/07/09	d-BHC	<2.34 ppb		SW8081
11/07/09	Dieldrin	<2.34 ppb		SW8081
11/07/09	Endosulfan I	<2.34 ppb		SW8081
11/07/09	Endosulfan II	<2.34 ppb		SW8081
11/07/09	Endosulfan Sulfate	<2.34 ppb		SW8081
11/07/09	Endrin	<2.34 ppb		SW8081
11/07/09	Endrin Aldehyde	<2.34 ppb		SW8081
11/07/09	Endrin Ketone	<2.34 ppb		SW8081
11/07/09	g-BHC	<2.34 ppb		SW8081
11/07/09	Heptachlor	<2.34 ppb		SW8081
11/07/09	Heptachlor epoxide	<2.34 ppb		SW8081
11/07/09	Methoxychlor	<2.34 ppb		SW8081
11/07/09	Mitotane	<2.34 ppb		SW8081
11/07/09	Toxaphene	<100 ppb		SW8081
11/06/09	Zinc	49.1 ppm	N/A	6010/E200.7
11/06/09	Vanadium	24 ppm	N/A	6010/E200.7
11/06/09	Thallium	0.243 ppm	N/A	6010/E200.7
11/06/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/06/09	Antimony	0.538 ppm	N/A	6010/E200.7
11/06/09	Lead	29.4 ppm	N/A	6010/E200.7
11/06/09	Nickel	15.2 ppm	N/A	6010/E200.7
11/06/09	Sodium	349 ppm	N/A	6010/E200.7
11/06/09	Manganese	308 ppm	N/A	6010/E200.7
11/06/09	Magnesium	6762 ppm	N/A	6010/E200.7
11/06/09	Potassium	1388 ppm	N/A	6010/E200.7
11/05/09	Mercury	0.112 ppm	N/A	SW-7471
11/06/09	Iron	13849 ppm	N/A	6010/E200.7
11/06/09	Copper	23.4 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent	21.4 ppm	N/A	6010/E200.7

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087514

Sample's Information:
Sample ID: B-4.2

Site: B-4.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/29/2009
Time Collected: 4:10:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908527

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chromium	21.4 ppm	N/A	6010/E200.7
11/06/09	Cobalt	6.86 ppm	N/A	6010/E200.7
11/06/09	Cadmium	2.4 ppm	N/A	6010/E200.7
11/06/09	Calcium	9393 ppm	N/A	6010/E200.7
11/06/09	Beryllium	0.229 ppm	N/A	6010/E200.7
11/06/09	Barium	67.9 ppm	N/A	6010/E200.7
11/06/09	Arsenic	0.569 ppm	N/A	6010/E200.7
11/06/09	Aluminum	7495 ppm	N/A	6010/E200.7
11/06/09	Silver	<0.1 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087515

Sample's Information: **Sample ID:** B-1.1

Site: B-1.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 2:03:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908528

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	1,2,4-Trichlorobenzene	<350 ppb		8270
11/06/09	1,2-Dichlorobenzene	<350 ppb		8270
11/06/09	1,3-Dichlorobenzene	<350 ppb		8270
11/06/09	1,4-Dichlorobenzene	<350 ppb		8270
11/06/09	2,4,5-Trichlorophenol	<350 ppb		8270
11/06/09	2,4,6-Trichlorophenol	<350 ppb		8270
11/06/09	2,4-Dichlorophenol	<350 ppb		8270
11/06/09	2,4-Dimethylphenol	<350 ppb		8270
11/06/09	2,4-Dinitrophenol	<350 ppb		8270
11/06/09	2,4-Dinitrotoluene	<350 ppb		8270
11/06/09	2,6-Dichlorophenol	<350 ppb		8270
11/06/09	2,6-Dinitrotoluene	<350 ppb		8270
11/06/09	2-Chloronaphthalene	<350 ppb		8270
11/06/09	2-Chlorophenol	<350 ppb		8270
11/06/09	2-Methyl-4,6-dinitrophenol	<350 ppb		8270
11/06/09	2-Methylnaphthalene	<350 ppb		8270
11/06/09	2-Methylphenol (o-Cresol)	<350 ppb		8270
11/06/09	2-Nitroaniline	<350 ppb		8270
11/06/09	2-Nitrophenol	<350 ppb		8270
11/06/09	3&4-Methylphenol (m,p-Cresol)	<350 ppb		8270
11/06/09	3,3'-Dichlorobenzidine	<350 ppb		8270
11/06/09	3-Nitroaniline	<350 ppb		8270
11/06/09	4-Bromophenyl Phenyl Ether	<350 ppb		8270
11/06/09	4-Chloro-3-Methylphenol	<350 ppb		8270
11/06/09	4-Chloroaniline	<350 ppb		8270
11/06/09	4-Chlorophenylphenyl ether	<350 ppb		8270
11/06/09	4-Nitroaniline	<350 ppb		8270
11/06/09	4-Nitrophenol	<350 ppb		8270
11/06/09	Acenaphthene	580 ppb		8270
11/06/09	Acenaphthylene	490 ppb		8270
11/06/09	Aniline	<350 ppb		8270

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Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087515

Sample's Information: **Sample ID:** B-1.1

Site: B-1.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 2:03:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908528

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Anthracene	1800 ppb		8270
11/06/09	Benzidine	<350 ppb		8270
11/06/09	Benzo(a)anthracene	4800 ppb		8270
11/06/09	Benzo(a)pyrene	3800 ppb		8270
11/06/09	Benzo(b)fluoranthene	6700 ppb		8270
11/06/09	Benzo(g,h,i)perylene	1300 ppb		8270
11/06/09	Benzo(k)fluoranthene	2300 ppb		8270
11/06/09	Benzoic Acid	<350 ppb		8270
11/06/09	Benzyl Alcohol	<350 ppb		8270
11/06/09	Benzyl Butyl Phthalate	<350 ppb		8270
11/06/09	bis(2-Chloroethoxy)methane	<350 ppb		8270
11/06/09	bis(2-Chloroethyl) ether	<350 ppb		8270
11/06/09	bis(2-Chloroisopropyl) ether	<350 ppb		8270
11/06/09	bis(2-ethylhexyl)phthalate	<350 ppb		8270
11/06/09	Chrysene	4800 ppb		8270
11/06/09	Dibenz(a,h)anthracene	<350 ppb		8270
11/06/09	Dibenzofuran	590 ppb		8270
11/06/09	Diethyl Phthalate	<350 ppb		8270
11/06/09	Dimethyl Phthalate	<350 ppb		8270
11/06/09	Di-n-Butyl phthalate	<350 ppb		8270
11/06/09	Di-n-octyl phthalate	<350 ppb		8270
11/06/09	Fluoranthene	13000 ppb		8270
11/06/09	Fluorene	840 ppb		8270
11/06/09	Hexachlorobenzene	<350 ppb		8270
11/06/09	Hexachlorobutadiene	<350 ppb		8270
11/06/09	Hexachlorocyclopentadiene	<350 ppb		8270
11/06/09	Hexachloroethane	<350 ppb		8270
11/06/09	Indeno(1,2,3-cd)pyrene	640 ppb		8270
11/06/09	Isophorone	<350 ppb		8270
11/06/09	m-Cresol	<350 ppb		8270
11/06/09	Naphthalene	390 ppb		8270

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Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information: **JMS ID:** 087515
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

Sample's Information: **Sample ID:** B-1.1

Site: B-1.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 2:03:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908528

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Nitrobenzene	<350 ppb		8270
11/06/09	n-Nitrosodimethylamine	<350 ppb		8270
11/06/09	n-Nitrosodi-n-propylamine	<350 ppb		8270
11/06/09	n-Nitrosodiphenylamine	<350 ppb		8270
11/06/09	Pentachlorophenol	<350 ppb		8270
11/06/09	Phenanthrene	10000 ppb		8270
11/06/09	Phenol	<350 ppb		8270
11/06/09	Pyrene	11000 ppb		8270
11/04/09	1,1,1,2-Tetrachloroethane	<5.1 ppb		EPA 8260
11/04/09	1,1,1-Trichloroethane	<5.1 ppb		EPA 8260
11/04/09	1,1,2,2-Tetrachloroethane	<5.1 ppb		EPA 8260
11/04/09	1,1,2-Trichloroethane	<5.1 ppb		EPA 8260
11/04/09	1,1-Dichloroethane	<5.1 ppb		EPA 8260
11/04/09	1,1-Dichloroethene	<5.1 ppb		EPA 8260
11/04/09	1,1-Dichloropropene	<5.1 ppb		EPA 8260
11/04/09	1,2,3-Trichlorobenzene	<5.1 ppb		EPA 8260
11/04/09	1,2,3-Trichloropropane	<5.1 ppb		EPA 8260
11/04/09	1,2,4-Trichlorobenzene	<5.1 ppb		EPA 8260
11/04/09	1,2,4-Trimethylbenzene	<5.1 ppb		EPA 8260
11/04/09	1,2-Dibromo-3-Chloropropane	<5.1 ppb		EPA 8260
11/04/09	1,2-Dibromoethane	<5.1 ppb		EPA 8260
11/04/09	1,2-Dichlorobenzene	<5.1 ppb		EPA 8260
11/04/09	1,2-Dichloroethane	<5.1 ppb		EPA 8260
11/04/09	1,2-Dichloropropane	<5.1 ppb		EPA 8260
11/04/09	1,3,5-Trimethylbenzene	<5.1 ppb		EPA 8260
11/04/09	1,3-Dichlorobenzene	<5.1 ppb		EPA 8260
11/04/09	1,3-Dichloropropane	<5.1 ppb		EPA 8260
11/04/09	1,4-Dichlorobenzene	<5.1 ppb		EPA 8260
11/04/09	2,2-Dichloropropane	<5.1 ppb		EPA 8260
11/04/09	2-Butanone (MEK)	<5.1 ppb		EPA 8260

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Phone:

JMS ID: 087515

Sample's Information: **Sample ID:** B-1.1

Site: B-1.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
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Date Analyzed	Test Name	Result	MCL	Method
11/04/09	2-Chlorotoluene	<5.1 ppb		EPA 8260
11/04/09	2-Hexanone	<5.1 ppb		EPA 8260
11/04/09	4-Chlorotoluene	<5.1 ppb		EPA 8260
11/04/09	4-Methyl-2-pentanone (MIBK)	<5.1 ppb		EPA 8260
11/04/09	Acetone	<5.1 ppb		EPA 8260
11/04/09	Acrolein	<5.1 ppb		EPA 8260
11/04/09	Acrylonitrile	<5.1 ppb		EPA 8260
11/04/09	Benzene	<5.1 ppb		EPA 8260
11/04/09	Bromobenzene	<5.1 ppb		EPA 8260
11/04/09	Bromochloromethane	<5.1 ppb		EPA 8260
11/04/09	Bromodichloromethane	<5.1 ppb		EPA 8260
11/04/09	Bromoform	<5.1 ppb		EPA 8260
11/04/09	Bromomethane	<5.1 ppb		EPA 8260
11/04/09	Carbon disulfide	<5.1 ppb		EPA 8260
11/04/09	Carbon tetrachloride	<5.1 ppb		EPA 8260
11/04/09	Chlorobenzene	<5.1 ppb		EPA 8260
11/04/09	Chlorodibromomethane	<5.1 ppb		EPA 8260
11/04/09	Chloroethane	<5.1 ppb		EPA 8260
11/04/09	Chloroform	<5.1 ppb		EPA 8260
11/04/09	Chloromethane	<5.1 ppb		EPA 8260
11/04/09	cis-1,2-Dichloroethene	<5.1 ppb		EPA 8260
11/04/09	cis-1,3-Dichloropropene	<5.1 ppb		EPA 8260
11/04/09	Dibromomethane	<5.1 ppb		EPA 8260
11/04/09	Dichlorodifluoromethane	<5.1 ppb		EPA 8260
11/04/09	Ethylbenzene	<5.1 ppb		EPA 8260
11/04/09	Isopropylbenzene	<5.1 ppb		EPA 8260
11/04/09	m&p xylene	<5.1 ppb		EPA 8260
11/04/09	Methylene Chloride	<5.1 ppb		EPA 8260
11/04/09	MTBE	<5.1 ppb		EPA 8260
11/04/09	Naphthalene	<5.1 ppb		EPA 8260
11/04/09	n-Butylbenzene	<5.1 ppb		EPA 8260

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State: NY **Zip:**
Phone:

JMS ID: 087515

Sample's Information: **Sample ID:** B-1.1

Site: B-1.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 2:03:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908528

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	n-Propylbenzene	<5.1 ppb		EPA 8260
11/04/09	o-Xylene	<5.1 ppb		EPA 8260
11/04/09	p-Isoproplytoluene	<5.1 ppb		EPA 8260
11/04/09	sec-Butylbenzene	<5.1 ppb		EPA 8260
11/04/09	Styrene	<5.1 ppb		EPA 8260
11/04/09	tert-Butylbenzene	<5.1 ppb		EPA 8260
11/04/09	Tetrachloroethene	<5.1 ppb		EPA 8260
11/04/09	Toluene	<5.1 ppb		EPA 8260
11/04/09	trans-1,2-Dichloroethene	<5.1 ppb		EPA 8260
11/04/09	trans-1,3-Dichloropropene	<5.1 ppb		EPA 8260
11/04/09	Trichloroethene	<5.1 ppb		EPA 8260
11/04/09	Trichlorofluoromethane	<5.1 ppb		EPA 8260
11/04/09	Vinyl Acetate	<5.1 ppb		EPA 8260
11/04/09	Vinyl chloride	<5.1 ppb		EPA 8260
11/07/09	PCB-1016	<51.5 ppb		SW 8082
11/07/09	PCB-1221	<51.5 ppb		SW 8082
11/07/09	PCB-1232	<51.5 ppb		SW 8082
11/07/09	PCB-1242	<51.5 ppb		SW 8082
11/07/09	PCB-1248	<51.5 ppb		SW 8082
11/07/09	PCB-1254	<51.5 ppb		SW 8082
11/07/09	PCB-1260	<51.5 ppb		SW 8082
11/07/09	PCB-1262	<51.5 ppb		SW 8082
11/07/09	PCB-1268	<51.5 ppb		SW 8082
11/07/09	4,4'-DDD	<2.06 ppb		SW8081
11/07/09	4,4'-DDE	<2.06 ppb		SW8081
11/07/09	4,4'-DDT	<2.06 ppb		SW8081
11/07/09	a-BHC	<2.06 ppb		SW8081
11/07/09	Aldrin	<2.06 ppb		SW8081
11/07/09	b-BHC	<2.06 ppb		SW8081

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue
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Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087515

Sample's Information: **Sample ID:** B-1.1

Site: B-1.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 2:03:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908528

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	Chlordane	<2.06 ppb		SW8081
11/07/09	d-BHC	<2.06 ppb		SW8081
11/07/09	Dieldrin	<2.06 ppb		SW8081
11/07/09	Endosulfan I	<2.06 ppb		SW8081
11/07/09	Endosulfan II	<2.06 ppb		SW8081
11/07/09	Endosulfan Sulfate	<2.06 ppb		SW8081
11/07/09	Endrin	<2.06 ppb		SW8081
11/07/09	Endrin Aldehyde	4.63 ppb		SW8081
11/07/09	Endrin Ketone	30.5 ppb		SW8081
11/07/09	g-BHC	<2.06 ppb		SW8081
11/07/09	Heptachlor	<2.06 ppb		SW8081
11/07/09	Heptachlor epoxide	<2.06 ppb		SW8081
11/07/09	Methoxychlor	<2.06 ppb		SW8081
11/07/09	Mitotane	<2.06 ppb		SW8081
11/07/09	Toxaphene	<100 ppb		SW8081
11/06/09	Zinc	278 ppm	N/A	6010/E200.7
11/06/09	Vanadium	16.6 ppm	N/A	6010/E200.7
11/06/09	Thallium	0.191 ppm	N/A	6010/E200.7
11/06/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/06/09	Antimony	0.682 ppm	N/A	6010/E200.7
11/06/09	Lead	100 ppm	N/A	6010/E200.7
11/06/09	Nickel	12.3 ppm	N/A	6010/E200.7
11/06/09	Sodium	95.6 ppm	N/A	6010/E200.7
11/06/09	Manganese	235 ppm	N/A	6010/E200.7
11/06/09	Magnesium	2192 ppm	N/A	6010/E200.7
11/06/09	Potassium	627 ppm	N/A	6010/E200.7
11/05/09	Mercury	<0.1 ppm	N/A	SW-7471
11/06/09	Iron	9662 ppm	N/A	6010/E200.7
11/06/09	Copper	85.2 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent	14.5 ppm	N/A	6010/E200.7

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Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information: **JMS ID:** 087515
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

Sample's Information: **Sample ID:** B-1.1

Site: B-1.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 2:03:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908528

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chromium	14.5 ppm	N/A	6010/E200.7
11/06/09	Cobalt	6.25 ppm	N/A	6010/E200.7
11/06/09	Cadmium	1.73 ppm	N/A	6010/E200.7
11/06/09	Calcium	3289 ppm	N/A	6010/E200.7
11/06/09	Beryllium	0.257 ppm	N/A	6010/E200.7
11/06/09	Barium	63.9 ppm	N/A	6010/E200.7
11/06/09	Arsenic	1.79 ppm	N/A	6010/E200.7
11/06/09	Aluminum	5559 ppm	N/A	6010/E200.7
11/06/09	Silver	<0.1 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087516

Sample's Information:
Sample ID: B-1.2

Site: B-1.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 3:00:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908529

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	1,2,4-Trichlorobenzene	<360 ppb		8270
11/06/09	1,2-Dichlorobenzene	<360 ppb		8270
11/06/09	1,3-Dichlorobenzene	<360 ppb		8270
11/06/09	1,4-Dichlorobenzene	<360 ppb		8270
11/06/09	2,4,5-Trichlorophenol	<360 ppb		8270
11/06/09	2,4,6-Trichlorophenol	<360 ppb		8270
11/06/09	2,4-Dichlorophenol	<360 ppb		8270
11/06/09	2,4-Dimethylphenol	<360 ppb		8270
11/06/09	2,4-Dinitrophenol	<360 ppb		8270
11/06/09	2,4-Dinitrotoluene	<360 ppb		8270
11/06/09	2,6-Dichlorophenol	<360 ppb		8270
11/06/09	2,6-Dinitrotoluene	<360 ppb		8270
11/06/09	2-Chloronaphthalene	<360 ppb		8270
11/06/09	2-Chlorophenol	<360 ppb		8270
11/06/09	2-Methyl-4,6-dinitrophenol	<360 ppb		8270
11/06/09	2-Methylnaphthalene	<360 ppb		8270
11/06/09	2-Methylphenol (o-Cresol)	<360 ppb		8270
11/06/09	2-Nitroaniline	<360 ppb		8270
11/06/09	2-Nitrophenol	<360 ppb		8270
11/06/09	3&4-Methylphenol (m,p-Cresol)	<360 ppb		8270
11/06/09	3,3'-Dichlorobenzidine	<360 ppb		8270
11/06/09	3-Nitroaniline	<360 ppb		8270
11/06/09	4-Bromophenyl Phenyl Ether	<360 ppb		8270
11/06/09	4-Chloro-3-Methylphenol	<360 ppb		8270
11/06/09	4-Chloroaniline	<360 ppb		8270
11/06/09	4-Chlorophenylphenyl ether	<360 ppb		8270
11/06/09	4-Nitroaniline	<360 ppb		8270
11/06/09	4-Nitrophenol	<360 ppb		8270
11/06/09	Acenaphthene	<360 ppb		8270
11/06/09	Acenaphthylene	<360 ppb		8270
11/06/09	Aniline	<360 ppb		8270

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087516

Sample's Information: **Sample ID:** B-1.2

Site: B-1.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 3:00:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908529

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Anthracene	<360 ppb		8270
11/06/09	Benzidine	<360 ppb		8270
11/06/09	Benzo(a)anthracene	<360 ppb		8270
11/06/09	Benzo(a)pyrene	<360 ppb		8270
11/06/09	Benzo(b)fluoranthene	<360 ppb		8270
11/06/09	Benzo(g,h,i)perylene	<360 ppb		8270
11/06/09	Benzo(k)fluoranthene	<360 ppb		8270
11/06/09	Benzoic Acid	<360 ppb		8270
11/06/09	Benzyl Alcohol	<360 ppb		8270
11/06/09	Benzyl Butyl Phthalate	<360 ppb		8270
11/06/09	bis(2-Chloroethoxy)methane	<360 ppb		8270
11/06/09	bis(2-Chloroethyl) ether	<360 ppb		8270
11/06/09	bis(2-Chloroisopropyl) ether	<360 ppb		8270
11/06/09	bis(2-ethylhexyl)phthalate	<360 ppb		8270
11/06/09	Chrysene	<360 ppb		8270
11/06/09	Dibenz(a,h)anthracene	<360 ppb		8270
11/06/09	Dibenzofuran	<360 ppb		8270
11/06/09	Diethyl Phthalate	<360 ppb		8270
11/06/09	Dimethyl Phthalate	<360 ppb		8270
11/06/09	Di-n-Butyl phthalate	<360 ppb		8270
11/06/09	Di-n-octyl phthalate	<360 ppb		8270
11/06/09	Fluoranthene	<360 ppb		8270
11/06/09	Fluorene	<360 ppb		8270
11/06/09	Hexachlorobenzene	<360 ppb		8270
11/06/09	Hexachlorobutadiene	<360 ppb		8270
11/06/09	Hexachlorocyclopentadiene	<360 ppb		8270
11/06/09	Hexachloroethane	<360 ppb		8270
11/06/09	Indeno(1,2,3-cd)pyrene	<360 ppb		8270
11/06/09	Isophorone	<360 ppb		8270
11/06/09	m-Cresol	<360 ppb		8270
11/06/09	Naphthalene	<360 ppb		8270

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Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information: **JMS ID:** 087516
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

Sample's Information: **Sample ID:** B-1.2

Site: B-1.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 3:00:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908529

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Nitrobenzene	<360 ppb		8270
11/06/09	n-Nitrosodimethylamine	<360 ppb		8270
11/06/09	n-Nitrosodi-n-propylamine	<360 ppb		8270
11/06/09	n-Nitrosodiphenylamine	<360 ppb		8270
11/06/09	Pentachlorophenol	<360 ppb		8270
11/06/09	Phenanthrene	<360 ppb		8270
11/06/09	Phenol	<360 ppb		8270
11/06/09	Pyrene	<360 ppb		8270
11/04/09	1,1,1,2-Tetrachloroethane	<5.3 ppb		EPA 8260
11/04/09	1,1,1-Trichloroethane	<5.3 ppb		EPA 8260
11/04/09	1,1,2,2-Tetrachloroethane	<5.3 ppb		EPA 8260
11/04/09	1,1,2-Trichloroethane	<5.3 ppb		EPA 8260
11/04/09	1,1-Dichloroethane	<5.3 ppb		EPA 8260
11/04/09	1,1-Dichloroethene	<5.3 ppb		EPA 8260
11/04/09	1,1-Dichloropropene	<5.3 ppb		EPA 8260
11/04/09	1,2,3-Trichlorobenzene	<5.3 ppb		EPA 8260
11/04/09	1,2,3-Trichloropropane	<5.3 ppb		EPA 8260
11/04/09	1,2,4-Trichlorobenzene	<5.3 ppb		EPA 8260
11/04/09	1,2,4-Trimethylbenzene	<5.3 ppb		EPA 8260
11/04/09	1,2-Dibromo-3-Chloropropane	<5.3 ppb		EPA 8260
11/04/09	1,2-Dibromoethane	<5.3 ppb		EPA 8260
11/04/09	1,2-Dichlorobenzene	<5.3 ppb		EPA 8260
11/04/09	1,2-Dichloroethane	<5.3 ppb		EPA 8260
11/04/09	1,2-Dichloropropane	<5.3 ppb		EPA 8260
11/04/09	1,3,5-Trimethylbenzene	<5.3 ppb		EPA 8260
11/04/09	1,3-Dichlorobenzene	<5.3 ppb		EPA 8260
11/04/09	1,3-Dichloropropane	<5.3 ppb		EPA 8260
11/04/09	1,4-Dichlorobenzene	<5.3 ppb		EPA 8260
11/04/09	2,2-Dichloropropane	<5.3 ppb		EPA 8260
11/04/09	2-Butanone (MEK)	<5.3 ppb		EPA 8260

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State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087516

Sample's Information: **Sample ID:** B-1.2

Site: B-1.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 3:00:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908529

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	2-Chlorotoluene	<5.3 ppb		EPA 8260
11/04/09	2-Hexanone	<5.3 ppb		EPA 8260
11/04/09	4-Chlorotoluene	<5.3 ppb		EPA 8260
11/04/09	4-Methyl-2-pentanone (MIBK)	<5.3 ppb		EPA 8260
11/04/09	Acetone	<5.3 ppb		EPA 8260
11/04/09	Acrolein	<5.3 ppb		EPA 8260
11/04/09	Acrylonitrile	<5.3 ppb		EPA 8260
11/04/09	Benzene	<5.3 ppb		EPA 8260
11/04/09	Bromobenzene	<5.3 ppb		EPA 8260
11/04/09	Bromochloromethane	<5.3 ppb		EPA 8260
11/04/09	Bromodichloromethane	<5.3 ppb		EPA 8260
11/04/09	Bromoform	<5.3 ppb		EPA 8260
11/04/09	Bromomethane	<5.3 ppb		EPA 8260
11/04/09	Carbon disulfide	<5.3 ppb		EPA 8260
11/04/09	Carbon tetrachloride	<5.3 ppb		EPA 8260
11/04/09	Chlorobenzene	<5.3 ppb		EPA 8260
11/04/09	Chlorodibromomethane	<5.3 ppb		EPA 8260
11/04/09	Chloroethane	<5.3 ppb		EPA 8260
11/04/09	Chloroform	<5.3 ppb		EPA 8260
11/04/09	Chloromethane	<5.3 ppb		EPA 8260
11/04/09	cis-1,2-Dichloroethene	<5.3 ppb		EPA 8260
11/04/09	cis-1,3-Dichloropropene	<5.3 ppb		EPA 8260
11/04/09	Dibromomethane	<5.3 ppb		EPA 8260
11/04/09	Dichlorodifluoromethane	<5.3 ppb		EPA 8260
11/04/09	Ethylbenzene	<5.3 ppb		EPA 8260
11/04/09	Isopropylbenzene	<5.3 ppb		EPA 8260
11/04/09	m&p xylene	<5.3 ppb		EPA 8260
11/04/09	Methylene Chloride	<5.3 ppb		EPA 8260
11/04/09	MTBE	<5.3 ppb		EPA 8260
11/04/09	Naphthalene	<5.3 ppb		EPA 8260
11/04/09	n-Butylbenzene	<5.3 ppb		EPA 8260

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087516

Sample's Information: **Sample ID:** B-1.2

Site: B-1.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 3:00:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908529

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	n-Propylbenzene	<5.3 ppb		EPA 8260
11/04/09	o-Xylene	<5.3 ppb		EPA 8260
11/04/09	p-Isoproplytoluene	<5.3 ppb		EPA 8260
11/04/09	sec-Butylbenzene	<5.3 ppb		EPA 8260
11/04/09	Styrene	<5.3 ppb		EPA 8260
11/04/09	tert-Butylbenzene	<5.3 ppb		EPA 8260
11/04/09	Tetrachloroethene	<5.3 ppb		EPA 8260
11/04/09	Toluene	<5.3 ppb		EPA 8260
11/04/09	trans-1,2-Dichloroethene	<5.3 ppb		EPA 8260
11/04/09	trans-1,3-Dichloropropene	<5.3 ppb		EPA 8260
11/04/09	Trichloroethene	<5.3 ppb		EPA 8260
11/04/09	Trichlorofluoromethane	<5.3 ppb		EPA 8260
11/04/09	Vinyl Acetate	<5.3 ppb		EPA 8260
11/04/09	Vinyl chloride	<5.3 ppb		EPA 8260
11/07/09	PCB-1016	<53.9 ppb		SW 8082
11/07/09	PCB-1221	<53.9 ppb		SW 8082
11/07/09	PCB-1232	<53.9 ppb		SW 8082
11/07/09	PCB-1242	<53.9 ppb		SW 8082
11/07/09	PCB-1248	<53.9 ppb		SW 8082
11/07/09	PCB-1254	<53.9 ppb		SW 8082
11/07/09	PCB-1260	<53.9 ppb		SW 8082
11/07/09	PCB-1262	<53.9 ppb		SW 8082
11/07/09	PCB-1268	<53.9 ppb		SW 8082
11/07/09	4,4'-DDD	<2.16 ppb		SW8081
11/07/09	4,4'-DDE	<2.16 ppb		SW8081
11/07/09	4,4'-DDT	<2.16 ppb		SW8081
11/07/09	a-BHC	<2.16 ppb		SW8081
11/07/09	Aldrin	<2.16 ppb		SW8081
11/07/09	b-BHC	<2.16 ppb		SW8081

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087516

Sample's Information: **Sample ID:** B-1.2

Site: B-1.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 3:00:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908529

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	Chlordane	<2.16 ppb		SW8081
11/07/09	d-BHC	<2.16 ppb		SW8081
11/07/09	Dieldrin	<2.16 ppb		SW8081
11/07/09	Endosulfan I	<2.16 ppb		SW8081
11/07/09	Endosulfan II	<2.16 ppb		SW8081
11/07/09	Endosulfan Sulfate	<2.16 ppb		SW8081
11/07/09	Endrin	<2.16 ppb		SW8081
11/07/09	Endrin Aldehyde	<2.16 ppb		SW8081
11/07/09	Endrin Ketone	<2.16 ppb		SW8081
11/07/09	g-BHC	<2.16 ppb		SW8081
11/07/09	Heptachlor	<2.16 ppb		SW8081
11/07/09	Heptachlor epoxide	<2.16 ppb		SW8081
11/07/09	Methoxychlor	<2.16 ppb		SW8081
11/07/09	Mitotane	<2.16 ppb		SW8081
11/07/09	Toxaphene	<100 ppb		SW8081
11/06/09	Zinc	215 ppm	N/A	6010/E200.7
11/06/09	Vanadium	153 ppm	N/A	6010/E200.7
11/06/09	Thallium	0.715 ppm	N/A	6010/E200.7
11/06/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/06/09	Antimony	3.65 ppm	N/A	6010/E200.7
11/06/09	Lead	36.8 ppm	N/A	6010/E200.7
11/06/09	Nickel	102 ppm	N/A	6010/E200.7
11/06/09	Sodium	1819 ppm	N/A	6010/E200.7
11/06/09	Manganese	2553 ppm	N/A	6010/E200.7
11/06/09	Magnesium	25431 ppm	N/A	6010/E200.7
11/06/09	Potassium	955 ppm	N/A	6010/E200.7
11/05/09	Mercury	0.107 ppm	N/A	SW-7471
11/06/09	Iron	86383 ppm	N/A	6010/E200.7
11/06/09	Copper	106 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent	165 ppm	N/A	6010/E200.7

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue
Danbury, Connecticut 06810 | Telephone 203-798-2229

Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087516

Sample's Information:
Sample ID: B-1.2

Site: B-1.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 3:00:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908529

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chromium	165 ppm	N/A	6010/E200.7
11/06/09	Cobalt	42.5 ppm	N/A	6010/E200.7
11/06/09	Cadmium	13.6 ppm	N/A	6010/E200.7
11/06/09	Calcium	21707 ppm	N/A	6010/E200.7
11/06/09	Beryllium	2.73 ppm	N/A	6010/E200.7
11/06/09	Barium	264 ppm	N/A	6010/E200.7
11/06/09	Arsenic	2.01 ppm	N/A	6010/E200.7
11/06/09	Aluminum	52588 ppm	N/A	6010/E200.7
11/06/09	Silver	<0.1 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087517

Sample's Information: **Sample ID:** B-8.1

Site: B-8.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 9:40:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908530

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	1,2,4-Trichlorobenzene	<340 ppb		8270
11/06/09	1,2-Dichlorobenzene	<340 ppb		8270
11/06/09	1,3-Dichlorobenzene	<340 ppb		8270
11/06/09	1,4-Dichlorobenzene	<340 ppb		8270
11/06/09	2,4,5-Trichlorophenol	<340 ppb		8270
11/06/09	2,4,6-Trichlorophenol	<340 ppb		8270
11/06/09	2,4-Dichlorophenol	<340 ppb		8270
11/06/09	2,4-Dimethylphenol	<340 ppb		8270
11/06/09	2,4-Dinitrophenol	<340 ppb		8270
11/06/09	2,4-Dinitrotoluene	<340 ppb		8270
11/06/09	2,6-Dichlorophenol	<340 ppb		8270
11/06/09	2,6-Dinitrotoluene	<340 ppb		8270
11/06/09	2-Chloronaphthalene	<340 ppb		8270
11/06/09	2-Chlorophenol	<340 ppb		8270
11/06/09	2-Methyl-4,6-dinitrophenol	<340 ppb		8270
11/06/09	2-Methylnaphthalene	<340 ppb		8270
11/06/09	2-Methylphenol (o-Cresol)	<340 ppb		8270
11/06/09	2-Nitroaniline	<340 ppb		8270
11/06/09	2-Nitrophenol	<340 ppb		8270
11/06/09	3&4-Methylphenol (m,p-Cresol)	<340 ppb		8270
11/06/09	3,3'-Dichlorobenzidine	<340 ppb		8270
11/06/09	3-Nitroaniline	<340 ppb		8270
11/06/09	4-Bromophenyl Phenyl Ether	<340 ppb		8270
11/06/09	4-Chloro-3-Methylphenol	<340 ppb		8270
11/06/09	4-Chloroaniline	<340 ppb		8270
11/06/09	4-Chlorophenylphenyl ether	<340 ppb		8270
11/06/09	4-Nitroaniline	<340 ppb		8270
11/06/09	4-Nitrophenol	<340 ppb		8270
11/06/09	Acenaphthene	<340 ppb		8270
11/06/09	Acenaphthylene	<340 ppb		8270
11/06/09	Aniline	<340 ppb		8270

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087517

Sample's Information: **Sample ID:** B-8.1

Site: B-8.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 9:40:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908530

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Anthracene	<340 ppb		8270
11/06/09	Benzidine	<340 ppb		8270
11/06/09	Benzo(a)anthracene	1100 ppb		8270
11/06/09	Benzo(a)pyrene	890 ppb		8270
11/06/09	Benzo(b)fluoranthene	1400 ppb		8270
11/06/09	Benzo(g,h,i)perylene	380 ppb		8270
11/06/09	Benzo(k)fluoranthene	520 ppb		8270
11/06/09	Benzoic Acid	<340 ppb		8270
11/06/09	Benzyl Alcohol	<340 ppb		8270
11/06/09	Benzyl Butyl Phthalate	<340 ppb		8270
11/06/09	bis(2-Chloroethoxy)methane	<340 ppb		8270
11/06/09	bis(2-Chloroethyl) ether	<340 ppb		8270
11/06/09	bis(2-Chloroisopropyl) ether	<340 ppb		8270
11/06/09	bis(2-ethylhexyl)phthalate	<340 ppb		8270
11/06/09	Chrysene	1100 ppb		8270
11/06/09	Dibenz(a,h)anthracene	<340 ppb		8270
11/06/09	Dibenzofuran	<340 ppb		8270
11/06/09	Diethyl Phthalate	<340 ppb		8270
11/06/09	Dimethyl Phthalate	<340 ppb		8270
11/06/09	Di-n-Butyl phthalate	<340 ppb		8270
11/06/09	Di-n-octyl phthalate	<340 ppb		8270
11/06/09	Fluoranthene	2100 ppb		8270
11/06/09	Fluorene	<340 ppb		8270
11/06/09	Hexachlorobenzene	<340 ppb		8270
11/06/09	Hexachlorobutadiene	<340 ppb		8270
11/06/09	Hexachlorocyclopentadiene	<340 ppb		8270
11/06/09	Hexachloroethane	<340 ppb		8270
11/06/09	Indeno(1,2,3-cd)pyrene	<340 ppb		8270
11/06/09	Isophorone	<340 ppb		8270
11/06/09	m-Cresol	<340 ppb		8270
11/06/09	Naphthalene	<340 ppb		8270

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State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information: **JMS ID:** 087517
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

Sample's Information: **Sample ID:** B-8.1

Site: B-8.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 9:40:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908530

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Nitrobenzene	<340 ppb		8270
11/06/09	n-Nitrosodimethylamine	<340 ppb		8270
11/06/09	n-Nitrosodi-n-propylamine	<340 ppb		8270
11/06/09	n-Nitrosodiphenylamine	<340 ppb		8270
11/06/09	Pentachlorophenol	<340 ppb		8270
11/06/09	Phenanthrene	1100 ppb		8270
11/06/09	Phenol	<340 ppb		8270
11/06/09	Pyrene	2000 ppb		8270
11/04/09	1,1,1,2-Tetrachloroethane	<5.3 ppb		EPA 8260
11/04/09	1,1,1-Trichloroethane	<5.3 ppb		EPA 8260
11/04/09	1,1,2,2-Tetrachloroethane	<5.3 ppb		EPA 8260
11/04/09	1,1,2-Trichloroethane	<5.3 ppb		EPA 8260
11/04/09	1,1-Dichloroethane	<5.3 ppb		EPA 8260
11/04/09	1,1-Dichloroethene	<5.3 ppb		EPA 8260
11/04/09	1,1-Dichloropropene	<5.3 ppb		EPA 8260
11/04/09	1,2,3-Trichlorobenzene	<5.3 ppb		EPA 8260
11/04/09	1,2,3-Trichloropropane	<5.3 ppb		EPA 8260
11/04/09	1,2,4-Trichlorobenzene	<5.3 ppb		EPA 8260
11/04/09	1,2,4-Trimethylbenzene	<5.3 ppb		EPA 8260
11/04/09	1,2-Dibromo-3-Chloropropane	<5.3 ppb		EPA 8260
11/04/09	1,2-Dibromoethane	<5.3 ppb		EPA 8260
11/04/09	1,2-Dichlorobenzene	<5.3 ppb		EPA 8260
11/04/09	1,2-Dichloroethane	<5.3 ppb		EPA 8260
11/04/09	1,2-Dichloropropane	<5.3 ppb		EPA 8260
11/04/09	1,3,5-Trimethylbenzene	<5.3 ppb		EPA 8260
11/04/09	1,3-Dichlorobenzene	<5.3 ppb		EPA 8260
11/04/09	1,3-Dichloropropane	<5.3 ppb		EPA 8260
11/04/09	1,4-Dichlorobenzene	<5.3 ppb		EPA 8260
11/04/09	2,2-Dichloropropane	<5.3 ppb		EPA 8260
11/04/09	2-Butanone (MEK)	<5.3 ppb		EPA 8260

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087517

Sample's Information: **Sample ID:** B-8.1

Site: B-8.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 9:40:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908530

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	2-Chlorotoluene	<5.3 ppb		EPA 8260
11/04/09	2-Hexanone	<5.3 ppb		EPA 8260
11/04/09	4-Chlorotoluene	<5.3 ppb		EPA 8260
11/04/09	4-Methyl-2-pentanone (MIBK)	<5.3 ppb		EPA 8260
11/04/09	Acetone	<5.3 ppb		EPA 8260
11/04/09	Acrolein	<5.3 ppb		EPA 8260
11/04/09	Acrylonitrile	<5.3 ppb		EPA 8260
11/04/09	Benzene	<5.3 ppb		EPA 8260
11/04/09	Bromobenzene	<5.3 ppb		EPA 8260
11/04/09	Bromochloromethane	<5.3 ppb		EPA 8260
11/04/09	Bromodichloromethane	<5.3 ppb		EPA 8260
11/04/09	Bromoform	<5.3 ppb		EPA 8260
11/04/09	Bromomethane	<5.3 ppb		EPA 8260
11/04/09	Carbon disulfide	<5.3 ppb		EPA 8260
11/04/09	Carbon tetrachloride	<5.3 ppb		EPA 8260
11/04/09	Chlorobenzene	<5.3 ppb		EPA 8260
11/04/09	Chlorodibromomethane	<5.3 ppb		EPA 8260
11/04/09	Chloroethane	<5.3 ppb		EPA 8260
11/04/09	Chloroform	<5.3 ppb		EPA 8260
11/04/09	Chloromethane	<5.3 ppb		EPA 8260
11/04/09	cis-1,2-Dichloroethene	<5.3 ppb		EPA 8260
11/04/09	cis-1,3-Dichloropropene	<5.3 ppb		EPA 8260
11/04/09	Dibromomethane	<5.3 ppb		EPA 8260
11/04/09	Dichlorodifluoromethane	<5.3 ppb		EPA 8260
11/04/09	Ethylbenzene	<5.3 ppb		EPA 8260
11/04/09	Isopropylbenzene	<5.3 ppb		EPA 8260
11/04/09	m&p xylene	<5.3 ppb		EPA 8260
11/04/09	Methylene Chloride	<5.3 ppb		EPA 8260
11/04/09	MTBE	<5.3 ppb		EPA 8260
11/04/09	Naphthalene	<5.3 ppb		EPA 8260
11/04/09	n-Butylbenzene	<5.3 ppb		EPA 8260

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087517

Sample's Information: **Sample ID:** B-8.1

Site: B-8.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 9:40:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908530

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	n-Propylbenzene	<5.3 ppb		EPA 8260
11/04/09	o-Xylene	<5.3 ppb		EPA 8260
11/04/09	p-Isoproplytoluene	<5.3 ppb		EPA 8260
11/04/09	sec-Butylbenzene	<5.3 ppb		EPA 8260
11/04/09	Styrene	<5.3 ppb		EPA 8260
11/04/09	tert-Butylbenzene	<5.3 ppb		EPA 8260
11/04/09	Tetrachloroethene	<5.3 ppb		EPA 8260
11/04/09	Toluene	<5.3 ppb		EPA 8260
11/04/09	trans-1,2-Dichloroethene	<5.3 ppb		EPA 8260
11/04/09	trans-1,3-Dichloropropene	<5.3 ppb		EPA 8260
11/04/09	Trichloroethene	<5.3 ppb		EPA 8260
11/04/09	Trichlorofluoromethane	<5.3 ppb		EPA 8260
11/04/09	Vinyl Acetate	<5.3 ppb		EPA 8260
11/04/09	Vinyl chloride	<5.3 ppb		EPA 8260
11/07/09	PCB-1016	<51.9 ppb		SW 8082
11/07/09	PCB-1221	<51.9 ppb		SW 8082
11/07/09	PCB-1232	<51.9 ppb		SW 8082
11/07/09	PCB-1242	<51.9 ppb		SW 8082
11/07/09	PCB-1248	<51.9 ppb		SW 8082
11/07/09	PCB-1254	<51.9 ppb		SW 8082
11/07/09	PCB-1260	<51.9 ppb		SW 8082
11/07/09	PCB-1262	<51.9 ppb		SW 8082
11/07/09	PCB-1268	<51.9 ppb		SW 8082
11/07/09	4,4'-DDD	<2.07 ppb		SW8081
11/07/09	4,4'-DDE	<2.07 ppb		SW8081
11/07/09	4,4'-DDT	<2.07 ppb		SW8081
11/07/09	a-BHC	<2.07 ppb		SW8081
11/07/09	Aldrin	<2.07 ppb		SW8081
11/07/09	b-BHC	<2.07 ppb		SW8081

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087517

Sample's Information: **Sample ID:** B-8.1

Site: B-8.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 9:40:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908530

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	Chlordane	<2.07 ppb		SW8081
11/07/09	d-BHC	<2.07 ppb		SW8081
11/07/09	Dieldrin	<2.07 ppb		SW8081
11/07/09	Endosulfan I	<2.07 ppb		SW8081
11/07/09	Endosulfan II	<2.07 ppb		SW8081
11/07/09	Endosulfan Sulfate	<2.07 ppb		SW8081
11/07/09	Endrin	<2.07 ppb		SW8081
11/07/09	Endrin Aldehyde	<2.07 ppb		SW8081
11/07/09	Endrin Ketone	<2.07 ppb		SW8081
11/07/09	g-BHC	<2.07 ppb		SW8081
11/07/09	Heptachlor	<2.07 ppb		SW8081
11/07/09	Heptachlor epoxide	<2.07 ppb		SW8081
11/07/09	Methoxychlor	<2.07 ppb		SW8081
11/07/09	Mitotane	<2.07 ppb		SW8081
11/07/09	Toxaphene	<100 ppb		SW8081
11/06/09	Zinc	27.6 ppm	N/A	6010/E200.7
11/06/09	Vanadium	12.2 ppm	N/A	6010/E200.7
11/06/09	Thallium	0.151 ppm	N/A	6010/E200.7
11/06/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/06/09	Antimony	1.72 ppm	N/A	6010/E200.7
11/06/09	Lead	16.8 ppm	N/A	6010/E200.7
11/06/09	Nickel	7.54 ppm	N/A	6010/E200.7
11/06/09	Sodium	104 ppm	N/A	6010/E200.7
11/06/09	Manganese	146 ppm	N/A	6010/E200.7
11/06/09	Magnesium	1743 ppm	N/A	6010/E200.7
11/06/09	Potassium	602 ppm	N/A	6010/E200.7
11/05/09	Mercury	0.101 ppm	N/A	SW-7471
11/06/09	Iron	7800 ppm	N/A	6010/E200.7
11/06/09	Copper	9.7 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent	11.1 ppm	N/A	6010/E200.7

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087517

Sample's Information:
Sample ID: B-8.1

Site: B-8.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 9:40:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908530

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chromium	11.1 ppm	N/A	6010/E200.7
11/06/09	Cobalt	3.05 ppm	N/A	6010/E200.7
11/06/09	Cadmium	1.41 ppm	N/A	6010/E200.7
11/06/09	Calcium	1410 ppm	N/A	6010/E200.7
11/06/09	Beryllium	0.206 ppm	N/A	6010/E200.7
11/06/09	Barium	28.2 ppm	N/A	6010/E200.7
11/06/09	Arsenic	0.744 ppm	N/A	6010/E200.7
11/06/09	Aluminum	4564 ppm	N/A	6010/E200.7
11/06/09	Silver	<0.1 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue
Danbury, Connecticut 06810 | Telephone 203-798-2229

Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087518

Sample's Information: **Sample ID:** B-8.2

Site: B-8.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 10:05:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908531

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	1,2,4-Trichlorobenzene	<360 ppb		8270
11/06/09	1,2-Dichlorobenzene	<360 ppb		8270
11/06/09	1,3-Dichlorobenzene	<360 ppb		8270
11/06/09	1,4-Dichlorobenzene	<360 ppb		8270
11/06/09	2,4,5-Trichlorophenol	<360 ppb		8270
11/06/09	2,4,6-Trichlorophenol	<360 ppb		8270
11/06/09	2,4-Dichlorophenol	<360 ppb		8270
11/06/09	2,4-Dimethylphenol	<360 ppb		8270
11/06/09	2,4-Dinitrophenol	<360 ppb		8270
11/06/09	2,4-Dinitrotoluene	<360 ppb		8270
11/06/09	2,6-Dichlorophenol	<360 ppb		8270
11/06/09	2,6-Dinitrotoluene	<360 ppb		8270
11/06/09	2-Chloronaphthalene	<360 ppb		8270
11/06/09	2-Chlorophenol	<360 ppb		8270
11/06/09	2-Methyl-4,6-dinitrophenol	<360 ppb		8270
11/06/09	2-Methylnaphthalene	<360 ppb		8270
11/06/09	2-Methylphenol (o-Cresol)	<360 ppb		8270
11/06/09	2-Nitroaniline	<360 ppb		8270
11/06/09	2-Nitrophenol	<360 ppb		8270
11/06/09	3&4-Methylphenol (m,p-Cresol)	<360 ppb		8270
11/06/09	3,3'-Dichlorobenzidine	<360 ppb		8270
11/06/09	3-Nitroaniline	<360 ppb		8270
11/06/09	4-Bromophenyl Phenyl Ether	<360 ppb		8270
11/06/09	4-Chloro-3-Methylphenol	<360 ppb		8270
11/06/09	4-Chloroaniline	<360 ppb		8270
11/06/09	4-Chlorophenylphenyl ether	<360 ppb		8270
11/06/09	4-Nitroaniline	<360 ppb		8270
11/06/09	4-Nitrophenol	<360 ppb		8270
11/06/09	Acenaphthene	<360 ppb		8270
11/06/09	Acenaphthylene	<360 ppb		8270
11/06/09	Aniline	<360 ppb		8270

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087518

Sample's Information: **Sample ID:** B-8.2

Site: B-8.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 10:05:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908531

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Anthracene	<360 ppb		8270
11/06/09	Benzidine	<360 ppb		8270
11/06/09	Benzo(a)anthracene	<360 ppb		8270
11/06/09	Benzo(a)pyrene	<360 ppb		8270
11/06/09	Benzo(b)fluoranthene	<360 ppb		8270
11/06/09	Benzo(g,h,i)perylene	<360 ppb		8270
11/06/09	Benzo(k)fluoranthene	<360 ppb		8270
11/06/09	Benzoic Acid	<360 ppb		8270
11/06/09	Benzyl Alcohol	<360 ppb		8270
11/06/09	Benzyl Butyl Phthalate	<360 ppb		8270
11/06/09	bis(2-Chloroethoxy)methane	<360 ppb		8270
11/06/09	bis(2-Chloroethyl) ether	<360 ppb		8270
11/06/09	bis(2-Chloroisopropyl) ether	<360 ppb		8270
11/06/09	bis(2-ethylhexyl)phthalate	<360 ppb		8270
11/06/09	Chrysene	<360 ppb		8270
11/06/09	Dibenz(a,h)anthracene	<360 ppb		8270
11/06/09	Dibenzofuran	<360 ppb		8270
11/06/09	Diethyl Phthalate	<360 ppb		8270
11/06/09	Dimethyl Phthalate	<360 ppb		8270
11/06/09	Di-n-Butyl phthalate	<360 ppb		8270
11/06/09	Di-n-octyl phthalate	<360 ppb		8270
11/06/09	Fluoranthene	<360 ppb		8270
11/06/09	Fluorene	<360 ppb		8270
11/06/09	Hexachlorobenzene	<360 ppb		8270
11/06/09	Hexachlorobutadiene	<360 ppb		8270
11/06/09	Hexachlorocyclopentadiene	<360 ppb		8270
11/06/09	Hexachloroethane	<360 ppb		8270
11/06/09	Indeno(1,2,3-cd)pyrene	<360 ppb		8270
11/06/09	Isophorone	<360 ppb		8270
11/06/09	m-Cresol	<360 ppb		8270
11/06/09	Naphthalene	<360 ppb		8270

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City: Woodmere
State: NY **Zip:** 11598
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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087518

Sample's Information: **Sample ID:** B-8.2

Site: B-8.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 10:05:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908531

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Nitrobenzene	<360 ppb		8270
11/06/09	n-Nitrosodimethylamine	<360 ppb		8270
11/06/09	n-Nitrosodi-n-propylamine	<360 ppb		8270
11/06/09	n-Nitrosodiphenylamine	<360 ppb		8270
11/06/09	Pentachlorophenol	<360 ppb		8270
11/06/09	Phenanthrene	<360 ppb		8270
11/06/09	Phenol	<360 ppb		8270
11/06/09	Pyrene	<360 ppb		8270
11/04/09	1,1,1,2-Tetrachloroethane	<5.1 ppb		EPA 8260
11/04/09	1,1,1-Trichloroethane	<5.1 ppb		EPA 8260
11/04/09	1,1,2,2-Tetrachloroethane	<5.1 ppb		EPA 8260
11/04/09	1,1,2-Trichloroethane	<5.1 ppb		EPA 8260
11/04/09	1,1-Dichloroethane	<5.1 ppb		EPA 8260
11/04/09	1,1-Dichloroethene	<5.1 ppb		EPA 8260
11/04/09	1,1-Dichloropropene	<5.1 ppb		EPA 8260
11/04/09	1,2,3-Trichlorobenzene	<5.1 ppb		EPA 8260
11/04/09	1,2,3-Trichloropropane	<5.1 ppb		EPA 8260
11/04/09	1,2,4-Trichlorobenzene	<5.1 ppb		EPA 8260
11/04/09	1,2,4-Trimethylbenzene	<5.1 ppb		EPA 8260
11/04/09	1,2-Dibromo-3-Chloropropane	<5.1 ppb		EPA 8260
11/04/09	1,2-Dibromoethane	<5.1 ppb		EPA 8260
11/04/09	1,2-Dichlorobenzene	<5.1 ppb		EPA 8260
11/04/09	1,2-Dichloroethane	<5.1 ppb		EPA 8260
11/04/09	1,2-Dichloropropane	<5.1 ppb		EPA 8260
11/04/09	1,3,5-Trimethylbenzene	<5.1 ppb		EPA 8260
11/04/09	1,3-Dichlorobenzene	<5.1 ppb		EPA 8260
11/04/09	1,3-Dichloropropane	<5.1 ppb		EPA 8260
11/04/09	1,4-Dichlorobenzene	<5.1 ppb		EPA 8260
11/04/09	2,2-Dichloropropane	<5.1 ppb		EPA 8260
11/04/09	2-Butanone (MEK)	<5.1 ppb		EPA 8260

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Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087518

Sample's Information: **Sample ID:** B-8.2

Site: B-8.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 10:05:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908531

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	2-Chlorotoluene	<5.1 ppb		EPA 8260
11/04/09	2-Hexanone	<5.1 ppb		EPA 8260
11/04/09	4-Chlorotoluene	<5.1 ppb		EPA 8260
11/04/09	4-Methyl-2-pentanone (MIBK)	<5.1 ppb		EPA 8260
11/04/09	Acetone	<5.1 ppb		EPA 8260
11/04/09	Acrolein	<5.1 ppb		EPA 8260
11/04/09	Acrylonitrile	<5.1 ppb		EPA 8260
11/04/09	Benzene	<5.1 ppb		EPA 8260
11/04/09	Bromobenzene	<5.1 ppb		EPA 8260
11/04/09	Bromochloromethane	<5.1 ppb		EPA 8260
11/04/09	Bromodichloromethane	<5.1 ppb		EPA 8260
11/04/09	Bromoform	<5.1 ppb		EPA 8260
11/04/09	Bromomethane	<5.1 ppb		EPA 8260
11/04/09	Carbon disulfide	<5.1 ppb		EPA 8260
11/04/09	Carbon tetrachloride	<5.1 ppb		EPA 8260
11/04/09	Chlorobenzene	<5.1 ppb		EPA 8260
11/04/09	Chlorodibromomethane	<5.1 ppb		EPA 8260
11/04/09	Chloroethane	<5.1 ppb		EPA 8260
11/04/09	Chloroform	<5.1 ppb		EPA 8260
11/04/09	Chloromethane	<5.1 ppb		EPA 8260
11/04/09	cis-1,2-Dichloroethene	<5.1 ppb		EPA 8260
11/04/09	cis-1,3-Dichloropropene	<5.1 ppb		EPA 8260
11/04/09	Dibromomethane	<5.1 ppb		EPA 8260
11/04/09	Dichlorodifluoromethane	<5.1 ppb		EPA 8260
11/04/09	Ethylbenzene	<5.1 ppb		EPA 8260
11/04/09	Isopropylbenzene	<5.1 ppb		EPA 8260
11/04/09	m&p xylene	<5.1 ppb		EPA 8260
11/04/09	Methylene Chloride	<5.1 ppb		EPA 8260
11/04/09	MTBE	<5.1 ppb		EPA 8260
11/04/09	Naphthalene	<5.1 ppb		EPA 8260
11/04/09	n-Butylbenzene	<5.1 ppb		EPA 8260

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State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087518

Sample's Information: **Sample ID:** B-8.2

Site: B-8.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 10:05:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908531

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	n-Propylbenzene	<5.1 ppb		EPA 8260
11/04/09	o-Xylene	<5.1 ppb		EPA 8260
11/04/09	p-Isoproplytoluene	<5.1 ppb		EPA 8260
11/04/09	sec-Butylbenzene	<5.1 ppb		EPA 8260
11/04/09	Styrene	<5.1 ppb		EPA 8260
11/04/09	tert-Butylbenzene	<5.1 ppb		EPA 8260
11/04/09	Tetrachloroethene	<5.1 ppb		EPA 8260
11/04/09	Toluene	<5.1 ppb		EPA 8260
11/04/09	trans-1,2-Dichloroethene	<5.1 ppb		EPA 8260
11/04/09	trans-1,3-Dichloropropene	<5.1 ppb		EPA 8260
11/04/09	Trichloroethene	<5.1 ppb		EPA 8260
11/04/09	Trichlorofluoromethane	<5.1 ppb		EPA 8260
11/04/09	Vinyl Acetate	<5.1 ppb		EPA 8260
11/04/09	Vinyl chloride	<5.1 ppb		EPA 8260
11/07/09	PCB-1016	<53.4 ppb		SW 8082
11/07/09	PCB-1221	<53.4 ppb		SW 8082
11/07/09	PCB-1232	<53.4 ppb		SW 8082
11/07/09	PCB-1242	<53.4 ppb		SW 8082
11/07/09	PCB-1248	<53.4 ppb		SW 8082
11/07/09	PCB-1254	<53.4 ppb		SW 8082
11/07/09	PCB-1260	<53.4 ppb		SW 8082
11/07/09	PCB-1262	<53.4 ppb		SW 8082
11/07/09	PCB-1268	<53.4 ppb		SW 8082
11/07/09	4,4'-DDD	<2.14 ppb		SW8081
11/07/09	4,4'-DDE	<2.14 ppb		SW8081
11/07/09	4,4'-DDT	<2.14 ppb		SW8081
11/07/09	a-BHC	<2.14 ppb		SW8081
11/07/09	Aldrin	<2.14 ppb		SW8081
11/07/09	b-BHC	<2.14 ppb		SW8081

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City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087518

Sample's Information: **Sample ID:** B-8.2

Site: B-8.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 10:05:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908531

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	Chlordane	<2.14 ppb		SW8081
11/07/09	d-BHC	<2.14 ppb		SW8081
11/07/09	Dieldrin	<2.14 ppb		SW8081
11/07/09	Endosulfan I	<2.14 ppb		SW8081
11/07/09	Endosulfan II	<2.14 ppb		SW8081
11/07/09	Endosulfan Sulfate	<2.14 ppb		SW8081
11/07/09	Endrin	<2.14 ppb		SW8081
11/07/09	Endrin Aldehyde	<2.14 ppb		SW8081
11/07/09	Endrin Ketone	<2.14 ppb		SW8081
11/07/09	g-BHC	<2.14 ppb		SW8081
11/07/09	Heptachlor	<2.14 ppb		SW8081
11/07/09	Heptachlor epoxide	<2.14 ppb		SW8081
11/07/09	Methoxychlor	<2.14 ppb		SW8081
11/07/09	Mitotane	<2.14 ppb		SW8081
11/07/09	Toxaphene	<100 ppb		SW8081
11/06/09	Zinc	23.9 ppm	N/A	6010/E200.7
11/06/09	Vanadium	17.4 ppm	N/A	6010/E200.7
11/06/09	Thallium	<0.1 ppm	N/A	6010/E200.7
11/06/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/06/09	Antimony	0.614 ppm	N/A	6010/E200.7
11/06/09	Lead	4.73 ppm	N/A	6010/E200.7
11/06/09	Nickel	10.9 ppm	N/A	6010/E200.7
11/06/09	Sodium	172 ppm	N/A	6010/E200.7
11/06/09	Manganese	327 ppm	N/A	6010/E200.7
11/06/09	Magnesium	2930 ppm	N/A	6010/E200.7
11/06/09	Potassium	1066 ppm	N/A	6010/E200.7
11/05/09	Mercury	0.103 ppm	N/A	SW-7471
11/06/09	Iron	10735 ppm	N/A	6010/E200.7
11/06/09	Copper	10.5 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent	16.1 ppm	N/A	6010/E200.7

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State: NY **Zip:** 11598
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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087518

Sample's Information: **Sample ID:** B-8.2

Site: B-8.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 10:05:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908531

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chromium	16.1 ppm	N/A	6010/E200.7
11/06/09	Cobalt	5.13 ppm	N/A	6010/E200.7
11/06/09	Cadmium	1.69 ppm	N/A	6010/E200.7
11/06/09	Calcium	2121 ppm	N/A	6010/E200.7
11/06/09	Beryllium	0.319 ppm	N/A	6010/E200.7
11/06/09	Barium	28.6 ppm	N/A	6010/E200.7
11/06/09	Arsenic	<0.1 ppm	N/A	6010/E200.7
11/06/09	Aluminum	6097 ppm	N/A	6010/E200.7
11/06/09	Silver	<0.1 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087519

Sample's Information: **Sample ID:** B-2.1

Site: B-2.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 11:24:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908514

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	1,2,4-Trichlorobenzene	<350 ppb		8270
11/06/09	1,2-Dichlorobenzene	<350 ppb		8270
11/06/09	1,3-Dichlorobenzene	<350 ppb		8270
11/06/09	1,4-Dichlorobenzene	<350 ppb		8270
11/06/09	2,4,5-Trichlorophenol	<350 ppb		8270
11/06/09	2,4,6-Trichlorophenol	<350 ppb		8270
11/06/09	2,4-Dichlorophenol	<350 ppb		8270
11/06/09	2,4-Dimethylphenol	<350 ppb		8270
11/06/09	2,4-Dinitrophenol	<350 ppb		8270
11/06/09	2,4-Dinitrotoluene	<350 ppb		8270
11/06/09	2,6-Dichlorophenol	<350 ppb		8270
11/06/09	2,6-Dinitrotoluene	<350 ppb		8270
11/06/09	2-Chloronaphthalene	<350 ppb		8270
11/06/09	2-Chlorophenol	<350 ppb		8270
11/06/09	2-Methyl-4,6-dinitrophenol	<350 ppb		8270
11/06/09	2-Methylnaphthalene	<350 ppb		8270
11/06/09	2-Methylphenol (o-Cresol)	<350 ppb		8270
11/06/09	2-Nitroaniline	<350 ppb		8270
11/06/09	2-Nitrophenol	<350 ppb		8270
11/06/09	3&4-Methylphenol (m,p-Cresol)	<350 ppb		8270
11/06/09	3,3'-Dichlorobenzidine	<350 ppb		8270
11/06/09	3-Nitroaniline	<350 ppb		8270
11/06/09	4-Bromophenyl Phenyl Ether	<350 ppb		8270
11/06/09	4-Chloro-3-Methylphenol	<350 ppb		8270
11/06/09	4-Chloroaniline	<350 ppb		8270
11/06/09	4-Chlorophenylphenyl ether	<350 ppb		8270
11/06/09	4-Nitroaniline	<350 ppb		8270
11/06/09	4-Nitrophenol	<350 ppb		8270
11/06/09	Acenaphthene	610 ppb		8270
11/06/09	Acenaphthylene	<350 ppb		8270
11/06/09	Aniline	<350 ppb		8270

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue
Danbury, Connecticut 06810 | Telephone 203-798-2229

Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087519

Sample's Information: **Sample ID:** B-2.1

Site: B-2.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 11:24:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908514

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Anthracene	1100 ppb		8270
11/06/09	Benzidine	<350 ppb		8270
11/06/09	Benzo(a)anthracene	2800 ppb		8270
11/06/09	Benzo(a)pyrene	2300 ppb		8270
11/06/09	Benzo(b)fluoranthene	4200 ppb		8270
11/06/09	Benzo(g,h,i)perylene	780 ppb		8270
11/06/09	Benzo(k)fluoranthene	1400 ppb		8270
11/06/09	Benzoic Acid	<350 ppb		8270
11/06/09	Benzyl Alcohol	<350 ppb		8270
11/06/09	Benzyl Butyl Phthalate	<350 ppb		8270
11/06/09	bis(2-Chloroethoxy)methane	<350 ppb		8270
11/06/09	bis(2-Chloroethyl) ether	<350 ppb		8270
11/06/09	bis(2-Chloroisopropyl) ether	<350 ppb		8270
11/06/09	bis(2-ethylhexyl)phthalate	<350 ppb		8270
11/06/09	Chrysene	3100 ppb		8270
11/06/09	Dibenz(a,h)anthracene	<350 ppb		8270
11/06/09	Dibenzofuran	540 ppb		8270
11/06/09	Diethyl Phthalate	<350 ppb		8270
11/06/09	Dimethyl Phthalate	<350 ppb		8270
11/06/09	Di-n-Butyl phthalate	<350 ppb		8270
11/06/09	Di-n-octyl phthalate	<350 ppb		8270
11/06/09	Fluoranthene	6400 ppb		8270
11/06/09	Fluorene	690 ppb		8270
11/06/09	Hexachlorobenzene	<350 ppb		8270
11/06/09	Hexachlorobutadiene	<350 ppb		8270
11/06/09	Hexachlorocyclopentadiene	<350 ppb		8270
11/06/09	Hexachloroethane	<350 ppb		8270
11/06/09	Indeno(1,2,3-cd)pyrene	<350 ppb		8270
11/06/09	Isophorone	<350 ppb		8270
11/06/09	m-Cresol	<350 ppb		8270
11/06/09	Naphthalene	<350 ppb		8270

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Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information: **JMS ID:** 087519
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

Sample's Information: **Sample ID:** B-2.1

Site: B-2.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 11:24:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908514

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Nitrobenzene	<350 ppb		8270
11/06/09	n-Nitrosodimethylamine	<350 ppb		8270
11/06/09	n-Nitrosodi-n-propylamine	<350 ppb		8270
11/06/09	n-Nitrosodiphenylamine	<350 ppb		8270
11/06/09	Pentachlorophenol	<350 ppb		8270
11/06/09	Phenanthrene	6500 ppb		8270
11/06/09	Phenol	<350 ppb		8270
11/06/09	Pyrene	6900 ppb		8270
11/03/09	1,1,1,2-Tetrachloroethane	<5.3 ppb		EPA 8260
11/03/09	1,1,1-Trichloroethane	<5.3 ppb		EPA 8260
11/03/09	1,1,2,2-Tetrachloroethane	<5.3 ppb		EPA 8260
11/03/09	1,1,2-Trichloroethane	<5.3 ppb		EPA 8260
11/03/09	1,1-Dichloroethane	<5.3 ppb		EPA 8260
11/03/09	1,1-Dichloroethene	<5.3 ppb		EPA 8260
11/03/09	1,1-Dichloropropene	<5.3 ppb		EPA 8260
11/03/09	1,2,3-Trichlorobenzene	<5.3 ppb		EPA 8260
11/03/09	1,2,3-Trichloropropane	<5.3 ppb		EPA 8260
11/03/09	1,2,4-Trichlorobenzene	<5.3 ppb		EPA 8260
11/03/09	1,2,4-Trimethylbenzene	45 ppb		EPA 8260
11/03/09	1,2-Dibromo-3-Chloropropane	<5.3 ppb		EPA 8260
11/03/09	1,2-Dibromoethane	<5.3 ppb		EPA 8260
11/03/09	1,2-Dichlorobenzene	<5.3 ppb		EPA 8260
11/03/09	1,2-Dichloroethane	<5.3 ppb		EPA 8260
11/03/09	1,2-Dichloropropane	<5.3 ppb		EPA 8260
11/03/09	1,3,5-Trimethylbenzene	11 ppb		EPA 8260
11/03/09	1,3-Dichlorobenzene	<5.3 ppb		EPA 8260
11/03/09	1,3-Dichloropropane	<5.3 ppb		EPA 8260
11/03/09	1,4-Dichlorobenzene	<5.3 ppb		EPA 8260
11/03/09	2,2-Dichloropropane	<5.3 ppb		EPA 8260
11/03/09	2-Butanone (MEK)	<5.3 ppb		EPA 8260

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087519

Sample's Information: **Sample ID:** B-2.1

Site: B-2.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 11:24:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908514

Date Analyzed	Test Name	Result	MCL	Method
11/03/09	2-Chlorotoluene	<5.3 ppb		EPA 8260
11/03/09	2-Hexanone	<5.3 ppb		EPA 8260
11/03/09	4-Chlorotoluene	<5.3 ppb		EPA 8260
11/03/09	4-Methyl-2-pentanone (MIBK)	<5.3 ppb		EPA 8260
11/03/09	Acetone	<5.3 ppb		EPA 8260
11/03/09	Acrolein	<5.3 ppb		EPA 8260
11/03/09	Acrylonitrile	<5.3 ppb		EPA 8260
11/03/09	Benzene	<5.3 ppb		EPA 8260
11/03/09	Bromobenzene	<5.3 ppb		EPA 8260
11/03/09	Bromochloromethane	<5.3 ppb		EPA 8260
11/03/09	Bromodichloromethane	<5.3 ppb		EPA 8260
11/03/09	Bromoform	<5.3 ppb		EPA 8260
11/03/09	Bromomethane	<5.3 ppb		EPA 8260
11/03/09	Carbon disulfide	<5.3 ppb		EPA 8260
11/03/09	Carbon tetrachloride	<5.3 ppb		EPA 8260
11/03/09	Chlorobenzene	<5.3 ppb		EPA 8260
11/03/09	Chlorodibromomethane	<5.3 ppb		EPA 8260
11/03/09	Chloroethane	<5.3 ppb		EPA 8260
11/03/09	Chloroform	<5.3 ppb		EPA 8260
11/03/09	Chloromethane	<5.3 ppb		EPA 8260
11/03/09	cis-1,2-Dichloroethene	<5.3 ppb		EPA 8260
11/03/09	cis-1,3-Dichloropropene	<5.3 ppb		EPA 8260
11/03/09	Dibromomethane	<5.3 ppb		EPA 8260
11/03/09	Dichlorodifluoromethane	<5.3 ppb		EPA 8260
11/03/09	Ethylbenzene	6.3 ppb		EPA 8260
11/03/09	Isopropylbenzene	<5.3 ppb		EPA 8260
11/03/09	m&p xylene	24 ppb		EPA 8260
11/03/09	Methylene Chloride	<5.3 ppb		EPA 8260
11/03/09	MTBE	<5.3 ppb		EPA 8260
11/03/09	Naphthalene	33 ppb		EPA 8260
11/03/09	n-Butylbenzene	5.7 ppb		EPA 8260

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Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087519

Sample's Information: **Sample ID:** B-2.1

Site: B-2.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 11:24:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908514

Date Analyzed	Test Name	Result	MCL	Method
11/03/09	n-Propylbenzene	<5.3 ppb		EPA 8260
11/03/09	o-Xylene	7.9 ppb		EPA 8260
11/03/09	p-Isoproplytoluene	<5.3 ppb		EPA 8260
11/03/09	sec-Butylbenzene	<5.3 ppb		EPA 8260
11/03/09	Styrene	<5.3 ppb		EPA 8260
11/03/09	tert-Butylbenzene	<5.3 ppb		EPA 8260
11/03/09	Tetrachloroethene	<5.3 ppb		EPA 8260
11/03/09	Toluene	<5.3 ppb		EPA 8260
11/03/09	trans-1,2-Dichloroethene	<5.3 ppb		EPA 8260
11/03/09	trans-1,3-Dichloropropene	<5.3 ppb		EPA 8260
11/03/09	Trichloroethene	<5.3 ppb		EPA 8260
11/03/09	Trichlorofluoromethane	<5.3 ppb		EPA 8260
11/03/09	Vinyl Acetate	<5.3 ppb		EPA 8260
11/03/09	Vinyl chloride	<5.3 ppb		EPA 8260
11/06/09	PCB-1016	<53.1 ppb		SW 8082
11/06/09	PCB-1221	<53.1 ppb		SW 8082
11/06/09	PCB-1232	<53.1 ppb		SW 8082
11/06/09	PCB-1242	<53.1 ppb		SW 8082
11/06/09	PCB-1248	<53.1 ppb		SW 8082
11/06/09	PCB-1254	<53.1 ppb		SW 8082
11/06/09	PCB-1260	<53.1 ppb		SW 8082
11/06/09	PCB-1262	<53.1 ppb		SW 8082
11/06/09	PCB-1268	<53.1 ppb		SW 8082
11/06/09	4,4'-DDD	<2.12 ppb		SW8081
11/06/09	4,4'-DDE	<2.12 ppb		SW8081
11/06/09	4,4'-DDT	<2.12 ppb		SW8081
11/06/09	a-BHC	<2.12 ppb		SW8081
11/06/09	Aldrin	<2.12 ppb		SW8081
11/06/09	b-BHC	<2.12 ppb		SW8081

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Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087519

Sample's Information: **Sample ID:** B-2.1

Site: B-2.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 11:24:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908514

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chlordane	<2.12 ppb		SW8081
11/06/09	d-BHC	<2.12 ppb		SW8081
11/06/09	Dieldrin	<2.12 ppb		SW8081
11/06/09	Endosulfan I	<2.12 ppb		SW8081
11/06/09	Endosulfan II	<2.12 ppb		SW8081
11/06/09	Endosulfan Sulfate	<2.12 ppb		SW8081
11/06/09	Endrin	<2.12 ppb		SW8081
11/06/09	Endrin Aldehyde	<2.12 ppb		SW8081
11/06/09	Endrin Ketone	<2.12 ppb		SW8081
11/06/09	g-BHC	<2.12 ppb		SW8081
11/06/09	Heptachlor	<2.12 ppb		SW8081
11/06/09	Heptachlor epoxide	<2.12 ppb		SW8081
11/06/09	Methoxychlor	<2.12 ppb		SW8081
11/06/09	Mitotane	<2.12 ppb		SW8081
11/06/09	Toxaphene	<100 ppb		SW8081
11/06/09	Zinc	95.7 ppm	N/A	6010/E200.7
11/06/09	Vanadium	18 ppm	N/A	6010/E200.7
11/06/09	Thallium	0.393 ppm	N/A	6010/E200.7
11/06/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/06/09	Antimony	0.745 ppm	N/A	6010/E200.7
11/06/09	Lead	65.3 ppm	N/A	6010/E200.7
11/06/09	Nickel	11.3 ppm	N/A	6010/E200.7
11/06/09	Sodium	144 ppm	N/A	6010/E200.7
11/06/09	Manganese	1533 ppm	N/A	6010/E200.7
11/06/09	Magnesium	2582 ppm	N/A	6010/E200.7
11/06/09	Potassium	866 ppm	N/A	6010/E200.7
11/05/09	Mercury	0.178 ppm	N/A	SW-7471
11/06/09	Iron	11725 ppm	N/A	6010/E200.7
11/06/09	Copper	27.4 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent	16.3 ppm	N/A	6010/E200.7

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Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087519

Sample's Information:
Sample ID: B-2.1

Site: B-2.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 11:24:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908514

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chromium	16.3 ppm	N/A	6010/E200.7
11/06/09	Cobalt	5.45 ppm	N/A	6010/E200.7
11/06/09	Cadmium	2.23 ppm	N/A	6010/E200.7
11/06/09	Calcium	2246 ppm	N/A	6010/E200.7
11/06/09	Beryllium	0.301 ppm	N/A	6010/E200.7
11/06/09	Barium	123 ppm	N/A	6010/E200.7
11/06/09	Arsenic	2.1 ppm	N/A	6010/E200.7
11/06/09	Aluminum	6093 ppm	N/A	6010/E200.7
11/06/09	Silver	<0.1 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

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State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087520

Sample's Information: **Sample ID:** B-2.2

Site: B-2.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 11:41:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908515

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	1,2,4-Trichlorobenzene	<340 ppb		8270
11/06/09	1,2-Dichlorobenzene	<340 ppb		8270
11/06/09	1,3-Dichlorobenzene	<340 ppb		8270
11/06/09	1,4-Dichlorobenzene	<340 ppb		8270
11/06/09	2,4,5-Trichlorophenol	<340 ppb		8270
11/06/09	2,4,6-Trichlorophenol	<340 ppb		8270
11/06/09	2,4-Dichlorophenol	<340 ppb		8270
11/06/09	2,4-Dimethylphenol	<340 ppb		8270
11/06/09	2,4-Dinitrophenol	<340 ppb		8270
11/06/09	2,4-Dinitrotoluene	<340 ppb		8270
11/06/09	2,6-Dichlorophenol	<340 ppb		8270
11/06/09	2,6-Dinitrotoluene	<340 ppb		8270
11/06/09	2-Chloronaphthalene	<340 ppb		8270
11/06/09	2-Chlorophenol	<340 ppb		8270
11/06/09	2-Methyl-4,6-dinitrophenol	<340 ppb		8270
11/06/09	2-Methylnaphthalene	<340 ppb		8270
11/06/09	2-Methylphenol (o-Cresol)	<340 ppb		8270
11/06/09	2-Nitroaniline	<340 ppb		8270
11/06/09	2-Nitrophenol	<340 ppb		8270
11/06/09	3&4-Methylphenol (m,p-Cresol)	<340 ppb		8270
11/06/09	3,3'-Dichlorobenzidine	<340 ppb		8270
11/06/09	3-Nitroaniline	<340 ppb		8270
11/06/09	4-Bromophenyl Phenyl Ether	<340 ppb		8270
11/06/09	4-Chloro-3-Methylphenol	<340 ppb		8270
11/06/09	4-Chloroaniline	<340 ppb		8270
11/06/09	4-Chlorophenylphenyl ether	<340 ppb		8270
11/06/09	4-Nitroaniline	<340 ppb		8270
11/06/09	4-Nitrophenol	<340 ppb		8270
11/06/09	Acenaphthene	<340 ppb		8270
11/06/09	Acenaphthylene	<340 ppb		8270
11/06/09	Aniline	<340 ppb		8270

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087520

Sample's Information: **Sample ID:** B-2.2

Site: B-2.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 11:41:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908515

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Anthracene	<340 ppb		8270
11/06/09	Benzidine	<340 ppb		8270
11/06/09	Benzo(a)anthracene	<340 ppb		8270
11/06/09	Benzo(a)pyrene	<340 ppb		8270
11/06/09	Benzo(b)fluoranthene	<340 ppb		8270
11/06/09	Benzo(g,h,i)perylene	<340 ppb		8270
11/06/09	Benzo(k)fluoranthene	<340 ppb		8270
11/06/09	Benzoic Acid	<340 ppb		8270
11/06/09	Benzyl Alcohol	<340 ppb		8270
11/06/09	Benzyl Butyl Phthalate	<340 ppb		8270
11/06/09	bis(2-Chloroethoxy)methane	<340 ppb		8270
11/06/09	bis(2-Chloroethyl) ether	<340 ppb		8270
11/06/09	bis(2-Chloroisopropyl) ether	<340 ppb		8270
11/06/09	bis(2-ethylhexyl)phthalate	<340 ppb		8270
11/06/09	Chrysene	<340 ppb		8270
11/06/09	Dibenz(a,h)anthracene	<340 ppb		8270
11/06/09	Dibenzofuran	<340 ppb		8270
11/06/09	Diethyl Phthalate	<340 ppb		8270
11/06/09	Dimethyl Phthalate	<340 ppb		8270
11/06/09	Di-n-Butyl phthalate	<340 ppb		8270
11/06/09	Di-n-octyl phthalate	<340 ppb		8270
11/06/09	Fluoranthene	<340 ppb		8270
11/06/09	Fluorene	<340 ppb		8270
11/06/09	Hexachlorobenzene	<340 ppb		8270
11/06/09	Hexachlorobutadiene	<340 ppb		8270
11/06/09	Hexachlorocyclopentadiene	<340 ppb		8270
11/06/09	Hexachloroethane	<340 ppb		8270
11/06/09	Indeno(1,2,3-cd)pyrene	<340 ppb		8270
11/06/09	Isophorone	<340 ppb		8270
11/06/09	m-Cresol	<340 ppb		8270
11/06/09	Naphthalene	<340 ppb		8270

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue
Danbury, Connecticut 06810 | Telephone 203-798-2229

Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information: **JMS ID:** 087520
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

Sample's Information: **Sample ID:** B-2.2

Site: B-2.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 11:41:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908515

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Nitrobenzene	<340 ppb		8270
11/06/09	n-Nitrosodimethylamine	<340 ppb		8270
11/06/09	n-Nitrosodi-n-propylamine	<340 ppb		8270
11/06/09	n-Nitrosodiphenylamine	<340 ppb		8270
11/06/09	Pentachlorophenol	<340 ppb		8270
11/06/09	Phenanthrene	<340 ppb		8270
11/06/09	Phenol	<340 ppb		8270
11/06/09	Pyrene	<340 ppb		8270
11/03/09	1,1,1,2-Tetrachloroethane	<6.4 ppb		EPA 8260
11/03/09	1,1,1-Trichloroethane	<6.4 ppb		EPA 8260
11/03/09	1,1,2,2-Tetrachloroethane	<6.4 ppb		EPA 8260
11/03/09	1,1,2-Trichloroethane	<6.4 ppb		EPA 8260
11/03/09	1,1-Dichloroethane	<6.4 ppb		EPA 8260
11/03/09	1,1-Dichloroethene	<6.4 ppb		EPA 8260
11/03/09	1,1-Dichloropropene	<6.4 ppb		EPA 8260
11/03/09	1,2,3-Trichlorobenzene	<6.4 ppb		EPA 8260
11/03/09	1,2,3-Trichloropropane	<6.4 ppb		EPA 8260
11/03/09	1,2,4-Trichlorobenzene	<6.4 ppb		EPA 8260
11/03/09	1,2,4-Trimethylbenzene	11 ppb		EPA 8260
11/03/09	1,2-Dibromo-3-Chloropropane	<6.4 ppb		EPA 8260
11/03/09	1,2-Dibromoethane	<6.4 ppb		EPA 8260
11/03/09	1,2-Dichlorobenzene	<6.4 ppb		EPA 8260
11/03/09	1,2-Dichloroethane	<6.4 ppb		EPA 8260
11/03/09	1,2-Dichloropropane	<6.4 ppb		EPA 8260
11/03/09	1,3,5-Trimethylbenzene	<6.4 ppb		EPA 8260
11/03/09	1,3-Dichlorobenzene	<6.4 ppb		EPA 8260
11/03/09	1,3-Dichloropropane	<6.4 ppb		EPA 8260
11/03/09	1,4-Dichlorobenzene	<6.4 ppb		EPA 8260
11/03/09	2,2-Dichloropropane	<6.4 ppb		EPA 8260
11/03/09	2-Butanone (MEK)	<6.4 ppb		EPA 8260

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JMS ID: 087520

Sample's Information: **Sample ID:** B-2.2

Site: B-2.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 11:41:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908515

Date Analyzed	Test Name	Result	MCL	Method
11/03/09	2-Chlorotoluene	<6.4 ppb		EPA 8260
11/03/09	2-Hexanone	<6.4 ppb		EPA 8260
11/03/09	4-Chlorotoluene	<6.4 ppb		EPA 8260
11/03/09	4-Methyl-2-pentanone (MIBK)	<6.4 ppb		EPA 8260
11/03/09	Acetone	<6.4 ppb		EPA 8260
11/03/09	Acrolein	<6.4 ppb		EPA 8260
11/03/09	Acrylonitrile	<6.4 ppb		EPA 8260
11/03/09	Benzene	<6.4 ppb		EPA 8260
11/03/09	Bromobenzene	<6.4 ppb		EPA 8260
11/03/09	Bromochloromethane	<6.4 ppb		EPA 8260
11/03/09	Bromodichloromethane	<6.4 ppb		EPA 8260
11/03/09	Bromoform	<6.4 ppb		EPA 8260
11/03/09	Bromomethane	<6.4 ppb		EPA 8260
11/03/09	Carbon disulfide	<6.4 ppb		EPA 8260
11/03/09	Carbon tetrachloride	<6.4 ppb		EPA 8260
11/03/09	Chlorobenzene	<6.4 ppb		EPA 8260
11/03/09	Chlorodibromomethane	<6.4 ppb		EPA 8260
11/03/09	Chloroethane	<6.4 ppb		EPA 8260
11/03/09	Chloroform	<6.4 ppb		EPA 8260
11/03/09	Chloromethane	<6.4 ppb		EPA 8260
11/03/09	cis-1,2-Dichloroethene	<6.4 ppb		EPA 8260
11/03/09	cis-1,3-Dichloropropene	<6.4 ppb		EPA 8260
11/03/09	Dibromomethane	<6.4 ppb		EPA 8260
11/03/09	Dichlorodifluoromethane	<6.4 ppb		EPA 8260
11/03/09	Ethylbenzene	<6.4 ppb		EPA 8260
11/03/09	Isopropylbenzene	<6.4 ppb		EPA 8260
11/03/09	m&p xylene	9.1 ppb		EPA 8260
11/03/09	Methylene Chloride	<6.4 ppb		EPA 8260
11/03/09	MTBE	<6.4 ppb		EPA 8260
11/03/09	Naphthalene	9 ppb		EPA 8260
11/03/09	n-Butylbenzene	<6.4 ppb		EPA 8260

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087520

Sample's Information: **Sample ID:** B-2.2

Site: B-2.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 11:41:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908515

Date Analyzed	Test Name	Result	MCL	Method
11/03/09	n-Propylbenzene	<6.4 ppb		EPA 8260
11/03/09	o-Xylene	<6.4 ppb		EPA 8260
11/03/09	p-Isoproplytoluene	<6.4 ppb		EPA 8260
11/03/09	sec-Butylbenzene	<6.4 ppb		EPA 8260
11/03/09	Styrene	<6.4 ppb		EPA 8260
11/03/09	tert-Butylbenzene	<6.4 ppb		EPA 8260
11/03/09	Tetrachloroethene	<6.4 ppb		EPA 8260
11/03/09	Toluene	<6.4 ppb		EPA 8260
11/03/09	trans-1,2-Dichloroethene	<6.4 ppb		EPA 8260
11/03/09	trans-1,3-Dichloropropene	<6.4 ppb		EPA 8260
11/03/09	Trichloroethene	<6.4 ppb		EPA 8260
11/03/09	Trichlorofluoromethane	<6.4 ppb		EPA 8260
11/03/09	Vinyl Acetate	<6.4 ppb		EPA 8260
11/03/09	Vinyl chloride	<6.4 ppb		EPA 8260
11/06/09	PCB-1016	<62.7 ppb		SW 8082
11/06/09	PCB-1221	<62.7 ppb		SW 8082
11/06/09	PCB-1232	<62.7 ppb		SW 8082
11/06/09	PCB-1242	<62.7 ppb		SW 8082
11/06/09	PCB-1248	<62.7 ppb		SW 8082
11/06/09	PCB-1254	<62.7 ppb		SW 8082
11/06/09	PCB-1260	<62.7 ppb		SW 8082
11/06/09	PCB-1262	<62.7 ppb		SW 8082
11/06/09	PCB-1268	<62.7 ppb		SW 8082
11/06/09	4,4'-DDD	<2.51 ppb		SW8081
11/06/09	4,4'-DDE	<2.51 ppb		SW8081
11/06/09	4,4'-DDT	<2.51 ppb		SW8081
11/06/09	a-BHC	<2.51 ppb		SW8081
11/06/09	Aldrin	<2.51 ppb		SW8081
11/06/09	b-BHC	<2.51 ppb		SW8081

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087520

Sample's Information: **Sample ID:** B-2.2

Site: B-2.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 11:41:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908515

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chlordane	<2.51 ppb		SW8081
11/06/09	d-BHC	<2.51 ppb		SW8081
11/06/09	Dieldrin	<2.51 ppb		SW8081
11/06/09	Endosulfan I	<2.51 ppb		SW8081
11/06/09	Endosulfan II	<2.51 ppb		SW8081
11/06/09	Endosulfan Sulfate	<2.51 ppb		SW8081
11/06/09	Endrin	<2.51 ppb		SW8081
11/06/09	Endrin Aldehyde	<2.51 ppb		SW8081
11/06/09	Endrin Ketone	<2.51 ppb		SW8081
11/06/09	g-BHC	<2.51 ppb		SW8081
11/06/09	Heptachlor	<2.51 ppb		SW8081
11/06/09	Heptachlor epoxide	<2.51 ppb		SW8081
11/06/09	Methoxychlor	<2.51 ppb		SW8081
11/06/09	Mitotane	<2.51 ppb		SW8081
11/06/09	Toxaphene	<100 ppb		SW8081
11/06/09	Zinc	49.2 ppm	N/A	6010/E200.7
11/06/09	Vanadium	23.6 ppm	N/A	6010/E200.7
11/06/09	Thallium	3.03 ppm	N/A	6010/E200.7
11/06/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/06/09	Antimony	1.06 ppm	N/A	6010/E200.7
11/06/09	Lead	9.2 ppm	N/A	6010/E200.7
11/06/09	Nickel	15.2 ppm	N/A	6010/E200.7
11/06/09	Sodium	288 ppm	N/A	6010/E200.7
11/06/09	Manganese	341 ppm	N/A	6010/E200.7
11/06/09	Magnesium	5436 ppm	N/A	6010/E200.7
11/06/09	Potassium	1660 ppm	N/A	6010/E200.7
11/05/09	Mercury	1.48 ppm	N/A	SW-7471
11/06/09	Iron	23455 ppm	N/A	6010/E200.7
11/06/09	Copper	22.1 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent	19.6 ppm	N/A	6010/E200.7

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087520

Sample's Information: **Sample ID:** B-2.2

Site: B-2.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 11:41:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908515

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chromium	19.6 ppm	N/A	6010/E200.7
11/06/09	Cobalt	7.47 ppm	N/A	6010/E200.7
11/06/09	Cadmium	9.14 ppm	N/A	6010/E200.7
11/06/09	Calcium	5475 ppm	N/A	6010/E200.7
11/06/09	Beryllium	0.349 ppm	N/A	6010/E200.7
11/06/09	Barium	55.7 ppm	N/A	6010/E200.7
11/06/09	Arsenic	0.432 ppm	N/A	6010/E200.7
11/06/09	Aluminum	7779 ppm	N/A	6010/E200.7
11/06/09	Silver	<0.1 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087521

Sample's Information: **Sample ID:** B-9.1

Site: B-9.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 1:11:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908516

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	1,2,4-Trichlorobenzene	<340 ppb		8270
11/07/09	1,2-Dichlorobenzene	<340 ppb		8270
11/07/09	1,3-Dichlorobenzene	<340 ppb		8270
11/07/09	1,4-Dichlorobenzene	<340 ppb		8270
11/07/09	2,4,5-Trichlorophenol	<340 ppb		8270
11/07/09	2,4,6-Trichlorophenol	<340 ppb		8270
11/07/09	2,4-Dichlorophenol	<340 ppb		8270
11/07/09	2,4-Dimethylphenol	<340 ppb		8270
11/07/09	2,4-Dinitrophenol	<340 ppb		8270
11/07/09	2,4-Dinitrotoluene	<340 ppb		8270
11/07/09	2,6-Dichlorophenol	<340 ppb		8270
11/07/09	2,6-Dinitrotoluene	<340 ppb		8270
11/07/09	2-Chloronaphthalene	<340 ppb		8270
11/07/09	2-Chlorophenol	<340 ppb		8270
11/07/09	2-Methyl-4,6-dinitrophenol	<340 ppb		8270
11/07/09	2-Methylnaphthalene	<340 ppb		8270
11/07/09	2-Methylphenol (o-Cresol)	<340 ppb		8270
11/07/09	2-Nitroaniline	<340 ppb		8270
11/07/09	2-Nitrophenol	<340 ppb		8270
11/07/09	3&4-Methylphenol (m,p-Cresol)	<340 ppb		8270
11/07/09	3,3'-Dichlorobenzidine	<340 ppb		8270
11/07/09	3-Nitroaniline	<340 ppb		8270
11/07/09	4-Bromophenyl Phenyl Ether	<340 ppb		8270
11/07/09	4-Chloro-3-Methylphenol	<340 ppb		8270
11/07/09	4-Chloroaniline	<340 ppb		8270
11/07/09	4-Chlorophenylphenyl ether	<340 ppb		8270
11/07/09	4-Nitroaniline	<340 ppb		8270
11/07/09	4-Nitrophenol	<340 ppb		8270
11/07/09	Acenaphthene	<340 ppb		8270
11/07/09	Acenaphthylene	<340 ppb		8270
11/07/09	Aniline	<340 ppb		8270

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087521

Sample's Information: **Sample ID:** B-9.1

Site: B-9.1
Preservative: N/A
Temperature:
Matrix: Soil

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Date Analyzed	Test Name	Result	MCL	Method
11/07/09	Anthracene	<340 ppb		8270
11/07/09	Benzidine	<340 ppb		8270
11/07/09	Benzo(a)anthracene	<340 ppb		8270
11/07/09	Benzo(a)pyrene	<340 ppb		8270
11/07/09	Benzo(b)fluoranthene	<340 ppb		8270
11/07/09	Benzo(g,h,i)perylene	<340 ppb		8270
11/07/09	Benzo(k)fluoranthene	<340 ppb		8270
11/07/09	Benzoic Acid	<340 ppb		8270
11/07/09	Benzyl Alcohol	<340 ppb		8270
11/07/09	Benzyl Butyl Phthalate	<340 ppb		8270
11/07/09	bis(2-Chloroethoxy)methane	<340 ppb		8270
11/07/09	bis(2-Chloroethyl) ether	<340 ppb		8270
11/07/09	bis(2-Chloroisopropyl) ether	<340 ppb		8270
11/07/09	bis(2-ethylhexyl)phthalate	<340 ppb		8270
11/07/09	Chrysene	<340 ppb		8270
11/07/09	Dibenz(a,h)anthracene	<340 ppb		8270
11/07/09	Dibenzofuran	<340 ppb		8270
11/07/09	Diethyl Phthalate	<340 ppb		8270
11/07/09	Dimethyl Phthalate	<340 ppb		8270
11/07/09	Di-n-Butyl phthalate	<340 ppb		8270
11/07/09	Di-n-octyl phthalate	<340 ppb		8270
11/07/09	Fluoranthene	<340 ppb		8270
11/07/09	Fluorene	<340 ppb		8270
11/07/09	Hexachlorobenzene	<340 ppb		8270
11/07/09	Hexachlorobutadiene	<340 ppb		8270
11/07/09	Hexachlorocyclopentadiene	<340 ppb		8270
11/07/09	Hexachloroethane	<340 ppb		8270
11/07/09	Indeno(1,2,3-cd)pyrene	<340 ppb		8270
11/07/09	Isophorone	<340 ppb		8270
11/07/09	m-Cresol	<340 ppb		8270
11/07/09	Naphthalene	<340 ppb		8270

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Address of site: Not Specified

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Phone:

Sample's Information: **Sample ID:** B-9.1

Site: B-9.1
Preservative: N/A
Temperature:
Matrix: Soil

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Date Analyzed	Test Name	Result	MCL	Method
11/07/09	Nitrobenzene	<340 ppb		8270
11/07/09	n-Nitrosodimethylamine	<340 ppb		8270
11/07/09	n-Nitrosodi-n-propylamine	<340 ppb		8270
11/07/09	n-Nitrosodiphenylamine	<340 ppb		8270
11/07/09	Pentachlorophenol	<340 ppb		8270
11/07/09	Phenanthrene	<340 ppb		8270
11/07/09	Phenol	<340 ppb		8270
11/07/09	Pyrene	<340 ppb		8270
11/03/09	1,1,1,2-Tetrachloroethane	<5.6 ppb		EPA 8260
11/03/09	1,1,1-Trichloroethane	<5.6 ppb		EPA 8260
11/03/09	1,1,2,2-Tetrachloroethane	<5.6 ppb		EPA 8260
11/03/09	1,1,2-Trichloroethane	<5.6 ppb		EPA 8260
11/03/09	1,1-Dichloroethane	<5.6 ppb		EPA 8260
11/03/09	1,1-Dichloroethene	<5.6 ppb		EPA 8260
11/03/09	1,1-Dichloropropene	<5.6 ppb		EPA 8260
11/03/09	1,2,3-Trichlorobenzene	<5.6 ppb		EPA 8260
11/03/09	1,2,3-Trichloropropane	<5.6 ppb		EPA 8260
11/03/09	1,2,4-Trichlorobenzene	<5.6 ppb		EPA 8260
11/03/09	1,2,4-Trimethylbenzene	<5.6 ppb		EPA 8260
11/03/09	1,2-Dibromo-3-Chloropropane	<5.6 ppb		EPA 8260
11/03/09	1,2-Dibromoethane	<5.6 ppb		EPA 8260
11/03/09	1,2-Dichlorobenzene	<5.6 ppb		EPA 8260
11/03/09	1,2-Dichloroethane	<5.6 ppb		EPA 8260
11/03/09	1,2-Dichloropropane	<5.6 ppb		EPA 8260
11/03/09	1,3,5-Trimethylbenzene	<5.6 ppb		EPA 8260
11/03/09	1,3-Dichlorobenzene	<5.6 ppb		EPA 8260
11/03/09	1,3-Dichloropropane	<5.6 ppb		EPA 8260
11/03/09	1,4-Dichlorobenzene	<5.6 ppb		EPA 8260
11/03/09	2,2-Dichloropropane	<5.6 ppb		EPA 8260
11/03/09	2-Butanone (MEK)	<5.6 ppb		EPA 8260

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue
Danbury, Connecticut 06810 | Telephone 203-798-2229

Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087521

Sample's Information: **Sample ID:** B-9.1

Site: B-9.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 1:11:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908516

Date Analyzed	Test Name	Result	MCL	Method
11/03/09	2-Chlorotoluene	<5.6 ppb		EPA 8260
11/03/09	2-Hexanone	<5.6 ppb		EPA 8260
11/03/09	4-Chlorotoluene	<5.6 ppb		EPA 8260
11/03/09	4-Methyl-2-pentanone (MIBK)	<5.6 ppb		EPA 8260
11/03/09	Acetone	<5.6 ppb		EPA 8260
11/03/09	Acrolein	<5.6 ppb		EPA 8260
11/03/09	Acrylonitrile	<5.6 ppb		EPA 8260
11/03/09	Benzene	<5.6 ppb		EPA 8260
11/03/09	Bromobenzene	<5.6 ppb		EPA 8260
11/03/09	Bromochloromethane	<5.6 ppb		EPA 8260
11/03/09	Bromodichloromethane	<5.6 ppb		EPA 8260
11/03/09	Bromoform	<5.6 ppb		EPA 8260
11/03/09	Bromomethane	<5.6 ppb		EPA 8260
11/03/09	Carbon disulfide	<5.6 ppb		EPA 8260
11/03/09	Carbon tetrachloride	<5.6 ppb		EPA 8260
11/03/09	Chlorobenzene	<5.6 ppb		EPA 8260
11/03/09	Chlorodibromomethane	<5.6 ppb		EPA 8260
11/03/09	Chloroethane	<5.6 ppb		EPA 8260
11/03/09	Chloroform	<5.6 ppb		EPA 8260
11/03/09	Chloromethane	<5.6 ppb		EPA 8260
11/03/09	cis-1,2-Dichloroethene	<5.6 ppb		EPA 8260
11/03/09	cis-1,3-Dichloropropene	<5.6 ppb		EPA 8260
11/03/09	Dibromomethane	<5.6 ppb		EPA 8260
11/03/09	Dichlorodifluoromethane	<5.6 ppb		EPA 8260
11/03/09	Ethylbenzene	<5.6 ppb		EPA 8260
11/03/09	Isopropylbenzene	<5.6 ppb		EPA 8260
11/03/09	m&p xylene	<5.6 ppb		EPA 8260
11/03/09	Methylene Chloride	<5.6 ppb		EPA 8260
11/03/09	MTBE	<5.6 ppb		EPA 8260
11/03/09	Naphthalene	<5.6 ppb		EPA 8260
11/03/09	n-Butylbenzene	<5.6 ppb		EPA 8260

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087521

Sample's Information: **Sample ID:** B-9.1

Site: B-9.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 1:11:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908516

Date Analyzed	Test Name	Result	MCL	Method
11/03/09	n-Propylbenzene	<5.6 ppb		EPA 8260
11/03/09	o-Xylene	<5.6 ppb		EPA 8260
11/03/09	p-Isoproplytoluene	<5.6 ppb		EPA 8260
11/03/09	sec-Butylbenzene	<5.6 ppb		EPA 8260
11/03/09	Styrene	<5.6 ppb		EPA 8260
11/03/09	tert-Butylbenzene	<5.6 ppb		EPA 8260
11/03/09	Tetrachloroethene	<5.6 ppb		EPA 8260
11/03/09	Toluene	<5.6 ppb		EPA 8260
11/03/09	trans-1,2-Dichloroethene	<5.6 ppb		EPA 8260
11/03/09	trans-1,3-Dichloropropene	<5.6 ppb		EPA 8260
11/03/09	Trichloroethene	<5.6 ppb		EPA 8260
11/03/09	Trichlorofluoromethane	<5.6 ppb		EPA 8260
11/03/09	Vinyl Acetate	<5.6 ppb		EPA 8260
11/03/09	Vinyl chloride	<5.6 ppb		EPA 8260
11/06/09	PCB-1016	<54.9 ppb		SW 8082
11/06/09	PCB-1221	<54.9 ppb		SW 8082
11/06/09	PCB-1232	<54.9 ppb		SW 8082
11/06/09	PCB-1242	<54.9 ppb		SW 8082
11/06/09	PCB-1248	<54.9 ppb		SW 8082
11/06/09	PCB-1254	<54.9 ppb		SW 8082
11/06/09	PCB-1260	<54.9 ppb		SW 8082
11/06/09	PCB-1262	<54.9 ppb		SW 8082
11/06/09	PCB-1268	<54.9 ppb		SW 8082
11/06/09	4,4'-DDD	<2.2 ppb		SW8081
11/06/09	4,4'-DDE	<2.2 ppb		SW8081
11/06/09	4,4'-DDT	<2.2 ppb		SW8081
11/06/09	a-BHC	<2.2 ppb		SW8081
11/06/09	Aldrin	<2.2 ppb		SW8081
11/06/09	b-BHC	<2.2 ppb		SW8081

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087521

Sample's Information: **Sample ID:** B-9.1

Site: B-9.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 1:11:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908516

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chlordane	<2.2 ppb		SW8081
11/06/09	d-BHC	<2.2 ppb		SW8081
11/06/09	Dieldrin	<2.2 ppb		SW8081
11/06/09	Endosulfan I	<2.2 ppb		SW8081
11/06/09	Endosulfan II	<2.2 ppb		SW8081
11/06/09	Endosulfan Sulfate	<2.2 ppb		SW8081
11/06/09	Endrin	<2.2 ppb		SW8081
11/06/09	Endrin Aldehyde	<2.2 ppb		SW8081
11/06/09	Endrin Ketone	<2.2 ppb		SW8081
11/06/09	g-BHC	<2.2 ppb		SW8081
11/06/09	Heptachlor	<2.2 ppb		SW8081
11/06/09	Heptachlor epoxide	<2.2 ppb		SW8081
11/06/09	Methoxychlor	<2.2 ppb		SW8081
11/06/09	Mitotane	<2.2 ppb		SW8081
11/06/09	Toxaphene	<100 ppb		SW8081
11/06/09	Zinc	41.5 ppm	N/A	6010/E200.7
11/06/09	Vanadium	11.1 ppm	N/A	6010/E200.7
11/06/09	Thallium	2.13 ppm	N/A	6010/E200.7
11/06/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/06/09	Antimony	0.234 ppm	N/A	6010/E200.7
11/06/09	Lead	20.9 ppm	N/A	6010/E200.7
11/06/09	Nickel	8.6 ppm	N/A	6010/E200.7
11/06/09	Sodium	120 ppm	N/A	6010/E200.7
11/06/09	Manganese	245 ppm	N/A	6010/E200.7
11/06/09	Magnesium	1785 ppm	N/A	6010/E200.7
11/06/09	Potassium	643 ppm	N/A	6010/E200.7
11/05/09	Mercury	0.106 ppm	N/A	SW-7471
11/06/09	Iron	7484 ppm	N/A	6010/E200.7
11/06/09	Copper	17.1 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent	10.4 ppm	N/A	6010/E200.7

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087521

Sample's Information:
Sample ID: B-9.1

Site: B-9.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 1:11:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908516

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chromium	10.4 ppm	N/A	6010/E200.7
11/06/09	Cobalt	4.95 ppm	N/A	6010/E200.7
11/06/09	Cadmium	4.84 ppm	N/A	6010/E200.7
11/06/09	Calcium	1733 ppm	N/A	6010/E200.7
11/06/09	Beryllium	0.23 ppm	N/A	6010/E200.7
11/06/09	Barium	31.2 ppm	N/A	6010/E200.7
11/06/09	Arsenic	0.837 ppm	N/A	6010/E200.7
11/06/09	Aluminum	4571 ppm	N/A	6010/E200.7
11/06/09	Silver	0.263 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087522

Sample's Information: **Sample ID:** B-7.1

Site: B-7.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 2:18:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908517

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	1,2,4-Trichlorobenzene	<340 ppb		8270
11/07/09	1,2-Dichlorobenzene	<340 ppb		8270
11/07/09	1,3-Dichlorobenzene	<340 ppb		8270
11/07/09	1,4-Dichlorobenzene	<340 ppb		8270
11/07/09	2,4,5-Trichlorophenol	<340 ppb		8270
11/07/09	2,4,6-Trichlorophenol	<340 ppb		8270
11/07/09	2,4-Dichlorophenol	<340 ppb		8270
11/07/09	2,4-Dimethylphenol	<340 ppb		8270
11/07/09	2,4-Dinitrophenol	<340 ppb		8270
11/07/09	2,4-Dinitrotoluene	<340 ppb		8270
11/07/09	2,6-Dichlorophenol	<340 ppb		8270
11/07/09	2,6-Dinitrotoluene	<340 ppb		8270
11/07/09	2-Chloronaphthalene	<340 ppb		8270
11/07/09	2-Chlorophenol	<340 ppb		8270
11/07/09	2-Methyl-4,6-dinitrophenol	<340 ppb		8270
11/07/09	2-Methylnaphthalene	<340 ppb		8270
11/07/09	2-Methylphenol (o-Cresol)	<340 ppb		8270
11/07/09	2-Nitroaniline	<340 ppb		8270
11/07/09	2-Nitrophenol	<340 ppb		8270
11/07/09	3&4-Methylphenol (m,p-Cresol)	<340 ppb		8270
11/07/09	3,3'-Dichlorobenzidine	<340 ppb		8270
11/07/09	3-Nitroaniline	<340 ppb		8270
11/07/09	4-Bromophenyl Phenyl Ether	<340 ppb		8270
11/07/09	4-Chloro-3-Methylphenol	<340 ppb		8270
11/07/09	4-Chloroaniline	<340 ppb		8270
11/07/09	4-Chlorophenylphenyl ether	<340 ppb		8270
11/07/09	4-Nitroaniline	<340 ppb		8270
11/07/09	4-Nitrophenol	<340 ppb		8270
11/07/09	Acenaphthene	<340 ppb		8270
11/07/09	Acenaphthylene	<340 ppb		8270
11/07/09	Aniline	<340 ppb		8270

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087522

Sample's Information: **Sample ID:** B-7.1

Site: B-7.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 2:18:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908517

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	Anthracene	<340 ppb		8270
11/07/09	Benzidine	<340 ppb		8270
11/07/09	Benzo(a)anthracene	<340 ppb		8270
11/07/09	Benzo(a)pyrene	<340 ppb		8270
11/07/09	Benzo(b)fluoranthene	<340 ppb		8270
11/07/09	Benzo(g,h,i)perylene	<340 ppb		8270
11/07/09	Benzo(k)fluoranthene	<340 ppb		8270
11/07/09	Benzoic Acid	<340 ppb		8270
11/07/09	Benzyl Alcohol	<340 ppb		8270
11/07/09	Benzyl Butyl Phthalate	<340 ppb		8270
11/07/09	bis(2-Chloroethoxy)methane	<340 ppb		8270
11/07/09	bis(2-Chloroethyl) ether	<340 ppb		8270
11/07/09	bis(2-Chloroisopropyl) ether	<340 ppb		8270
11/07/09	bis(2-ethylhexyl)phthalate	<340 ppb		8270
11/07/09	Chrysene	<340 ppb		8270
11/07/09	Dibenz(a,h)anthracene	<340 ppb		8270
11/07/09	Dibenzofuran	<340 ppb		8270
11/07/09	Diethyl Phthalate	<340 ppb		8270
11/07/09	Dimethyl Phthalate	<340 ppb		8270
11/07/09	Di-n-Butyl phthalate	<340 ppb		8270
11/07/09	Di-n-octyl phthalate	<340 ppb		8270
11/07/09	Fluoranthene	<340 ppb		8270
11/07/09	Fluorene	<340 ppb		8270
11/07/09	Hexachlorobenzene	<340 ppb		8270
11/07/09	Hexachlorobutadiene	<340 ppb		8270
11/07/09	Hexachlorocyclopentadiene	<340 ppb		8270
11/07/09	Hexachloroethane	<340 ppb		8270
11/07/09	Indeno(1,2,3-cd)pyrene	<340 ppb		8270
11/07/09	Isophorone	<340 ppb		8270
11/07/09	m-Cresol	<340 ppb		8270
11/07/09	Naphthalene	<340 ppb		8270

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Collector's Information: **JMS ID:** 087522
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

Sample's Information: **Sample ID:** B-7.1

Site: B-7.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 2:18:00 AM

Date Received: 11/2/2009
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Date Analyzed	Test Name	Result	MCL	Method
11/07/09	Nitrobenzene	<340 ppb		8270
11/07/09	n-Nitrosodimethylamine	<340 ppb		8270
11/07/09	n-Nitrosodi-n-propylamine	<340 ppb		8270
11/07/09	n-Nitrosodiphenylamine	<340 ppb		8270
11/07/09	Pentachlorophenol	<340 ppb		8270
11/07/09	Phenanthrene	<340 ppb		8270
11/07/09	Phenol	<340 ppb		8270
11/07/09	Pyrene	<340 ppb		8270
11/03/09	1,1,1,2-Tetrachloroethane	<5.5 ppb		EPA 8260
11/03/09	1,1,1-Trichloroethane	<5.5 ppb		EPA 8260
11/03/09	1,1,2,2-Tetrachloroethane	<5.5 ppb		EPA 8260
11/03/09	1,1,2-Trichloroethane	<5.5 ppb		EPA 8260
11/03/09	1,1-Dichloroethane	<5.5 ppb		EPA 8260
11/03/09	1,1-Dichloroethene	<5.5 ppb		EPA 8260
11/03/09	1,1-Dichloropropene	<5.5 ppb		EPA 8260
11/03/09	1,2,3-Trichlorobenzene	<5.5 ppb		EPA 8260
11/03/09	1,2,3-Trichloropropane	<5.5 ppb		EPA 8260
11/03/09	1,2,4-Trichlorobenzene	<5.5 ppb		EPA 8260
11/03/09	1,2,4-Trimethylbenzene	<5.5 ppb		EPA 8260
11/03/09	1,2-Dibromo-3-Chloropropane	<5.5 ppb		EPA 8260
11/03/09	1,2-Dibromoethane	<5.5 ppb		EPA 8260
11/03/09	1,2-Dichlorobenzene	<5.5 ppb		EPA 8260
11/03/09	1,2-Dichloroethane	<5.5 ppb		EPA 8260
11/03/09	1,2-Dichloropropane	<5.5 ppb		EPA 8260
11/03/09	1,3,5-Trimethylbenzene	<5.5 ppb		EPA 8260
11/03/09	1,3-Dichlorobenzene	<5.5 ppb		EPA 8260
11/03/09	1,3-Dichloropropane	<5.5 ppb		EPA 8260
11/03/09	1,4-Dichlorobenzene	<5.5 ppb		EPA 8260
11/03/09	2,2-Dichloropropane	<5.5 ppb		EPA 8260
11/03/09	2-Butanone (MEK)	<5.5 ppb		EPA 8260

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Collector's Information: **JMS ID:** 087522
Name: Alex Avracen
Address of site: Not Specified

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State: NY **Zip:**
Phone:

Sample's Information: **Sample ID:** B-7.1

Site: B-7.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 2:18:00 AM

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Date Analyzed	Test Name	Result	MCL	Method
11/03/09	2-Chlorotoluene	<5.5 ppb		EPA 8260
11/03/09	2-Hexanone	<5.5 ppb		EPA 8260
11/03/09	4-Chlorotoluene	<5.5 ppb		EPA 8260
11/03/09	4-Methyl-2-pentanone (MIBK)	<5.5 ppb		EPA 8260
11/03/09	Acetone	<5.5 ppb		EPA 8260
11/03/09	Acrolein	<5.5 ppb		EPA 8260
11/03/09	Acrylonitrile	<5.5 ppb		EPA 8260
11/03/09	Benzene	<5.5 ppb		EPA 8260
11/03/09	Bromobenzene	<5.5 ppb		EPA 8260
11/03/09	Bromochloromethane	<5.5 ppb		EPA 8260
11/03/09	Bromodichloromethane	<5.5 ppb		EPA 8260
11/03/09	Bromoform	<5.5 ppb		EPA 8260
11/03/09	Bromomethane	<5.5 ppb		EPA 8260
11/03/09	Carbon disulfide	<5.5 ppb		EPA 8260
11/03/09	Carbon tetrachloride	<5.5 ppb		EPA 8260
11/03/09	Chlorobenzene	<5.5 ppb		EPA 8260
11/03/09	Chlorodibromomethane	<5.5 ppb		EPA 8260
11/03/09	Chloroethane	<5.5 ppb		EPA 8260
11/03/09	Chloroform	<5.5 ppb		EPA 8260
11/03/09	Chloromethane	<5.5 ppb		EPA 8260
11/03/09	cis-1,2-Dichloroethene	<5.5 ppb		EPA 8260
11/03/09	cis-1,3-Dichloropropene	<5.5 ppb		EPA 8260
11/03/09	Dibromomethane	<5.5 ppb		EPA 8260
11/03/09	Dichlorodifluoromethane	<5.5 ppb		EPA 8260
11/03/09	Ethylbenzene	<5.5 ppb		EPA 8260
11/03/09	Isopropylbenzene	<5.5 ppb		EPA 8260
11/03/09	m&p xylene	<5.5 ppb		EPA 8260
11/03/09	Methylene Chloride	<5.5 ppb		EPA 8260
11/03/09	MTBE	<5.5 ppb		EPA 8260
11/03/09	Naphthalene	<5.5 ppb		EPA 8260
11/03/09	n-Butylbenzene	<5.5 ppb		EPA 8260

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue
Danbury, Connecticut 06810 | Telephone 203-798-2229

Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087522

Sample's Information: **Sample ID:** B-7.1

Site: B-7.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 2:18:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908517

Date Analyzed	Test Name	Result	MCL	Method
11/03/09	n-Propylbenzene	<5.5 ppb		EPA 8260
11/03/09	o-Xylene	<5.5 ppb		EPA 8260
11/03/09	p-Isoproplytoluene	<5.5 ppb		EPA 8260
11/03/09	sec-Butylbenzene	<5.5 ppb		EPA 8260
11/03/09	Styrene	<5.5 ppb		EPA 8260
11/03/09	tert-Butylbenzene	<5.5 ppb		EPA 8260
11/03/09	Tetrachloroethene	<5.5 ppb		EPA 8260
11/03/09	Toluene	<5.5 ppb		EPA 8260
11/03/09	trans-1,2-Dichloroethene	<5.5 ppb		EPA 8260
11/03/09	trans-1,3-Dichloropropene	<5.5 ppb		EPA 8260
11/03/09	Trichloroethene	<5.5 ppb		EPA 8260
11/03/09	Trichlorofluoromethane	<5.5 ppb		EPA 8260
11/03/09	Vinyl Acetate	<5.5 ppb		EPA 8260
11/03/09	Vinyl chloride	<5.5 ppb		EPA 8260
11/06/09	PCB-1016	<53.6 ppb		SW 8082
11/06/09	PCB-1221	<53.6 ppb		SW 8082
11/06/09	PCB-1232	<53.6 ppb		SW 8082
11/06/09	PCB-1242	<53.6 ppb		SW 8082
11/06/09	PCB-1248	<53.6 ppb		SW 8082
11/06/09	PCB-1254	<53.6 ppb		SW 8082
11/06/09	PCB-1260	<53.6 ppb		SW 8082
11/06/09	PCB-1262	<53.6 ppb		SW 8082
11/06/09	PCB-1268	<53.6 ppb		SW 8082
11/06/09	4,4'-DDD	<2.14 ppb		SW8081
11/06/09	4,4'-DDE	<2.14 ppb		SW8081
11/06/09	4,4'-DDT	<2.14 ppb		SW8081
11/06/09	a-BHC	<2.14 ppb		SW8081
11/06/09	Aldrin	<2.14 ppb		SW8081
11/06/09	b-BHC	<2.14 ppb		SW8081

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087522

Sample's Information: **Sample ID:** B-7.1

Site: B-7.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 2:18:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908517

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chlordane	<2.14 ppb		SW8081
11/06/09	d-BHC	<2.14 ppb		SW8081
11/06/09	Dieldrin	<2.14 ppb		SW8081
11/06/09	Endosulfan I	<2.14 ppb		SW8081
11/06/09	Endosulfan II	<2.14 ppb		SW8081
11/06/09	Endosulfan Sulfate	<2.14 ppb		SW8081
11/06/09	Endrin	<2.14 ppb		SW8081
11/06/09	Endrin Aldehyde	<2.14 ppb		SW8081
11/06/09	Endrin Ketone	<2.14 ppb		SW8081
11/06/09	g-BHC	<2.14 ppb		SW8081
11/06/09	Heptachlor	<2.14 ppb		SW8081
11/06/09	Heptachlor epoxide	<2.14 ppb		SW8081
11/06/09	Methoxychlor	<2.14 ppb		SW8081
11/06/09	Mitotane	<2.14 ppb		SW8081
11/06/09	Toxaphene	<100 ppb		SW8081
11/06/09	Zinc	35.9 ppm	N/A	6010/E200.7
11/06/09	Vanadium	15.4 ppm	N/A	6010/E200.7
11/06/09	Thallium	1.21 ppm	N/A	6010/E200.7
11/06/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/06/09	Antimony	0.665 ppm	N/A	6010/E200.7
11/06/09	Lead	7.1 ppm	N/A	6010/E200.7
11/06/09	Nickel	10.7 ppm	N/A	6010/E200.7
11/06/09	Sodium	134 ppm	N/A	6010/E200.7
11/06/09	Manganese	268 ppm	N/A	6010/E200.7
11/06/09	Magnesium	2432 ppm	N/A	6010/E200.7
11/06/09	Potassium	865 ppm	N/A	6010/E200.7
11/05/09	Mercury	0.106 ppm	N/A	SW-7471
11/06/09	Iron	9932 ppm	N/A	6010/E200.7
11/06/09	Copper	14.8 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent	17.4 ppm	N/A	6010/E200.7

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087522

Sample's Information: **Sample ID:** B-7.1

Site: B-7.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 2:18:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908517

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chromium	17.4 ppm	N/A	6010/E200.7
11/06/09	Cobalt	4.74 ppm	N/A	6010/E200.7
11/06/09	Cadmium	4.06 ppm	N/A	6010/E200.7
11/06/09	Calcium	2076 ppm	N/A	6010/E200.7
11/06/09	Beryllium	0.268 ppm	N/A	6010/E200.7
11/06/09	Barium	34.2 ppm	N/A	6010/E200.7
11/06/09	Arsenic	0.2 ppm	N/A	6010/E200.7
11/06/09	Aluminum	6011 ppm	N/A	6010/E200.7
11/06/09	Silver	<0.1 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

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State: NY **Zip:**
Phone:

JMS ID: 087523

Sample's Information:
Sample ID: B-7.2

Site: B-7.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 2:30:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908518

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	1,2,4-Trichlorobenzene	<340 ppb		8270
11/07/09	1,2-Dichlorobenzene	<340 ppb		8270
11/07/09	1,3-Dichlorobenzene	<340 ppb		8270
11/07/09	1,4-Dichlorobenzene	<340 ppb		8270
11/07/09	2,4,5-Trichlorophenol	<340 ppb		8270
11/07/09	2,4,6-Trichlorophenol	<340 ppb		8270
11/07/09	2,4-Dichlorophenol	<340 ppb		8270
11/07/09	2,4-Dimethylphenol	<340 ppb		8270
11/07/09	2,4-Dinitrophenol	<340 ppb		8270
11/07/09	2,4-Dinitrotoluene	<340 ppb		8270
11/07/09	2,6-Dichlorophenol	<340 ppb		8270
11/07/09	2,6-Dinitrotoluene	<340 ppb		8270
11/07/09	2-Chloronaphthalene	<340 ppb		8270
11/07/09	2-Chlorophenol	<340 ppb		8270
11/07/09	2-Methyl-4,6-dinitrophenol	<340 ppb		8270
11/07/09	2-Methylnaphthalene	<340 ppb		8270
11/07/09	2-Methylphenol (o-Cresol)	<340 ppb		8270
11/07/09	2-Nitroaniline	<340 ppb		8270
11/07/09	2-Nitrophenol	<340 ppb		8270
11/07/09	3&4-Methylphenol (m,p-Cresol)	<340 ppb		8270
11/07/09	3,3'-Dichlorobenzidine	<340 ppb		8270
11/07/09	3-Nitroaniline	<340 ppb		8270
11/07/09	4-Bromophenyl Phenyl Ether	<340 ppb		8270
11/07/09	4-Chloro-3-Methylphenol	<340 ppb		8270
11/07/09	4-Chloroaniline	<340 ppb		8270
11/07/09	4-Chlorophenylphenyl ether	<340 ppb		8270
11/07/09	4-Nitroaniline	<340 ppb		8270
11/07/09	4-Nitrophenol	<340 ppb		8270
11/07/09	Acenaphthene	<340 ppb		8270
11/07/09	Acenaphthylene	<340 ppb		8270
11/07/09	Aniline	<340 ppb		8270

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087523

Sample's Information:
Sample ID: B-7.2

Site: B-7.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 2:30:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908518

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	Anthracene	<340 ppb		8270
11/07/09	Benzidine	<340 ppb		8270
11/07/09	Benzo(a)anthracene	<340 ppb		8270
11/07/09	Benzo(a)pyrene	<340 ppb		8270
11/07/09	Benzo(b)fluoranthene	<340 ppb		8270
11/07/09	Benzo(g,h,i)perylene	<340 ppb		8270
11/07/09	Benzo(k)fluoranthene	<340 ppb		8270
11/07/09	Benzoic Acid	<340 ppb		8270
11/07/09	Benzyl Alcohol	<340 ppb		8270
11/07/09	Benzyl Butyl Phthalate	<340 ppb		8270
11/07/09	bis(2-Chloroethoxy)methane	<340 ppb		8270
11/07/09	bis(2-Chloroethyl) ether	<340 ppb		8270
11/07/09	bis(2-Chloroisopropyl) ether	<340 ppb		8270
11/07/09	bis(2-ethylhexyl)phthalate	<340 ppb		8270
11/07/09	Chrysene	<340 ppb		8270
11/07/09	Dibenz(a,h)anthracene	<340 ppb		8270
11/07/09	Dibenzofuran	<340 ppb		8270
11/07/09	Diethyl Phthalate	<340 ppb		8270
11/07/09	Dimethyl Phthalate	<340 ppb		8270
11/07/09	Di-n-Butyl phthalate	<340 ppb		8270
11/07/09	Di-n-octyl phthalate	<340 ppb		8270
11/07/09	Fluoranthene	<340 ppb		8270
11/07/09	Fluorene	<340 ppb		8270
11/07/09	Hexachlorobenzene	<340 ppb		8270
11/07/09	Hexachlorobutadiene	<340 ppb		8270
11/07/09	Hexachlorocyclopentadiene	<340 ppb		8270
11/07/09	Hexachloroethane	<340 ppb		8270
11/07/09	Indeno(1,2,3-cd)pyrene	<340 ppb		8270
11/07/09	Isophorone	<340 ppb		8270
11/07/09	m-Cresol	<340 ppb		8270
11/07/09	Naphthalene	<340 ppb		8270

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City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information: **JMS ID:** 087523
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

Sample's Information: **Sample ID:** B-7.2

Site: B-7.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 2:30:00 AM

Date Received: 11/2/2009
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Lab No.: J0908518

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	Nitrobenzene	<340 ppb		8270
11/07/09	n-Nitrosodimethylamine	<340 ppb		8270
11/07/09	n-Nitrosodi-n-propylamine	<340 ppb		8270
11/07/09	n-Nitrosodiphenylamine	<340 ppb		8270
11/07/09	Pentachlorophenol	<340 ppb		8270
11/07/09	Phenanthrene	<340 ppb		8270
11/07/09	Phenol	<340 ppb		8270
11/07/09	Pyrene	<340 ppb		8270
11/03/09	1,1,1,2-Tetrachloroethane	<6.3 ppb		EPA 8260
11/03/09	1,1,1-Trichloroethane	<6.3 ppb		EPA 8260
11/03/09	1,1,2,2-Tetrachloroethane	<6.3 ppb		EPA 8260
11/03/09	1,1,2-Trichloroethane	<6.3 ppb		EPA 8260
11/03/09	1,1-Dichloroethane	<6.3 ppb		EPA 8260
11/03/09	1,1-Dichloroethene	<6.3 ppb		EPA 8260
11/03/09	1,1-Dichloropropene	<6.3 ppb		EPA 8260
11/03/09	1,2,3-Trichlorobenzene	<6.3 ppb		EPA 8260
11/03/09	1,2,3-Trichloropropane	<6.3 ppb		EPA 8260
11/03/09	1,2,4-Trichlorobenzene	<6.3 ppb		EPA 8260
11/03/09	1,2,4-Trimethylbenzene	<6.3 ppb		EPA 8260
11/03/09	1,2-Dibromo-3-Chloropropane	<6.3 ppb		EPA 8260
11/03/09	1,2-Dibromoethane	<6.3 ppb		EPA 8260
11/03/09	1,2-Dichlorobenzene	<6.3 ppb		EPA 8260
11/03/09	1,2-Dichloroethane	<6.3 ppb		EPA 8260
11/03/09	1,2-Dichloropropane	<6.3 ppb		EPA 8260
11/03/09	1,3,5-Trimethylbenzene	<6.3 ppb		EPA 8260
11/03/09	1,3-Dichlorobenzene	<6.3 ppb		EPA 8260
11/03/09	1,3-Dichloropropane	<6.3 ppb		EPA 8260
11/03/09	1,4-Dichlorobenzene	<6.3 ppb		EPA 8260
11/03/09	2,2-Dichloropropane	<6.3 ppb		EPA 8260
11/03/09	2-Butanone (MEK)	<6.3 ppb		EPA 8260

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Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

Sample's Information: **Sample ID:** B-7.2

Site: B-7.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
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Date Received: 11/2/2009
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Date Analyzed	Test Name	Result	MCL	Method
11/03/09	2-Chlorotoluene	<6.3 ppb		EPA 8260
11/03/09	2-Hexanone	<6.3 ppb		EPA 8260
11/03/09	4-Chlorotoluene	<6.3 ppb		EPA 8260
11/03/09	4-Methyl-2-pentanone (MIBK)	<6.3 ppb		EPA 8260
11/03/09	Acetone	<6.3 ppb		EPA 8260
11/03/09	Acrolein	<6.3 ppb		EPA 8260
11/03/09	Acrylonitrile	<6.3 ppb		EPA 8260
11/03/09	Benzene	<6.3 ppb		EPA 8260
11/03/09	Bromobenzene	<6.3 ppb		EPA 8260
11/03/09	Bromochloromethane	<6.3 ppb		EPA 8260
11/03/09	Bromodichloromethane	<6.3 ppb		EPA 8260
11/03/09	Bromoform	<6.3 ppb		EPA 8260
11/03/09	Bromomethane	<6.3 ppb		EPA 8260
11/03/09	Carbon disulfide	<6.3 ppb		EPA 8260
11/03/09	Carbon tetrachloride	<6.3 ppb		EPA 8260
11/03/09	Chlorobenzene	<6.3 ppb		EPA 8260
11/03/09	Chlorodibromomethane	<6.3 ppb		EPA 8260
11/03/09	Chloroethane	<6.3 ppb		EPA 8260
11/03/09	Chloroform	<6.3 ppb		EPA 8260
11/03/09	Chloromethane	<6.3 ppb		EPA 8260
11/03/09	cis-1,2-Dichloroethene	<6.3 ppb		EPA 8260
11/03/09	cis-1,3-Dichloropropene	<6.3 ppb		EPA 8260
11/03/09	Dibromomethane	<6.3 ppb		EPA 8260
11/03/09	Dichlorodifluoromethane	<6.3 ppb		EPA 8260
11/03/09	Ethylbenzene	<6.3 ppb		EPA 8260
11/03/09	Isopropylbenzene	<6.3 ppb		EPA 8260
11/03/09	m&p xylene	<6.3 ppb		EPA 8260
11/03/09	Methylene Chloride	<6.3 ppb		EPA 8260
11/03/09	MTBE	<6.3 ppb		EPA 8260
11/03/09	Naphthalene	<6.3 ppb		EPA 8260
11/03/09	n-Butylbenzene	<6.3 ppb		EPA 8260

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JMS ID: 087523

Sample's Information: **Sample ID:** B-7.2

Site: B-7.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 2:30:00 AM

Date Received: 11/2/2009
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Lab No.: J0908518

Date Analyzed	Test Name	Result	MCL	Method
11/03/09	n-Propylbenzene	<6.3 ppb		EPA 8260
11/03/09	o-Xylene	<6.3 ppb		EPA 8260
11/03/09	p-Isoproplytoluene	<6.3 ppb		EPA 8260
11/03/09	sec-Butylbenzene	<6.3 ppb		EPA 8260
11/03/09	Styrene	<6.3 ppb		EPA 8260
11/03/09	tert-Butylbenzene	<6.3 ppb		EPA 8260
11/03/09	Tetrachloroethene	<6.3 ppb		EPA 8260
11/03/09	Toluene	<6.3 ppb		EPA 8260
11/03/09	trans-1,2-Dichloroethene	<6.3 ppb		EPA 8260
11/03/09	trans-1,3-Dichloropropene	<6.3 ppb		EPA 8260
11/03/09	Trichloroethene	<6.3 ppb		EPA 8260
11/03/09	Trichlorofluoromethane	<6.3 ppb		EPA 8260
11/03/09	Vinyl Acetate	<6.3 ppb		EPA 8260
11/03/09	Vinyl chloride	<6.3 ppb		EPA 8260
11/06/09	PCB-1016	<63.7 ppb		SW 8082
11/06/09	PCB-1221	<63.7 ppb		SW 8082
11/06/09	PCB-1232	<63.7 ppb		SW 8082
11/06/09	PCB-1242	<63.7 ppb		SW 8082
11/06/09	PCB-1248	<63.7 ppb		SW 8082
11/06/09	PCB-1254	<63.7 ppb		SW 8082
11/06/09	PCB-1260	<63.7 ppb		SW 8082
11/06/09	PCB-1262	<63.7 ppb		SW 8082
11/06/09	PCB-1268	<63.7 ppb		SW 8082
11/06/09	4,4'-DDD	<2.55 ppb		SW8081
11/06/09	4,4'-DDE	<2.55 ppb		SW8081
11/06/09	4,4'-DDT	<2.55 ppb		SW8081
11/06/09	a-BHC	<2.55 ppb		SW8081
11/06/09	Aldrin	<2.55 ppb		SW8081
11/06/09	b-BHC	<2.55 ppb		SW8081

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue
Danbury, Connecticut 06810 | Telephone 203-798-2229

Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087523

Sample's Information: **Sample ID:** B-7.2

Site: B-7.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 2:30:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908518

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chlordane	<2.55 ppb		SW8081
11/06/09	d-BHC	<2.55 ppb		SW8081
11/06/09	Dieldrin	<2.55 ppb		SW8081
11/06/09	Endosulfan I	<2.55 ppb		SW8081
11/06/09	Endosulfan II	<2.55 ppb		SW8081
11/06/09	Endosulfan Sulfate	<2.55 ppb		SW8081
11/06/09	Endrin	<2.55 ppb		SW8081
11/06/09	Endrin Aldehyde	<2.55 ppb		SW8081
11/06/09	Endrin Ketone	<2.55 ppb		SW8081
11/06/09	g-BHC	<2.55 ppb		SW8081
11/06/09	Heptachlor	<2.55 ppb		SW8081
11/06/09	Heptachlor epoxide	<2.55 ppb		SW8081
11/06/09	Methoxychlor	<2.55 ppb		SW8081
11/06/09	Mitotane	<2.55 ppb		SW8081
11/06/09	Toxaphene	<100 ppb		SW8081
11/06/09	Zinc	38.6 ppm	N/A	6010/E200.7
11/06/09	Vanadium	23.6 ppm	N/A	6010/E200.7
11/06/09	Thallium	0.803 ppm	N/A	6010/E200.7
11/06/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/06/09	Antimony	0.4 ppm	N/A	6010/E200.7
11/06/09	Lead	7.81 ppm	N/A	6010/E200.7
11/06/09	Nickel	14.2 ppm	N/A	6010/E200.7
11/06/09	Sodium	270 ppm	N/A	6010/E200.7
11/06/09	Manganese	320 ppm	N/A	6010/E200.7
11/06/09	Magnesium	4318 ppm	N/A	6010/E200.7
11/06/09	Potassium	1267 ppm	N/A	6010/E200.7
11/05/09	Mercury	0.125 ppm	N/A	SW-7471
11/06/09	Iron	13384 ppm	N/A	6010/E200.7
11/06/09	Copper	16.9 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent	17.3 ppm	N/A	6010/E200.7

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087523

Sample's Information:
Sample ID: B-7.2

Site: B-7.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 2:30:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908518

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chromium	17.3 ppm	N/A	6010/E200.7
11/06/09	Cobalt	6.82 ppm	N/A	6010/E200.7
11/06/09	Cadmium	4.33 ppm	N/A	6010/E200.7
11/06/09	Calcium	3428 ppm	N/A	6010/E200.7
11/06/09	Beryllium	0.261 ppm	N/A	6010/E200.7
11/06/09	Barium	41.1 ppm	N/A	6010/E200.7
11/06/09	Arsenic	0.158 ppm	N/A	6010/E200.7
11/06/09	Aluminum	7109 ppm	N/A	6010/E200.7
11/06/09	Silver	<0.1 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087524

Sample's Information: **Sample ID:** B-6.1

Site: B-6.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 7:45:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908519

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	1,2,4-Trichlorobenzene	<350 ppb		8270
11/06/09	1,2-Dichlorobenzene	<350 ppb		8270
11/06/09	1,3-Dichlorobenzene	<350 ppb		8270
11/06/09	1,4-Dichlorobenzene	<350 ppb		8270
11/06/09	2,4,5-Trichlorophenol	<350 ppb		8270
11/06/09	2,4,6-Trichlorophenol	<350 ppb		8270
11/06/09	2,4-Dichlorophenol	<350 ppb		8270
11/06/09	2,4-Dimethylphenol	<350 ppb		8270
11/06/09	2,4-Dinitrophenol	<350 ppb		8270
11/06/09	2,4-Dinitrotoluene	<350 ppb		8270
11/06/09	2,6-Dichlorophenol	<350 ppb		8270
11/06/09	2,6-Dinitrotoluene	<350 ppb		8270
11/06/09	2-Chloronaphthalene	<350 ppb		8270
11/06/09	2-Chlorophenol	<350 ppb		8270
11/06/09	2-Methyl-4,6-dinitrophenol	<350 ppb		8270
11/06/09	2-Methylnaphthalene	<350 ppb		8270
11/06/09	2-Methylphenol (o-Cresol)	<350 ppb		8270
11/06/09	2-Nitroaniline	<350 ppb		8270
11/06/09	2-Nitrophenol	<350 ppb		8270
11/06/09	3&4-Methylphenol (m,p-Cresol)	<350 ppb		8270
11/06/09	3,3'-Dichlorobenzidine	<350 ppb		8270
11/06/09	3-Nitroaniline	<350 ppb		8270
11/06/09	4-Bromophenyl Phenyl Ether	<350 ppb		8270
11/06/09	4-Chloro-3-Methylphenol	<350 ppb		8270
11/06/09	4-Chloroaniline	<350 ppb		8270
11/06/09	4-Chlorophenylphenyl ether	<350 ppb		8270
11/06/09	4-Nitroaniline	<350 ppb		8270
11/06/09	4-Nitrophenol	<350 ppb		8270
11/06/09	Acenaphthene	<350 ppb		8270
11/06/09	Acenaphthylene	<350 ppb		8270
11/06/09	Aniline	<350 ppb		8270

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087524

Sample's Information: **Sample ID:** B-6.1

Site: B-6.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 7:45:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908519

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Anthracene	<350 ppb		8270
11/06/09	Benzidine	<350 ppb		8270
11/06/09	Benzo(a)anthracene	<350 ppb		8270
11/06/09	Benzo(a)pyrene	<350 ppb		8270
11/06/09	Benzo(b)fluoranthene	<350 ppb		8270
11/06/09	Benzo(g,h,i)perylene	<350 ppb		8270
11/06/09	Benzo(k)fluoranthene	<350 ppb		8270
11/06/09	Benzoic Acid	<350 ppb		8270
11/06/09	Benzyl Alcohol	<350 ppb		8270
11/06/09	Benzyl Butyl Phthalate	<350 ppb		8270
11/06/09	bis(2-Chloroethoxy)methane	<350 ppb		8270
11/06/09	bis(2-Chloroethyl) ether	<350 ppb		8270
11/06/09	bis(2-Chloroisopropyl) ether	<350 ppb		8270
11/06/09	bis(2-ethylhexyl)phthalate	<350 ppb		8270
11/06/09	Chrysene	<350 ppb		8270
11/06/09	Dibenz(a,h)anthracene	<350 ppb		8270
11/06/09	Dibenzofuran	<350 ppb		8270
11/06/09	Diethyl Phthalate	<350 ppb		8270
11/06/09	Dimethyl Phthalate	<350 ppb		8270
11/06/09	Di-n-Butyl phthalate	<350 ppb		8270
11/06/09	Di-n-octyl phthalate	<350 ppb		8270
11/06/09	Fluoranthene	<350 ppb		8270
11/06/09	Fluorene	<350 ppb		8270
11/06/09	Hexachlorobenzene	<350 ppb		8270
11/06/09	Hexachlorobutadiene	<350 ppb		8270
11/06/09	Hexachlorocyclopentadiene	<350 ppb		8270
11/06/09	Hexachloroethane	<350 ppb		8270
11/06/09	Indeno(1,2,3-cd)pyrene	<350 ppb		8270
11/06/09	Isophorone	<350 ppb		8270
11/06/09	m-Cresol	<350 ppb		8270
11/06/09	Naphthalene	<350 ppb		8270

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City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information: **JMS ID:** 087524
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

Sample's Information: **Sample ID:** B-6.1

Site: B-6.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 7:45:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908519

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Nitrobenzene	<350 ppb		8270
11/06/09	n-Nitrosodimethylamine	<350 ppb		8270
11/06/09	n-Nitrosodi-n-propylamine	<350 ppb		8270
11/06/09	n-Nitrosodiphenylamine	<350 ppb		8270
11/06/09	Pentachlorophenol	<350 ppb		8270
11/06/09	Phenanthrene	<350 ppb		8270
11/06/09	Phenol	<350 ppb		8270
11/06/09	Pyrene	<350 ppb		8270
11/03/09	1,1,1,2-Tetrachloroethane	<5.2 ppb		EPA 8260
11/03/09	1,1,1-Trichloroethane	<5.2 ppb		EPA 8260
11/03/09	1,1,2,2-Tetrachloroethane	<5.2 ppb		EPA 8260
11/03/09	1,1,2-Trichloroethane	<5.2 ppb		EPA 8260
11/03/09	1,1-Dichloroethane	<5.2 ppb		EPA 8260
11/03/09	1,1-Dichloroethene	<5.2 ppb		EPA 8260
11/03/09	1,1-Dichloropropene	<5.2 ppb		EPA 8260
11/03/09	1,2,3-Trichlorobenzene	<5.2 ppb		EPA 8260
11/03/09	1,2,3-Trichloropropane	<5.2 ppb		EPA 8260
11/03/09	1,2,4-Trichlorobenzene	<5.2 ppb		EPA 8260
11/03/09	1,2,4-Trimethylbenzene	<5.2 ppb		EPA 8260
11/03/09	1,2-Dibromo-3-Chloropropane	<5.2 ppb		EPA 8260
11/03/09	1,2-Dibromoethane	<5.2 ppb		EPA 8260
11/03/09	1,2-Dichlorobenzene	<5.2 ppb		EPA 8260
11/03/09	1,2-Dichloroethane	<5.2 ppb		EPA 8260
11/03/09	1,2-Dichloropropane	<5.2 ppb		EPA 8260
11/03/09	1,3,5-Trimethylbenzene	<5.2 ppb		EPA 8260
11/03/09	1,3-Dichlorobenzene	<5.2 ppb		EPA 8260
11/03/09	1,3-Dichloropropane	<5.2 ppb		EPA 8260
11/03/09	1,4-Dichlorobenzene	<5.2 ppb		EPA 8260
11/03/09	2,2-Dichloropropane	<5.2 ppb		EPA 8260
11/03/09	2-Butanone (MEK)	<5.2 ppb		EPA 8260

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087524

Sample's Information: **Sample ID:** B-6.1

Site: B-6.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 7:45:00 AM

Date Received: 11/2/2009
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Lab No.: J0908519

Date Analyzed	Test Name	Result	MCL	Method
11/03/09	2-Chlorotoluene	<5.2 ppb		EPA 8260
11/03/09	2-Hexanone	<5.2 ppb		EPA 8260
11/03/09	4-Chlorotoluene	<5.2 ppb		EPA 8260
11/03/09	4-Methyl-2-pentanone (MIBK)	<5.2 ppb		EPA 8260
11/03/09	Acetone	<5.2 ppb		EPA 8260
11/03/09	Acrolein	<5.2 ppb		EPA 8260
11/03/09	Acrylonitrile	<5.2 ppb		EPA 8260
11/03/09	Benzene	<5.2 ppb		EPA 8260
11/03/09	Bromobenzene	<5.2 ppb		EPA 8260
11/03/09	Bromochloromethane	<5.2 ppb		EPA 8260
11/03/09	Bromodichloromethane	<5.2 ppb		EPA 8260
11/03/09	Bromoform	<5.2 ppb		EPA 8260
11/03/09	Bromomethane	<5.2 ppb		EPA 8260
11/03/09	Carbon disulfide	<5.2 ppb		EPA 8260
11/03/09	Carbon tetrachloride	<5.2 ppb		EPA 8260
11/03/09	Chlorobenzene	<5.2 ppb		EPA 8260
11/03/09	Chlorodibromomethane	<5.2 ppb		EPA 8260
11/03/09	Chloroethane	<5.2 ppb		EPA 8260
11/03/09	Chloroform	<5.2 ppb		EPA 8260
11/03/09	Chloromethane	<5.2 ppb		EPA 8260
11/03/09	cis-1,2-Dichloroethene	<5.2 ppb		EPA 8260
11/03/09	cis-1,3-Dichloropropene	<5.2 ppb		EPA 8260
11/03/09	Dibromomethane	<5.2 ppb		EPA 8260
11/03/09	Dichlorodifluoromethane	<5.2 ppb		EPA 8260
11/03/09	Ethylbenzene	<5.2 ppb		EPA 8260
11/03/09	Isopropylbenzene	<5.2 ppb		EPA 8260
11/03/09	m&p xylene	<5.2 ppb		EPA 8260
11/03/09	Methylene Chloride	<5.2 ppb		EPA 8260
11/03/09	MTBE	<5.2 ppb		EPA 8260
11/03/09	Naphthalene	<5.2 ppb		EPA 8260
11/03/09	n-Butylbenzene	<5.2 ppb		EPA 8260

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087524

Sample's Information: **Sample ID:** B-6.1

Site: B-6.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 7:45:00 AM

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Lab No.: J0908519

Date Analyzed	Test Name	Result	MCL	Method
11/03/09	n-Propylbenzene	<5.2 ppb		EPA 8260
11/03/09	o-Xylene	<5.2 ppb		EPA 8260
11/03/09	p-Isoproplytoluene	<5.2 ppb		EPA 8260
11/03/09	sec-Butylbenzene	<5.2 ppb		EPA 8260
11/03/09	Styrene	<5.2 ppb		EPA 8260
11/03/09	tert-Butylbenzene	<5.2 ppb		EPA 8260
11/03/09	Tetrachloroethene	<5.2 ppb		EPA 8260
11/03/09	Toluene	<5.2 ppb		EPA 8260
11/03/09	trans-1,2-Dichloroethene	<5.2 ppb		EPA 8260
11/03/09	trans-1,3-Dichloropropene	<5.2 ppb		EPA 8260
11/03/09	Trichloroethene	<5.2 ppb		EPA 8260
11/03/09	Trichlorofluoromethane	<5.2 ppb		EPA 8260
11/03/09	Vinyl Acetate	<5.2 ppb		EPA 8260
11/03/09	Vinyl chloride	<5.2 ppb		EPA 8260
11/06/09	PCB-1016	<52.3 ppb		SW 8082
11/06/09	PCB-1221	<52.3 ppb		SW 8082
11/06/09	PCB-1232	<52.3 ppb		SW 8082
11/06/09	PCB-1242	<52.3 ppb		SW 8082
11/06/09	PCB-1248	<52.3 ppb		SW 8082
11/06/09	PCB-1254	<52.3 ppb		SW 8082
11/06/09	PCB-1260	<52.3 ppb		SW 8082
11/06/09	PCB-1262	<52.3 ppb		SW 8082
11/06/09	PCB-1268	<52.3 ppb		SW 8082
11/06/09	4,4'-DDD	<2.09 ppb		SW8081
11/06/09	4,4'-DDE	<2.09 ppb		SW8081
11/06/09	4,4'-DDT	<2.09 ppb		SW8081
11/06/09	a-BHC	<2.09 ppb		SW8081
11/06/09	Aldrin	<2.09 ppb		SW8081
11/06/09	b-BHC	<2.09 ppb		SW8081

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State: NY **Zip:**
Phone:

JMS ID: 087524

Sample's Information: **Sample ID:** B-6.1

Site: B-6.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 7:45:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908519

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chlordane	<2.09 ppb		SW8081
11/06/09	d-BHC	<2.09 ppb		SW8081
11/06/09	Dieldrin	<2.09 ppb		SW8081
11/06/09	Endosulfan I	<2.09 ppb		SW8081
11/06/09	Endosulfan II	<2.09 ppb		SW8081
11/06/09	Endosulfan Sulfate	<2.09 ppb		SW8081
11/06/09	Endrin	<2.09 ppb		SW8081
11/06/09	Endrin Aldehyde	<2.09 ppb		SW8081
11/06/09	Endrin Ketone	<2.09 ppb		SW8081
11/06/09	g-BHC	<2.09 ppb		SW8081
11/06/09	Heptachlor	<2.09 ppb		SW8081
11/06/09	Heptachlor epoxide	<2.09 ppb		SW8081
11/06/09	Methoxychlor	<2.09 ppb		SW8081
11/06/09	Mitotane	<2.09 ppb		SW8081
11/06/09	Toxaphene	<100 ppb		SW8081
11/06/09	Zinc	18.8 ppm	N/A	6010/E200.7
11/06/09	Vanadium	9.43 ppm	N/A	6010/E200.7
11/06/09	Thallium	0.493 ppm	N/A	6010/E200.7
11/06/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/06/09	Antimony	0.356 ppm	N/A	6010/E200.7
11/06/09	Lead	7.87 ppm	N/A	6010/E200.7
11/06/09	Nickel	7.15 ppm	N/A	6010/E200.7
11/06/09	Sodium	119 ppm	N/A	6010/E200.7
11/06/09	Manganese	259 ppm	N/A	6010/E200.7
11/06/09	Magnesium	1612 ppm	N/A	6010/E200.7
11/06/09	Potassium	636 ppm	N/A	6010/E200.7
11/05/09	Mercury	0.101 ppm	N/A	SW-7471
11/06/09	Iron	6663 ppm	N/A	6010/E200.7
11/06/09	Copper	9.97 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent	10.7 ppm	N/A	6010/E200.7

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WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue
Danbury, Connecticut 06810 | Telephone 203-798-2229

Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087524

Sample's Information:
Sample ID: B-6.1

Site: B-6.1
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 7:45:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908519

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chromium	10.7 ppm	N/A	6010/E200.7
11/06/09	Cobalt	3.23 ppm	N/A	6010/E200.7
11/06/09	Cadmium	2.71 ppm	N/A	6010/E200.7
11/06/09	Calcium	638 ppm	N/A	6010/E200.7
11/06/09	Beryllium	0.197 ppm	N/A	6010/E200.7
11/06/09	Barium	24.8 ppm	N/A	6010/E200.7
11/06/09	Arsenic	<0.1 ppm	N/A	6010/E200.7
11/06/09	Aluminum	3726 ppm	N/A	6010/E200.7
11/06/09	Silver	<0.1 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087525

Sample's Information: **Sample ID:** B-6.2

Site: B-6.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 8:10:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908520

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	1,2,4-Trichlorobenzene	<430 ppb		8270
11/06/09	1,2-Dichlorobenzene	<430 ppb		8270
11/06/09	1,3-Dichlorobenzene	<430 ppb		8270
11/06/09	1,4-Dichlorobenzene	<430 ppb		8270
11/06/09	2,4,5-Trichlorophenol	<430 ppb		8270
11/06/09	2,4,6-Trichlorophenol	<430 ppb		8270
11/06/09	2,4-Dichlorophenol	<430 ppb		8270
11/06/09	2,4-Dimethylphenol	<430 ppb		8270
11/06/09	2,4-Dinitrophenol	<430 ppb		8270
11/06/09	2,4-Dinitrotoluene	<430 ppb		8270
11/06/09	2,6-Dichlorophenol	<430 ppb		8270
11/06/09	2,6-Dinitrotoluene	<430 ppb		8270
11/06/09	2-Chloronaphthalene	<430 ppb		8270
11/06/09	2-Chlorophenol	<430 ppb		8270
11/06/09	2-Methyl-4,6-dinitrophenol	<430 ppb		8270
11/06/09	2-Methylnaphthalene	<430 ppb		8270
11/06/09	2-Methylphenol (o-Cresol)	<430 ppb		8270
11/06/09	2-Nitroaniline	<430 ppb		8270
11/06/09	2-Nitrophenol	<430 ppb		8270
11/06/09	3&4-Methylphenol (m,p-Cresol)	<430 ppb		8270
11/06/09	3,3'-Dichlorobenzidine	<430 ppb		8270
11/06/09	3-Nitroaniline	<430 ppb		8270
11/06/09	4-Bromophenyl Phenyl Ether	<430 ppb		8270
11/06/09	4-Chloro-3-Methylphenol	<430 ppb		8270
11/06/09	4-Chloroaniline	<430 ppb		8270
11/06/09	4-Chlorophenylphenyl ether	<430 ppb		8270
11/06/09	4-Nitroaniline	<430 ppb		8270
11/06/09	4-Nitrophenol	<430 ppb		8270
11/06/09	Acenaphthene	<430 ppb		8270
11/06/09	Acenaphthylene	<430 ppb		8270
11/06/09	Aniline	<430 ppb		8270

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087525

Sample's Information: **Sample ID:** B-6.2

Site: B-6.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 8:10:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908520

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Anthracene	<430 ppb		8270
11/06/09	Benzidine	<430 ppb		8270
11/06/09	Benzo(a)anthracene	<430 ppb		8270
11/06/09	Benzo(a)pyrene	<430 ppb		8270
11/06/09	Benzo(b)fluoranthene	<430 ppb		8270
11/06/09	Benzo(g,h,i)perylene	<430 ppb		8270
11/06/09	Benzo(k)fluoranthene	<430 ppb		8270
11/06/09	Benzoic Acid	<430 ppb		8270
11/06/09	Benzyl Alcohol	<430 ppb		8270
11/06/09	Benzyl Butyl Phthalate	<430 ppb		8270
11/06/09	bis(2-Chloroethoxy)methane	<430 ppb		8270
11/06/09	bis(2-Chloroethyl) ether	<430 ppb		8270
11/06/09	bis(2-Chloroisopropyl) ether	<430 ppb		8270
11/06/09	bis(2-ethylhexyl)phthalate	<430 ppb		8270
11/06/09	Chrysene	<430 ppb		8270
11/06/09	Dibenz(a,h)anthracene	<430 ppb		8270
11/06/09	Dibenzofuran	<430 ppb		8270
11/06/09	Diethyl Phthalate	<430 ppb		8270
11/06/09	Dimethyl Phthalate	<430 ppb		8270
11/06/09	Di-n-Butyl phthalate	<430 ppb		8270
11/06/09	Di-n-octyl phthalate	<430 ppb		8270
11/06/09	Fluoranthene	<430 ppb		8270
11/06/09	Fluorene	<430 ppb		8270
11/06/09	Hexachlorobenzene	<430 ppb		8270
11/06/09	Hexachlorobutadiene	<430 ppb		8270
11/06/09	Hexachlorocyclopentadiene	<430 ppb		8270
11/06/09	Hexachloroethane	<430 ppb		8270
11/06/09	Indeno(1,2,3-cd)pyrene	<430 ppb		8270
11/06/09	Isophorone	<430 ppb		8270
11/06/09	m-Cresol	<430 ppb		8270
11/06/09	Naphthalene	<430 ppb		8270

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Collector's Information: **JMS ID:** 087525
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

Sample's Information: **Sample ID:** B-6.2

Site: B-6.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 8:10:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908520

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Nitrobenzene	<430 ppb		8270
11/06/09	n-Nitrosodimethylamine	<430 ppb		8270
11/06/09	n-Nitrosodi-n-propylamine	<430 ppb		8270
11/06/09	n-Nitrosodiphenylamine	<430 ppb		8270
11/06/09	Pentachlorophenol	<430 ppb		8270
11/06/09	Phenanthrene	<430 ppb		8270
11/06/09	Phenol	<430 ppb		8270
11/06/09	Pyrene	<430 ppb		8270
11/03/09	1,1,1,2-Tetrachloroethane	<6.2 ppb		EPA 8260
11/03/09	1,1,1-Trichloroethane	<6.2 ppb		EPA 8260
11/03/09	1,1,2,2-Tetrachloroethane	<6.2 ppb		EPA 8260
11/03/09	1,1,2-Trichloroethane	<6.2 ppb		EPA 8260
11/03/09	1,1-Dichloroethane	<6.2 ppb		EPA 8260
11/03/09	1,1-Dichloroethene	<6.2 ppb		EPA 8260
11/03/09	1,1-Dichloropropene	<6.2 ppb		EPA 8260
11/03/09	1,2,3-Trichlorobenzene	<6.2 ppb		EPA 8260
11/03/09	1,2,3-Trichloropropane	<6.2 ppb		EPA 8260
11/03/09	1,2,4-Trichlorobenzene	<6.2 ppb		EPA 8260
11/03/09	1,2,4-Trimethylbenzene	<6.2 ppb		EPA 8260
11/03/09	1,2-Dibromo-3-Chloropropane	<6.2 ppb		EPA 8260
11/03/09	1,2-Dibromoethane	<6.2 ppb		EPA 8260
11/03/09	1,2-Dichlorobenzene	<6.2 ppb		EPA 8260
11/03/09	1,2-Dichloroethane	<6.2 ppb		EPA 8260
11/03/09	1,2-Dichloropropane	<6.2 ppb		EPA 8260
11/03/09	1,3,5-Trimethylbenzene	<6.2 ppb		EPA 8260
11/03/09	1,3-Dichlorobenzene	<6.2 ppb		EPA 8260
11/03/09	1,3-Dichloropropane	<6.2 ppb		EPA 8260
11/03/09	1,4-Dichlorobenzene	<6.2 ppb		EPA 8260
11/03/09	2,2-Dichloropropane	<6.2 ppb		EPA 8260
11/03/09	2-Butanone (MEK)	<6.2 ppb		EPA 8260

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087525

Sample's Information: **Sample ID:** B-6.2

Site: B-6.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 8:10:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908520

Date Analyzed	Test Name	Result	MCL	Method
11/03/09	2-Chlorotoluene	<6.2 ppb		EPA 8260
11/03/09	2-Hexanone	<6.2 ppb		EPA 8260
11/03/09	4-Chlorotoluene	<6.2 ppb		EPA 8260
11/03/09	4-Methyl-2-pentanone (MIBK)	<6.2 ppb		EPA 8260
11/03/09	Acetone	<6.2 ppb		EPA 8260
11/03/09	Acrolein	<6.2 ppb		EPA 8260
11/03/09	Acrylonitrile	<6.2 ppb		EPA 8260
11/03/09	Benzene	<6.2 ppb		EPA 8260
11/03/09	Bromobenzene	<6.2 ppb		EPA 8260
11/03/09	Bromochloromethane	<6.2 ppb		EPA 8260
11/03/09	Bromodichloromethane	<6.2 ppb		EPA 8260
11/03/09	Bromoform	<6.2 ppb		EPA 8260
11/03/09	Bromomethane	<6.2 ppb		EPA 8260
11/03/09	Carbon disulfide	<6.2 ppb		EPA 8260
11/03/09	Carbon tetrachloride	<6.2 ppb		EPA 8260
11/03/09	Chlorobenzene	<6.2 ppb		EPA 8260
11/03/09	Chlorodibromomethane	<6.2 ppb		EPA 8260
11/03/09	Chloroethane	<6.2 ppb		EPA 8260
11/03/09	Chloroform	<6.2 ppb		EPA 8260
11/03/09	Chloromethane	<6.2 ppb		EPA 8260
11/03/09	cis-1,2-Dichloroethene	<6.2 ppb		EPA 8260
11/03/09	cis-1,3-Dichloropropene	<6.2 ppb		EPA 8260
11/03/09	Dibromomethane	<6.2 ppb		EPA 8260
11/03/09	Dichlorodifluoromethane	<6.2 ppb		EPA 8260
11/03/09	Ethylbenzene	<6.2 ppb		EPA 8260
11/03/09	Isopropylbenzene	<6.2 ppb		EPA 8260
11/03/09	m&p xylene	<6.2 ppb		EPA 8260
11/03/09	Methylene Chloride	<6.2 ppb		EPA 8260
11/03/09	MTBE	<6.2 ppb		EPA 8260
11/03/09	Naphthalene	<6.2 ppb		EPA 8260
11/03/09	n-Butylbenzene	<6.2 ppb		EPA 8260

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087525

Sample's Information: **Sample ID:** B-6.2

Site: B-6.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 8:10:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908520

Date Analyzed	Test Name	Result	MCL	Method
11/03/09	n-Propylbenzene	<6.2 ppb		EPA 8260
11/03/09	o-Xylene	<6.2 ppb		EPA 8260
11/03/09	p-Isoproplytoluene	<6.2 ppb		EPA 8260
11/03/09	sec-Butylbenzene	<6.2 ppb		EPA 8260
11/03/09	Styrene	<6.2 ppb		EPA 8260
11/03/09	tert-Butylbenzene	<6.2 ppb		EPA 8260
11/03/09	Tetrachloroethene	<6.2 ppb		EPA 8260
11/03/09	Toluene	<6.2 ppb		EPA 8260
11/03/09	trans-1,2-Dichloroethene	<6.2 ppb		EPA 8260
11/03/09	trans-1,3-Dichloropropene	<6.2 ppb		EPA 8260
11/03/09	Trichloroethene	<6.2 ppb		EPA 8260
11/03/09	Trichlorofluoromethane	<6.2 ppb		EPA 8260
11/03/09	Vinyl Acetate	<6.2 ppb		EPA 8260
11/03/09	Vinyl chloride	<6.2 ppb		EPA 8260
11/06/09	PCB-1016	<63.6 ppb		SW 8082
11/06/09	PCB-1221	<63.6 ppb		SW 8082
11/06/09	PCB-1232	<63.6 ppb		SW 8082
11/06/09	PCB-1242	<63.6 ppb		SW 8082
11/06/09	PCB-1248	<63.6 ppb		SW 8082
11/06/09	PCB-1254	<63.6 ppb		SW 8082
11/06/09	PCB-1260	<63.6 ppb		SW 8082
11/06/09	PCB-1262	<63.6 ppb		SW 8082
11/06/09	PCB-1268	<63.6 ppb		SW 8082
11/07/09	4,4'-DDD	<2.54 ppb		SW8081
11/07/09	4,4'-DDE	<2.54 ppb		SW8081
11/07/09	4,4'-DDT	<2.54 ppb		SW8081
11/07/09	a-BHC	<2.54 ppb		SW8081
11/07/09	Aldrin	<2.54 ppb		SW8081
11/07/09	b-BHC	<2.54 ppb		SW8081

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City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087525

Sample's Information: **Sample ID:** B-6.2

Site: B-6.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 8:10:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908520

Date Analyzed	Test Name	Result	MCL	Method
11/07/09	Chlordane	<2.54 ppb		SW8081
11/07/09	d-BHC	<2.54 ppb		SW8081
11/07/09	Dieldrin	<2.54 ppb		SW8081
11/07/09	Endosulfan I	<2.54 ppb		SW8081
11/07/09	Endosulfan II	<2.54 ppb		SW8081
11/07/09	Endosulfan Sulfate	<2.54 ppb		SW8081
11/07/09	Endrin	<2.54 ppb		SW8081
11/07/09	Endrin Aldehyde	<2.54 ppb		SW8081
11/07/09	Endrin Ketone	<2.54 ppb		SW8081
11/07/09	g-BHC	<2.54 ppb		SW8081
11/07/09	Heptachlor	<2.54 ppb		SW8081
11/07/09	Heptachlor epoxide	<2.54 ppb		SW8081
11/07/09	Methoxychlor	<2.54 ppb		SW8081
11/07/09	Mitotane	<2.54 ppb		SW8081
11/07/09	Toxaphene	<100 ppb		SW8081
11/06/09	Zinc	35 ppm	N/A	6010/E200.7
11/06/09	Vanadium	23.5 ppm	N/A	6010/E200.7
11/06/09	Thallium	0.263 ppm	N/A	6010/E200.7
11/06/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/06/09	Antimony	0.563 ppm	N/A	6010/E200.7
11/06/09	Lead	6.79 ppm	N/A	6010/E200.7
11/06/09	Nickel	14.3 ppm	N/A	6010/E200.7
11/06/09	Sodium	192 ppm	N/A	6010/E200.7
11/06/09	Manganese	396 ppm	N/A	6010/E200.7
11/06/09	Magnesium	4076 ppm	N/A	6010/E200.7
11/06/09	Potassium	1363 ppm	N/A	6010/E200.7
11/05/09	Mercury	0.125 ppm	N/A	SW-7471
11/06/09	Iron	14644 ppm	N/A	6010/E200.7
11/06/09	Copper	15.4 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent	16.6 ppm	N/A	6010/E200.7

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087525

Sample's Information: **Sample ID:** B-6.2

Site: B-6.2
Preservative: N/A
Temperature:
Matrix: Soil

Date Collected: 10/25/2009
Time Collected: 8:10:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908520

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Chromium	16.6 ppm	N/A	6010/E200.7
11/06/09	Cobalt	7.33 ppm	N/A	6010/E200.7
11/06/09	Cadmium	3.6 ppm	N/A	6010/E200.7
11/06/09	Calcium	3170 ppm	N/A	6010/E200.7
11/06/09	Beryllium	0.418 ppm	N/A	6010/E200.7
11/06/09	Barium	37 ppm	N/A	6010/E200.7
11/06/09	Arsenic	<0.1 ppm	N/A	6010/E200.7
11/06/09	Aluminum	7393 ppm	N/A	6010/E200.7
11/06/09	Silver	<0.1 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

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Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087526

Sample's Information: **Sample ID:** MW1

Site: MW1
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 11:30:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908503

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	1,2,4-Trichlorobenzene	<5 ppb		8270
11/04/09	1,2-Dichlorobenzene	<5 ppb		8270
11/04/09	1,3-Dichlorobenzene	<5 ppb		8270
11/04/09	1,4-Dichlorobenzene	<5 ppb		8270
11/04/09	2,4,5-Trichlorophenol	<5 ppb		8270
11/04/09	2,4,6-Trichlorophenol	<5 ppb		8270
11/04/09	2,4-Dichlorophenol	<5 ppb		8270
11/04/09	2,4-Dimethylphenol	<5 ppb		8270
11/04/09	2,4-Dinitrophenol	<5 ppb		8270
11/04/09	2,4-Dinitrotoluene	<5 ppb		8270
11/04/09	2,6-Dichlorophenol	<5 ppb		8270
11/04/09	2,6-Dinitrotoluene	<5 ppb		8270
11/04/09	2-Chloronaphthalene	<5 ppb		8270
11/04/09	2-Chlorophenol	<5 ppb		8270
11/04/09	2-Methyl-4,6-dinitrophenol	<5 ppb		8270
11/04/09	2-Methylnaphthalene	<5 ppb		8270
11/04/09	2-Methylphenol (o-Cresol)	<5 ppb		8270
11/04/09	2-Nitroaniline	<5 ppb		8270
11/04/09	2-Nitrophenol	<5 ppb		8270
11/04/09	3&4-Methylphenol (m,p-Cresol)	<5 ppb		8270
11/04/09	3,3'-Dichlorobenzidine	<5 ppb		8270
11/04/09	3-Nitroaniline	<5 ppb		8270
11/04/09	4-Bromophenyl Phenyl Ether	<5 ppb		8270
11/04/09	4-Chloro-3-Methylphenol	<5 ppb		8270
11/04/09	4-Chloroaniline	<5 ppb		8270
11/04/09	4-Chlorophenylphenyl ether	<5 ppb		8270
11/04/09	4-Nitroaniline	<5 ppb		8270
11/04/09	4-Nitrophenol	<5 ppb		8270
11/04/09	Acenaphthene	<5 ppb		8270
11/04/09	Acenaphthylene	<5 ppb		8270
11/04/09	Aniline	<5 ppb		8270

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Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087526

Sample's Information: **Sample ID:** MW1

Site: MW1
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 11:30:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908503

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	Anthracene	<5 ppb		8270
11/04/09	Benzidine	<5 ppb		8270
11/04/09	Benzo(a)anthracene	<5 ppb		8270
11/04/09	Benzo(a)pyrene	<5 ppb		8270
11/04/09	Benzo(b)fluoranthene	<5 ppb		8270
11/04/09	Benzo(g,h,i)perylene	<5 ppb		8270
11/04/09	Benzo(k)fluoranthene	<5 ppb		8270
11/04/09	Benzoic Acid	<5 ppb		8270
11/04/09	Benzyl Alcohol	<5 ppb		8270
11/04/09	Benzyl Butyl Phthalate	<5 ppb		8270
11/04/09	bis(2-Chloroethoxy)methane	<5 ppb		8270
11/04/09	bis(2-Chloroethyl) ether	<5 ppb		8270
11/04/09	bis(2-Chloroisopropyl) ether	<5 ppb		8270
11/04/09	bis(2-ethylhexyl)phthalate	<5 ppb		8270
11/04/09	Chrysene	<5 ppb		8270
11/04/09	Dibenz(a,h)anthracene	<5 ppb		8270
11/04/09	Dibenzofuran	<5 ppb		8270
11/04/09	Diethyl Phthalate	<5 ppb		8270
11/04/09	Dimethyl Phthalate	<5 ppb		8270
11/04/09	Di-n-Butyl phthalate	<5 ppb		8270
11/04/09	Di-n-octyl phthalate	<5 ppb		8270
11/04/09	Fluoranthene	<5 ppb		8270
11/04/09	Fluorene	<5 ppb		8270
11/04/09	Hexachlorobenzene	<5 ppb		8270
11/04/09	Hexachlorobutadiene	<5 ppb		8270
11/04/09	Hexachlorocyclopentadiene	<5 ppb		8270
11/04/09	Hexachloroethane	<5 ppb		8270
11/04/09	Indeno(1,2,3-cd)pyrene	<5 ppb		8270
11/04/09	Isophorone	<5 ppb		8270
11/04/09	m-Cresol	<5 ppb		8270
11/04/09	Naphthalene	<5 ppb		8270

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087526

Sample's Information: **Sample ID:** MW1

Site: MW1
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 11:30:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908503

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	Nitrobenzene	<5 ppb		8270
11/04/09	n-Nitrosodimethylamine	<5 ppb		8270
11/04/09	n-Nitrosodi-n-propylamine	<5 ppb		8270
11/04/09	n-Nitrosodiphenylamine	<5 ppb		8270
11/04/09	Pentachlorophenol	<5 ppb		8270
11/04/09	Phenanthrene	<5 ppb		8270
11/04/09	Phenol	<5 ppb		8270
11/04/09	Pyrene	<5 ppb		8270
11/04/09	Pyridine	<5 ppb		8270
11/02/09	1,1,1,2-Tetrachloroethane	<5 ppb		EPA 8260
11/02/09	1,1,1-Trichloroethane	<5 ppb		EPA 8260
11/02/09	1,1,2,2-Tetrachloroethane	<5 ppb		EPA 8260
11/02/09	1,1,2-Trichloroethane	<5 ppb		EPA 8260
11/02/09	1,1-Dichloroethane	<5 ppb		EPA 8260
11/02/09	1,1-Dichloroethene	<5 ppb		EPA 8260
11/02/09	1,1-Dichloropropene	<5 ppb		EPA 8260
11/02/09	1,2,3-Trichlorobenzene	<5 ppb		EPA 8260
11/02/09	1,2,3-Trichloropropane	<5 ppb		EPA 8260
11/02/09	1,2,4-Trichlorobenzene	<5 ppb		EPA 8260
11/02/09	1,2,4-Trimethylbenzene	<5 ppb		EPA 8260
11/02/09	1,2-Dibromo-3-Chloropropane	<5 ppb		EPA 8260
11/02/09	1,2-Dibromoethane	<5 ppb		EPA 8260
11/02/09	1,2-Dichlorobenzene	<5 ppb		EPA 8260
11/02/09	1,2-Dichloroethane	<5 ppb		EPA 8260
11/02/09	1,2-Dichloropropane	<5 ppb		EPA 8260
11/02/09	1,3,5-Trimethylbenzene	<5 ppb		EPA 8260
11/02/09	1,3-Dichlorobenzene	<5 ppb		EPA 8260
11/02/09	1,3-Dichloropropane	<5 ppb		EPA 8260
11/02/09	1,4-Dichlorobenzene	<5 ppb		EPA 8260
11/02/09	2,2-Dichloropropane	<5 ppb		EPA 8260

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087526

Sample's Information: **Sample ID:** MW1

Site: MW1
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 11:30:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908503

Date Analyzed	Test Name	Result	MCL	Method
11/02/09	2-Butanone (MEK)	<5 ppb		EPA 8260
11/02/09	2-Chlorotoluene	<5 ppb		EPA 8260
11/02/09	2-Hexanone	<5 ppb		EPA 8260
11/02/09	4-Chlorotoluene	<5 ppb		EPA 8260
11/02/09	4-Methyl-2-pentanone (MIBK)	<5 ppb		EPA 8260
11/02/09	Acetone	<5 ppb		EPA 8260
11/02/09	Acrolein	<5 ppb		EPA 8260
11/02/09	Acrylonitrile	<5 ppb		EPA 8260
11/02/09	Benzene	<5 ppb		EPA 8260
11/02/09	Bromobenzene	<5 ppb		EPA 8260
11/02/09	Bromochloromethane	<5 ppb		EPA 8260
11/02/09	Bromodichloromethane	<5 ppb		EPA 8260
11/02/09	Bromoform	<5 ppb		EPA 8260
11/02/09	Bromomethane	<5 ppb		EPA 8260
11/02/09	Carbon disulfide	<5 ppb		EPA 8260
11/02/09	Carbon tetrachloride	<5 ppb		EPA 8260
11/02/09	Chlorobenzene	<5 ppb		EPA 8260
11/02/09	Chlorodibromomethane	<5 ppb		EPA 8260
11/02/09	Chloroethane	<5 ppb		EPA 8260
11/02/09	Chloroform	<5 ppb		EPA 8260
11/02/09	Chloromethane	<5 ppb		EPA 8260
11/02/09	cis-1,2-Dichloroethene	<5 ppb		EPA 8260
11/02/09	cis-1,3-Dichloropropene	<5 ppb		EPA 8260
11/02/09	Dibromomethane	<5 ppb		EPA 8260
11/02/09	Dichlorodifluoromethane	<5 ppb		EPA 8260
11/02/09	Ethylbenzene	<5 ppb		EPA 8260
11/02/09	Isopropylbenzene	<5 ppb		EPA 8260
11/02/09	m&p xylene	<5 ppb		EPA 8260
11/02/09	Methylene Chloride	<5 ppb		EPA 8260
11/02/09	MTBE	<5 ppb		EPA 8260
11/02/09	Naphthalene	<5 ppb		EPA 8260

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State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087526

Sample's Information: **Sample ID:** MW1

Site: MW1
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 11:30:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908503

Date Analyzed	Test Name	Result	MCL	Method
11/02/09	n-Butylbenzene	<5 ppb		EPA 8260
11/02/09	n-Propylbenzene	<5 ppb		EPA 8260
11/02/09	o-Xylene	<5 ppb		EPA 8260
11/02/09	p-Isoproplytoluene	<5 ppb		EPA 8260
11/02/09	sec-Butylbenzene	<5 ppb		EPA 8260
11/02/09	Styrene	<5 ppb		EPA 8260
11/02/09	tert-Butylbenzene	<5 ppb		EPA 8260
11/02/09	Tetrachloroethene	<5 ppb		EPA 8260
11/02/09	Toluene	<5 ppb		EPA 8260
11/02/09	trans-1,2-Dichloroethene	<5 ppb		EPA 8260
11/02/09	trans-1,3-Dichloropropene	<5 ppb		EPA 8260
11/02/09	Trichloroethene	<5 ppb		EPA 8260
11/02/09	Trichlorofluoromethane	<5 ppb		EPA 8260
11/02/09	Vinyl Acetate	<5 ppb		EPA 8260
11/02/09	Vinyl chloride	<5 ppb		EPA 8260
11/04/09	PCB-1016	<0.5 ppb		SW 8082
11/04/09	PCB-1221	<0.5 ppb		SW 8082
11/04/09	PCB-1232	<0.5 ppb		SW 8082
11/04/09	PCB-1242	<0.5 ppb		SW 8082
11/04/09	PCB-1248	<0.5 ppb		SW 8082
11/04/09	PCB-1254	<0.5 ppb		SW 8082
11/04/09	PCB-1260	<0.5 ppb		SW 8082
11/04/09	PCB-1262	<0.5 ppb		SW 8082
11/04/09	PCB-1268	<0.5 ppb		SW 8082
11/04/09	4,4'-DDD	<0.02 ppb		SW8081
11/04/09	4,4'-DDE	<0.02 ppb		SW8081
11/04/09	4,4'-DDT	<0.02 ppb		SW8081
11/04/09	a-BHC	<0.02 ppb		SW8081
11/04/09	Aldrin	<0.02 ppb		SW8081

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087526

Sample's Information: **Sample ID:** MW1

Site: MW1
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 11:30:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908503

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	b-BHC	<0.02 ppb		SW8081
11/04/09	Chlordane	<0.02 ppb		SW8081
11/04/09	d-BHC	<0.02 ppb		SW8081
11/04/09	Dieldrin	<0.02 ppb		SW8081
11/04/09	Endosulfan I	<0.02 ppb		SW8081
11/04/09	Endosulfan II	<0.02 ppb		SW8081
11/04/09	Endosulfan Sulfate	<0.02 ppb		SW8081
11/04/09	Endrin	<0.02 ppb		SW8081
11/04/09	Endrin Aldehyde	<0.02 ppb		SW8081
11/04/09	Endrin Ketone	<0.02 ppb		SW8081
11/04/09	g-BHC	<0.02 ppb		SW8081
11/04/09	Heptachlor	<0.02 ppb		SW8081
11/04/09	Heptachlor epoxide	<0.02 ppb		SW8081
11/04/09	Methoxychlor	<0.02 ppb		SW8081
11/04/09	Mitotane	<0.02 ppb		SW8081
11/04/09	Toxaphene	<1 ppb		SW8081
11/05/09	Zinc	0.232 ppm	N/A	6010/E200.7
11/05/09	Vanadium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Thallium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Antimony	<0.1 ppm	N/A	6010/E200.7
11/05/09	Lead	0.137 ppm	N/A	6010/E200.7
11/05/09	Nickel	<0.1 ppm	N/A	6010/E200.7
11/05/09	Sodium	12.2 ppm	N/A	6010/E200.7
11/05/09	Manganese	3.06 ppm	N/A	6010/E200.7
11/05/09	Magnesium	19.7 ppm	N/A	6010/E200.7
11/05/09	Potassium	9.39 ppm	N/A	6010/E200.7
11/06/09	Mercury	<0.001 ppm	N/A	SW-7471
11/05/09	Iron	52.4 ppm	N/A	6010/E200.7
11/05/09	Copper	0.117 ppm	N/A	6010/E200.7

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Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information: **JMS ID:** 087526
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

Sample's Information: **Sample ID:** MW1

Site: MW1
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 11:30:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908503

Date Analyzed	Test Name	Result	MCL	Method
11/05/09	Chromium, Trivalent	<0.1 ppm	N/A	6010/E200.7
11/05/09	Chromium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Cobalt	<0.1 ppm	N/A	6010/E200.7
11/05/09	Cadmium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Calcium	22.7 ppm	N/A	6010/E200.7
11/05/09	Beryllium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Barium	0.262 ppm	N/A	6010/E200.7
11/05/09	Arsenic	<0.1 ppm	N/A	6010/E200.7
11/05/09	Aluminum	29.5 ppm	N/A	6010/E200.7
11/05/09	Silver	<0.1 ppm	N/A	6010/E200.7
11/06/09	Aluminum (Filtered)	1.82 ppm	N/A	6010/E200.7
11/06/09	Antimony (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Arsenic (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Barium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Beryllium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Cadmium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Calcium (Filtered)	6.84 ppm	N/A	6010/E200.7
11/06/09	Chromium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Cobalt (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Copper (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Iron (Filtered)	1.65 ppm	N/A	6010/E200.7
11/06/09	Lead (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Magnesium (Filtered)	3.09 ppm	N/A	6010/E200.7
11/06/09	Manganese (Filtered)	0.109 ppm	N/A	6010/E200.7
11/06/09	Mercury (Filtered)	<0.001 ppm	N/A	SW-7471
11/06/09	Nickel (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Potassium (Filtered)	2.22 ppm	N/A	6010/E200.7
11/06/09	Selenium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Silver (Filtered)	<0.1 ppm	N/A	6010/E200.7

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State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087526

Sample's Information: **Sample ID:** MW1

Site: MW1
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 11:30:00 AM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908503

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Sodium (Filtered)	4.87 ppm	N/A	6010/E200.7
11/06/09	Thallium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Vanadium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Zinc (Filtered)	<0.1 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087527

Sample's Information: **Sample ID:** MW2

Site: MW2
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 12:50:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908504

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	1,2,4-Trichlorobenzene	<5 ppb		8270
11/04/09	1,2-Dichlorobenzene	<5 ppb		8270
11/04/09	1,3-Dichlorobenzene	<5 ppb		8270
11/04/09	1,4-Dichlorobenzene	<5 ppb		8270
11/04/09	2,4,5-Trichlorophenol	<5 ppb		8270
11/04/09	2,4,6-Trichlorophenol	<5 ppb		8270
11/04/09	2,4-Dichlorophenol	<5 ppb		8270
11/04/09	2,4-Dimethylphenol	<5 ppb		8270
11/04/09	2,4-Dinitrophenol	<5 ppb		8270
11/04/09	2,4-Dinitrotoluene	<5 ppb		8270
11/04/09	2,6-Dichlorophenol	<5 ppb		8270
11/04/09	2,6-Dinitrotoluene	<5 ppb		8270
11/04/09	2-Chloronaphthalene	<5 ppb		8270
11/04/09	2-Chlorophenol	<5 ppb		8270
11/04/09	2-Methyl-4,6-dinitrophenol	<5 ppb		8270
11/04/09	2-Methylnaphthalene	<5 ppb		8270
11/04/09	2-Methylphenol (o-Cresol)	<5 ppb		8270
11/04/09	2-Nitroaniline	<5 ppb		8270
11/04/09	2-Nitrophenol	<5 ppb		8270
11/04/09	3&4-Methylphenol (m,p-Cresol)	<5 ppb		8270
11/04/09	3,3'-Dichlorobenzidine	<5 ppb		8270
11/04/09	3-Nitroaniline	<5 ppb		8270
11/04/09	4-Bromophenyl Phenyl Ether	<5 ppb		8270
11/04/09	4-Chloro-3-Methylphenol	<5 ppb		8270
11/04/09	4-Chloroaniline	<5 ppb		8270
11/04/09	4-Chlorophenylphenyl ether	<5 ppb		8270
11/04/09	4-Nitroaniline	<5 ppb		8270
11/04/09	4-Nitrophenol	<5 ppb		8270
11/04/09	Acenaphthene	<5 ppb		8270
11/04/09	Acenaphthylene	<5 ppb		8270
11/04/09	Aniline	<5 ppb		8270

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
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Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087527

Sample's Information: **Sample ID:** MW2

Site: MW2
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 12:50:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908504

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	Anthracene	<5 ppb		8270
11/04/09	Benzidine	<5 ppb		8270
11/04/09	Benzo(a)anthracene	<5 ppb		8270
11/04/09	Benzo(a)pyrene	<5 ppb		8270
11/04/09	Benzo(b)fluoranthene	<5 ppb		8270
11/04/09	Benzo(g,h,i)perylene	<5 ppb		8270
11/04/09	Benzo(k)fluoranthene	<5 ppb		8270
11/04/09	Benzoic Acid	<5 ppb		8270
11/04/09	Benzyl Alcohol	<5 ppb		8270
11/04/09	Benzyl Butyl Phthalate	<5 ppb		8270
11/04/09	bis(2-Chloroethoxy)methane	<5 ppb		8270
11/04/09	bis(2-Chloroethyl) ether	<5 ppb		8270
11/04/09	bis(2-Chloroisopropyl) ether	<5 ppb		8270
11/04/09	bis(2-ethylhexyl)phthalate	<5 ppb		8270
11/04/09	Chrysene	<5 ppb		8270
11/04/09	Dibenz(a,h)anthracene	<5 ppb		8270
11/04/09	Dibenzofuran	<5 ppb		8270
11/04/09	Diethyl Phthalate	<5 ppb		8270
11/04/09	Dimethyl Phthalate	<5 ppb		8270
11/04/09	Di-n-Butyl phthalate	<5 ppb		8270
11/04/09	Di-n-octyl phthalate	<5 ppb		8270
11/04/09	Fluoranthene	<5 ppb		8270
11/04/09	Fluorene	<5 ppb		8270
11/04/09	Hexachlorobenzene	<5 ppb		8270
11/04/09	Hexachlorobutadiene	<5 ppb		8270
11/04/09	Hexachlorocyclopentadiene	<5 ppb		8270
11/04/09	Hexachloroethane	<5 ppb		8270
11/04/09	Indeno(1,2,3-cd)pyrene	<5 ppb		8270
11/04/09	Isophorone	<5 ppb		8270
11/04/09	m-Cresol	<5 ppb		8270
11/04/09	Naphthalene	<5 ppb		8270

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087527

Sample's Information: **Sample ID:** MW2

Site: MW2
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 12:50:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908504

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	Nitrobenzene	<5 ppb		8270
11/04/09	n-Nitrosodimethylamine	<5 ppb		8270
11/04/09	n-Nitrosodi-n-propylamine	<5 ppb		8270
11/04/09	n-Nitrosodiphenylamine	<5 ppb		8270
11/04/09	Pentachlorophenol	<5 ppb		8270
11/04/09	Phenanthrene	<5 ppb		8270
11/04/09	Phenol	<5 ppb		8270
11/04/09	Pyrene	<5 ppb		8270
11/04/09	Pyridine	<5 ppb		8270
11/02/09	1,1,1,2-Tetrachloroethane	<5 ppb		EPA 8260
11/02/09	1,1,1-Trichloroethane	<5 ppb		EPA 8260
11/02/09	1,1,2,2-Tetrachloroethane	<5 ppb		EPA 8260
11/02/09	1,1,2-Trichloroethane	<5 ppb		EPA 8260
11/02/09	1,1-Dichloroethane	<5 ppb		EPA 8260
11/02/09	1,1-Dichloroethene	<5 ppb		EPA 8260
11/02/09	1,1-Dichloropropene	<5 ppb		EPA 8260
11/02/09	1,2,3-Trichlorobenzene	<5 ppb		EPA 8260
11/02/09	1,2,3-Trichloropropane	<5 ppb		EPA 8260
11/02/09	1,2,4-Trichlorobenzene	<5 ppb		EPA 8260
11/02/09	1,2,4-Trimethylbenzene	<5 ppb		EPA 8260
11/02/09	1,2-Dibromo-3-Chloropropane	<5 ppb		EPA 8260
11/02/09	1,2-Dibromoethane	<5 ppb		EPA 8260
11/02/09	1,2-Dichlorobenzene	<5 ppb		EPA 8260
11/02/09	1,2-Dichloroethane	<5 ppb		EPA 8260
11/02/09	1,2-Dichloropropane	<5 ppb		EPA 8260
11/02/09	1,3,5-Trimethylbenzene	<5 ppb		EPA 8260
11/02/09	1,3-Dichlorobenzene	<5 ppb		EPA 8260
11/02/09	1,3-Dichloropropane	<5 ppb		EPA 8260
11/02/09	1,4-Dichlorobenzene	<5 ppb		EPA 8260
11/02/09	2,2-Dichloropropane	<5 ppb		EPA 8260

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087527

Sample's Information: **Sample ID:** MW2

Site: MW2
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 12:50:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908504

Date Analyzed	Test Name	Result	MCL	Method
11/02/09	2-Butanone (MEK)	<5 ppb		EPA 8260
11/02/09	2-Chlorotoluene	<5 ppb		EPA 8260
11/02/09	2-Hexanone	<5 ppb		EPA 8260
11/02/09	4-Chlorotoluene	<5 ppb		EPA 8260
11/02/09	4-Methyl-2-pentanone (MIBK)	<5 ppb		EPA 8260
11/02/09	Acetone	<5 ppb		EPA 8260
11/02/09	Acrolein	<5 ppb		EPA 8260
11/02/09	Acrylonitrile	<5 ppb		EPA 8260
11/02/09	Benzene	<5 ppb		EPA 8260
11/02/09	Bromobenzene	<5 ppb		EPA 8260
11/02/09	Bromochloromethane	<5 ppb		EPA 8260
11/02/09	Bromodichloromethane	<5 ppb		EPA 8260
11/02/09	Bromoform	<5 ppb		EPA 8260
11/02/09	Bromomethane	<5 ppb		EPA 8260
11/02/09	Carbon disulfide	<5 ppb		EPA 8260
11/02/09	Carbon tetrachloride	<5 ppb		EPA 8260
11/02/09	Chlorobenzene	<5 ppb		EPA 8260
11/02/09	Chlorodibromomethane	<5 ppb		EPA 8260
11/02/09	Chloroethane	<5 ppb		EPA 8260
11/02/09	Chloroform	<5 ppb		EPA 8260
11/02/09	Chloromethane	<5 ppb		EPA 8260
11/02/09	cis-1,2-Dichloroethene	<5 ppb		EPA 8260
11/02/09	cis-1,3-Dichloropropene	<5 ppb		EPA 8260
11/02/09	Dibromomethane	<5 ppb		EPA 8260
11/02/09	Dichlorodifluoromethane	<5 ppb		EPA 8260
11/02/09	Ethylbenzene	<5 ppb		EPA 8260
11/02/09	Isopropylbenzene	<5 ppb		EPA 8260
11/02/09	m&p xylene	<5 ppb		EPA 8260
11/02/09	Methylene Chloride	<5 ppb		EPA 8260
11/02/09	MTBE	<5 ppb		EPA 8260
11/02/09	Naphthalene	<5 ppb		EPA 8260

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City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087527

Sample's Information: **Sample ID:** MW2

Site: MW2
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 12:50:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908504

Date Analyzed	Test Name	Result	MCL	Method
11/02/09	n-Butylbenzene	<5 ppb		EPA 8260
11/02/09	n-Propylbenzene	<5 ppb		EPA 8260
11/02/09	o-Xylene	<5 ppb		EPA 8260
11/02/09	p-Isoproplytoluene	<5 ppb		EPA 8260
11/02/09	sec-Butylbenzene	<5 ppb		EPA 8260
11/02/09	Styrene	<5 ppb		EPA 8260
11/02/09	tert-Butylbenzene	<5 ppb		EPA 8260
11/02/09	Tetrachloroethene	<5 ppb		EPA 8260
11/02/09	Toluene	<5 ppb		EPA 8260
11/02/09	trans-1,2-Dichloroethene	<5 ppb		EPA 8260
11/02/09	trans-1,3-Dichloropropene	<5 ppb		EPA 8260
11/02/09	Trichloroethene	<5 ppb		EPA 8260
11/02/09	Trichlorofluoromethane	<5 ppb		EPA 8260
11/02/09	Vinyl Acetate	<5 ppb		EPA 8260
11/02/09	Vinyl chloride	<5 ppb		EPA 8260
11/04/09	PCB-1016	<0.5 ppb		SW 8082
11/04/09	PCB-1221	<0.5 ppb		SW 8082
11/04/09	PCB-1232	<0.5 ppb		SW 8082
11/04/09	PCB-1242	<0.5 ppb		SW 8082
11/04/09	PCB-1248	<0.5 ppb		SW 8082
11/04/09	PCB-1254	<0.5 ppb		SW 8082
11/04/09	PCB-1260	<0.5 ppb		SW 8082
11/04/09	PCB-1262	<0.5 ppb		SW 8082
11/04/09	PCB-1268	<0.5 ppb		SW 8082
11/04/09	4,4'-DDD	<0.02 ppb		SW8081
11/04/09	4,4'-DDE	<0.02 ppb		SW8081
11/04/09	4,4'-DDT	<0.02 ppb		SW8081
11/04/09	a-BHC	<0.02 ppb		SW8081
11/04/09	Aldrin	<0.02 ppb		SW8081

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City: Woodmere
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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087527

Sample's Information: **Sample ID:** MW2

Site: MW2
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 12:50:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908504

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	b-BHC	<0.02 ppb		SW8081
11/04/09	Chlordane	<0.02 ppb		SW8081
11/04/09	d-BHC	<0.02 ppb		SW8081
11/04/09	Dieldrin	<0.02 ppb		SW8081
11/04/09	Endosulfan I	<0.02 ppb		SW8081
11/04/09	Endosulfan II	<0.02 ppb		SW8081
11/04/09	Endosulfan Sulfate	<0.02 ppb		SW8081
11/04/09	Endrin	<0.02 ppb		SW8081
11/04/09	Endrin Aldehyde	<0.02 ppb		SW8081
11/04/09	Endrin Ketone	<0.02 ppb		SW8081
11/04/09	g-BHC	<0.02 ppb		SW8081
11/04/09	Heptachlor	<0.02 ppb		SW8081
11/04/09	Heptachlor epoxide	<0.02 ppb		SW8081
11/04/09	Methoxychlor	<0.02 ppb		SW8081
11/04/09	Mitotane	<0.02 ppb		SW8081
11/04/09	Toxaphene	<1 ppb		SW8081
11/05/09	Zinc	0.813 ppm	N/A	6010/E200.7
11/05/09	Vanadium	0.288 ppm	N/A	6010/E200.7
11/05/09	Thallium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Antimony	<0.1 ppm	N/A	6010/E200.7
11/05/09	Lead	0.203 ppm	N/A	6010/E200.7
11/05/09	Nickel	0.292 ppm	N/A	6010/E200.7
11/05/09	Sodium	11.9 ppm	N/A	6010/E200.7
11/05/09	Manganese	11 ppm	N/A	6010/E200.7
11/05/09	Magnesium	79.9 ppm	N/A	6010/E200.7
11/05/09	Potassium	28 ppm	N/A	6010/E200.7
11/06/09	Mercury	<0.001 ppm	N/A	SW-7471
11/05/09	Iron	228 ppm	N/A	6010/E200.7
11/05/09	Copper	0.483 ppm	N/A	6010/E200.7

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087527

Sample's Information: **Sample ID:** MW2

Site: MW2
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 12:50:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908504

Date Analyzed	Test Name	Result	MCL	Method
11/05/09	Chromium, Trivalent	0.289 ppm	N/A	6010/E200.7
11/05/09	Chromium	0.289 ppm	N/A	6010/E200.7
11/05/09	Cobalt	0.161 ppm	N/A	6010/E200.7
11/05/09	Cadmium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Calcium	53.6 ppm	N/A	6010/E200.7
11/05/09	Beryllium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Barium	1.18 ppm	N/A	6010/E200.7
11/05/09	Arsenic	<0.1 ppm	N/A	6010/E200.7
11/05/09	Aluminum	112 ppm	N/A	6010/E200.7
11/05/09	Silver	<0.1 ppm	N/A	6010/E200.7
11/06/09	Aluminum (Filtered)	8.94 ppm	N/A	6010/E200.7
11/06/09	Antimony (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Arsenic (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Barium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Beryllium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Cadmium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Calcium (Filtered)	6.53 ppm	N/A	6010/E200.7
11/06/09	Chromium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Cobalt (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Copper (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Iron (Filtered)	8.77 ppm	N/A	6010/E200.7
11/06/09	Lead (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Magnesium (Filtered)	3.67 ppm	N/A	6010/E200.7
11/06/09	Manganese (Filtered)	0.393 ppm	N/A	6010/E200.7
11/06/09	Mercury (Filtered)	<0.001 ppm	N/A	SW-7471
11/06/09	Nickel (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Potassium (Filtered)	3.51 ppm	N/A	6010/E200.7
11/06/09	Selenium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Silver (Filtered)	<0.1 ppm	N/A	6010/E200.7

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Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087527

Sample's Information: **Sample ID:** MW2

Site: MW2
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 12:50:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908504

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Sodium (Filtered)	4.42 ppm	N/A	6010/E200.7
11/06/09	Thallium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Vanadium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Zinc (Filtered)	<0.1 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087528

Sample's Information: **Sample ID:** MW4

Site: MW4
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 2:05:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908505

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	1,2,4-Trichlorobenzene	<5 ppb		8270
11/04/09	1,2-Dichlorobenzene	<5 ppb		8270
11/04/09	1,3-Dichlorobenzene	<5 ppb		8270
11/04/09	1,4-Dichlorobenzene	<5 ppb		8270
11/04/09	2,4,5-Trichlorophenol	<5 ppb		8270
11/04/09	2,4,6-Trichlorophenol	<5 ppb		8270
11/04/09	2,4-Dichlorophenol	<5 ppb		8270
11/04/09	2,4-Dimethylphenol	<5 ppb		8270
11/04/09	2,4-Dinitrophenol	<5 ppb		8270
11/04/09	2,4-Dinitrotoluene	<5 ppb		8270
11/04/09	2,6-Dichlorophenol	<5 ppb		8270
11/04/09	2,6-Dinitrotoluene	<5 ppb		8270
11/04/09	2-Chloronaphthalene	<5 ppb		8270
11/04/09	2-Chlorophenol	<5 ppb		8270
11/04/09	2-Methyl-4,6-dinitrophenol	<5 ppb		8270
11/04/09	2-Methylnaphthalene	<5 ppb		8270
11/04/09	2-Methylphenol (o-Cresol)	<5 ppb		8270
11/04/09	2-Nitroaniline	<5 ppb		8270
11/04/09	2-Nitrophenol	<5 ppb		8270
11/04/09	3&4-Methylphenol (m,p-Cresol)	<5 ppb		8270
11/04/09	3,3'-Dichlorobenzidine	<5 ppb		8270
11/04/09	3-Nitroaniline	<5 ppb		8270
11/04/09	4-Bromophenyl Phenyl Ether	<5 ppb		8270
11/04/09	4-Chloro-3-Methylphenol	<5 ppb		8270
11/04/09	4-Chloroaniline	<5 ppb		8270
11/04/09	4-Chlorophenylphenyl ether	<5 ppb		8270
11/04/09	4-Nitroaniline	<5 ppb		8270
11/04/09	4-Nitrophenol	<5 ppb		8270
11/04/09	Acenaphthene	<5 ppb		8270
11/04/09	Acenaphthylene	<5 ppb		8270
11/04/09	Aniline	<5 ppb		8270

JMS Environmental Services, Inc.
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Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087528

Sample's Information: **Sample ID:** MW4

Site: MW4
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 2:05:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908505

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	Anthracene	<5 ppb		8270
11/04/09	Benzidine	<5 ppb		8270
11/04/09	Benzo(a)anthracene	<5 ppb		8270
11/04/09	Benzo(a)pyrene	<5 ppb		8270
11/04/09	Benzo(b)fluoranthene	<5 ppb		8270
11/04/09	Benzo(g,h,i)perylene	<5 ppb		8270
11/04/09	Benzo(k)fluoranthene	<5 ppb		8270
11/04/09	Benzoic Acid	<5 ppb		8270
11/04/09	Benzyl Alcohol	<5 ppb		8270
11/04/09	Benzyl Butyl Phthalate	<5 ppb		8270
11/04/09	bis(2-Chloroethoxy)methane	<5 ppb		8270
11/04/09	bis(2-Chloroethyl) ether	<5 ppb		8270
11/04/09	bis(2-Chloroisopropyl) ether	<5 ppb		8270
11/04/09	bis(2-ethylhexyl)phthalate	<5 ppb		8270
11/04/09	Chrysene	<5 ppb		8270
11/04/09	Dibenz(a,h)anthracene	<5 ppb		8270
11/04/09	Dibenzofuran	<5 ppb		8270
11/04/09	Diethyl Phthalate	<5 ppb		8270
11/04/09	Dimethyl Phthalate	<5 ppb		8270
11/04/09	Di-n-Butyl phthalate	<5 ppb		8270
11/04/09	Di-n-octyl phthalate	<5 ppb		8270
11/04/09	Fluoranthene	<5 ppb		8270
11/04/09	Fluorene	<5 ppb		8270
11/04/09	Hexachlorobenzene	<5 ppb		8270
11/04/09	Hexachlorobutadiene	<5 ppb		8270
11/04/09	Hexachlorocyclopentadiene	<5 ppb		8270
11/04/09	Hexachloroethane	<5 ppb		8270
11/04/09	Indeno(1,2,3-cd)pyrene	<5 ppb		8270
11/04/09	Isophorone	<5 ppb		8270
11/04/09	m-Cresol	<5 ppb		8270
11/04/09	Naphthalene	<5 ppb		8270

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087528

Sample's Information: **Sample ID:** MW4

Site: MW4
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 2:05:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908505

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	Nitrobenzene	<5 ppb		8270
11/04/09	n-Nitrosodimethylamine	<5 ppb		8270
11/04/09	n-Nitrosodi-n-propylamine	<5 ppb		8270
11/04/09	n-Nitrosodiphenylamine	<5 ppb		8270
11/04/09	Pentachlorophenol	<5 ppb		8270
11/04/09	Phenanthrene	<5 ppb		8270
11/04/09	Phenol	<5 ppb		8270
11/04/09	Pyrene	<5 ppb		8270
11/04/09	Pyridine	<5 ppb		8270
11/02/09	1,1,1,2-Tetrachloroethane	<5 ppb		EPA 8260
11/02/09	1,1,1-Trichloroethane	<5 ppb		EPA 8260
11/02/09	1,1,2,2-Tetrachloroethane	<5 ppb		EPA 8260
11/02/09	1,1,2-Trichloroethane	<5 ppb		EPA 8260
11/02/09	1,1-Dichloroethane	<5 ppb		EPA 8260
11/02/09	1,1-Dichloroethene	<5 ppb		EPA 8260
11/02/09	1,1-Dichloropropene	<5 ppb		EPA 8260
11/02/09	1,2,3-Trichlorobenzene	<5 ppb		EPA 8260
11/02/09	1,2,3-Trichloropropane	<5 ppb		EPA 8260
11/02/09	1,2,4-Trichlorobenzene	<5 ppb		EPA 8260
11/02/09	1,2,4-Trimethylbenzene	<5 ppb		EPA 8260
11/02/09	1,2-Dibromo-3-Chloropropane	<5 ppb		EPA 8260
11/02/09	1,2-Dibromoethane	<5 ppb		EPA 8260
11/02/09	1,2-Dichlorobenzene	<5 ppb		EPA 8260
11/02/09	1,2-Dichloroethane	<5 ppb		EPA 8260
11/02/09	1,2-Dichloropropane	<5 ppb		EPA 8260
11/02/09	1,3,5-Trimethylbenzene	<5 ppb		EPA 8260
11/02/09	1,3-Dichlorobenzene	<5 ppb		EPA 8260
11/02/09	1,3-Dichloropropane	<5 ppb		EPA 8260
11/02/09	1,4-Dichlorobenzene	<5 ppb		EPA 8260
11/02/09	2,2-Dichloropropane	<5 ppb		EPA 8260

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087528

Sample's Information: **Sample ID:** MW4

Site: MW4
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 2:05:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908505

Date Analyzed	Test Name	Result	MCL	Method
11/02/09	2-Butanone (MEK)	<5 ppb		EPA 8260
11/02/09	2-Chlorotoluene	<5 ppb		EPA 8260
11/02/09	2-Hexanone	<5 ppb		EPA 8260
11/02/09	4-Chlorotoluene	<5 ppb		EPA 8260
11/02/09	4-Methyl-2-pentanone (MIBK)	<5 ppb		EPA 8260
11/02/09	Acetone	<5 ppb		EPA 8260
11/02/09	Acrolein	<5 ppb		EPA 8260
11/02/09	Acrylonitrile	<5 ppb		EPA 8260
11/02/09	Benzene	<5 ppb		EPA 8260
11/02/09	Bromobenzene	<5 ppb		EPA 8260
11/02/09	Bromochloromethane	<5 ppb		EPA 8260
11/02/09	Bromodichloromethane	<5 ppb		EPA 8260
11/02/09	Bromoform	<5 ppb		EPA 8260
11/02/09	Bromomethane	<5 ppb		EPA 8260
11/02/09	Carbon disulfide	<5 ppb		EPA 8260
11/02/09	Carbon tetrachloride	<5 ppb		EPA 8260
11/02/09	Chlorobenzene	<5 ppb		EPA 8260
11/02/09	Chlorodibromomethane	<5 ppb		EPA 8260
11/02/09	Chloroethane	<5 ppb		EPA 8260
11/02/09	Chloroform	<5 ppb		EPA 8260
11/02/09	Chloromethane	<5 ppb		EPA 8260
11/02/09	cis-1,2-Dichloroethene	<5 ppb		EPA 8260
11/02/09	cis-1,3-Dichloropropene	<5 ppb		EPA 8260
11/02/09	Dibromomethane	<5 ppb		EPA 8260
11/02/09	Dichlorodifluoromethane	<5 ppb		EPA 8260
11/02/09	Ethylbenzene	<5 ppb		EPA 8260
11/02/09	Isopropylbenzene	<5 ppb		EPA 8260
11/02/09	m&p xylene	<5 ppb		EPA 8260
11/02/09	Methylene Chloride	<5 ppb		EPA 8260
11/02/09	MTBE	<5 ppb		EPA 8260
11/02/09	Naphthalene	<5 ppb		EPA 8260

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087528

Sample's Information: **Sample ID:** MW4

Site: MW4
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 2:05:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908505

Date Analyzed	Test Name	Result	MCL	Method
11/02/09	n-Butylbenzene	<5 ppb		EPA 8260
11/02/09	n-Propylbenzene	<5 ppb		EPA 8260
11/02/09	o-Xylene	<5 ppb		EPA 8260
11/02/09	p-Isoproplytoluene	<5 ppb		EPA 8260
11/02/09	sec-Butylbenzene	<5 ppb		EPA 8260
11/02/09	Styrene	<5 ppb		EPA 8260
11/02/09	tert-Butylbenzene	<5 ppb		EPA 8260
11/02/09	Tetrachloroethene	<5 ppb		EPA 8260
11/02/09	Toluene	<5 ppb		EPA 8260
11/02/09	trans-1,2-Dichloroethene	<5 ppb		EPA 8260
11/02/09	trans-1,3-Dichloropropene	<5 ppb		EPA 8260
11/02/09	Trichloroethene	<5 ppb		EPA 8260
11/02/09	Trichlorofluoromethane	<5 ppb		EPA 8260
11/02/09	Vinyl Acetate	<5 ppb		EPA 8260
11/02/09	Vinyl chloride	<5 ppb		EPA 8260
11/04/09	PCB-1016	<0.5 ppb		SW 8082
11/04/09	PCB-1221	<0.5 ppb		SW 8082
11/04/09	PCB-1232	<0.5 ppb		SW 8082
11/04/09	PCB-1242	<0.5 ppb		SW 8082
11/04/09	PCB-1248	<0.5 ppb		SW 8082
11/04/09	PCB-1254	<0.5 ppb		SW 8082
11/04/09	PCB-1260	<0.5 ppb		SW 8082
11/04/09	PCB-1262	<0.5 ppb		SW 8082
11/04/09	PCB-1268	<0.5 ppb		SW 8082
11/04/09	4,4'-DDD	<0.02 ppb		SW8081
11/04/09	4,4'-DDE	<0.02 ppb		SW8081
11/04/09	4,4'-DDT	<0.02 ppb		SW8081
11/04/09	a-BHC	<0.02 ppb		SW8081
11/04/09	Aldrin	<0.02 ppb		SW8081

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087528

Sample's Information: **Sample ID:** MW4

Site: MW4
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 2:05:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908505

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	b-BHC	<0.02 ppb		SW8081
11/04/09	Chlordane	<0.02 ppb		SW8081
11/04/09	d-BHC	<0.02 ppb		SW8081
11/04/09	Dieldrin	<0.02 ppb		SW8081
11/04/09	Endosulfan I	<0.02 ppb		SW8081
11/04/09	Endosulfan II	<0.02 ppb		SW8081
11/04/09	Endosulfan Sulfate	<0.02 ppb		SW8081
11/04/09	Endrin	<0.02 ppb		SW8081
11/04/09	Endrin Aldehyde	<0.02 ppb		SW8081
11/04/09	Endrin Ketone	<0.02 ppb		SW8081
11/04/09	g-BHC	<0.02 ppb		SW8081
11/04/09	Heptachlor	<0.02 ppb		SW8081
11/04/09	Heptachlor epoxide	<0.02 ppb		SW8081
11/04/09	Methoxychlor	<0.02 ppb		SW8081
11/04/09	Mitotane	<0.02 ppb		SW8081
11/04/09	Toxaphene	<1 ppb		SW8081
11/05/09	Zinc	0.392 ppm	N/A	6010/E200.7
11/05/09	Vanadium	0.102 ppm	N/A	6010/E200.7
11/05/09	Thallium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Antimony	<0.1 ppm	N/A	6010/E200.7
11/05/09	Lead	0.231 ppm	N/A	6010/E200.7
11/05/09	Nickel	<0.1 ppm	N/A	6010/E200.7
11/05/09	Sodium	33.6 ppm	N/A	6010/E200.7
11/05/09	Manganese	2.19 ppm	N/A	6010/E200.7
11/05/09	Magnesium	50.9 ppm	N/A	6010/E200.7
11/05/09	Potassium	16.8 ppm	N/A	6010/E200.7
11/06/09	Mercury	<0.001 ppm	N/A	SW-7471
11/05/09	Iron	74.3 ppm	N/A	6010/E200.7
11/05/09	Copper	0.189 ppm	N/A	6010/E200.7

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087528

Sample's Information: **Sample ID:** MW4

Site: MW4
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 2:05:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908505

Date Analyzed	Test Name	Result	MCL	Method
11/05/09	Chromium, Trivalent	<0.1 ppm	N/A	6010/E200.7
11/05/09	Chromium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Cobalt	<0.1 ppm	N/A	6010/E200.7
11/05/09	Cadmium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Calcium	142 ppm	N/A	6010/E200.7
11/05/09	Beryllium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Barium	0.647 ppm	N/A	6010/E200.7
11/05/09	Arsenic	<0.1 ppm	N/A	6010/E200.7
11/05/09	Aluminum	40.7 ppm	N/A	6010/E200.7
11/05/09	Silver	<0.1 ppm	N/A	6010/E200.7
11/06/09	Aluminum (Filtered)	0.506 ppm	N/A	6010/E200.7
11/06/09	Antimony (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Arsenic (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Barium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Beryllium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Cadmium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Calcium (Filtered)	40.3 ppm	N/A	6010/E200.7
11/06/09	Chromium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Cobalt (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Copper (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Iron (Filtered)	0.707 ppm	N/A	6010/E200.7
11/06/09	Lead (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Magnesium (Filtered)	8.04 ppm	N/A	6010/E200.7
11/06/09	Manganese (Filtered)	0.149 ppm	N/A	6010/E200.7
11/06/09	Mercury (Filtered)	<0.001 ppm	N/A	SW-7471
11/06/09	Nickel (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Potassium (Filtered)	3.29 ppm	N/A	6010/E200.7
11/06/09	Selenium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Silver (Filtered)	<0.1 ppm	N/A	6010/E200.7

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087528

Sample's Information: **Sample ID:** MW4

Site: MW4
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 2:05:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908505

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Sodium (Filtered)	16 ppm	N/A	6010/E200.7
11/06/09	Thallium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Vanadium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Zinc (Filtered)	<0.1 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087530

Sample's Information: **Sample ID:** MW6

Site: MW6
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 2:50:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908506

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	1,2,4-Trichlorobenzene	<5 ppb		8270
11/04/09	1,2-Dichlorobenzene	<5 ppb		8270
11/04/09	1,3-Dichlorobenzene	<5 ppb		8270
11/04/09	1,4-Dichlorobenzene	<5 ppb		8270
11/04/09	2,4,5-Trichlorophenol	<5 ppb		8270
11/04/09	2,4,6-Trichlorophenol	<5 ppb		8270
11/04/09	2,4-Dichlorophenol	<5 ppb		8270
11/04/09	2,4-Dimethylphenol	<5 ppb		8270
11/04/09	2,4-Dinitrophenol	<5 ppb		8270
11/04/09	2,4-Dinitrotoluene	<5 ppb		8270
11/04/09	2,6-Dichlorophenol	<5 ppb		8270
11/04/09	2,6-Dinitrotoluene	<5 ppb		8270
11/04/09	2-Chloronaphthalene	<5 ppb		8270
11/04/09	2-Chlorophenol	<5 ppb		8270
11/04/09	2-Methyl-4,6-dinitrophenol	<5 ppb		8270
11/04/09	2-Methylnaphthalene	<5 ppb		8270
11/04/09	2-Methylphenol (o-Cresol)	<5 ppb		8270
11/04/09	2-Nitroaniline	<5 ppb		8270
11/04/09	2-Nitrophenol	<5 ppb		8270
11/04/09	3&4-Methylphenol (m,p-Cresol)	<5 ppb		8270
11/04/09	3,3'-Dichlorobenzidine	<5 ppb		8270
11/04/09	3-Nitroaniline	<5 ppb		8270
11/04/09	4-Bromophenyl Phenyl Ether	<5 ppb		8270
11/04/09	4-Chloro-3-Methylphenol	<5 ppb		8270
11/04/09	4-Chloroaniline	<5 ppb		8270
11/04/09	4-Chlorophenylphenyl ether	<5 ppb		8270
11/04/09	4-Nitroaniline	<5 ppb		8270
11/04/09	4-Nitrophenol	<5 ppb		8270
11/04/09	Acenaphthene	<5 ppb		8270
11/04/09	Acenaphthylene	<5 ppb		8270
11/04/09	Aniline	<5 ppb		8270

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue
Danbury, Connecticut 06810 | Telephone 203-798-2229

Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087530

Sample's Information: **Sample ID:** MW6

Site: MW6
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 2:50:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908506

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	Anthracene	<5 ppb		8270
11/04/09	Benzidine	<5 ppb		8270
11/04/09	Benzo(a)anthracene	<5 ppb		8270
11/04/09	Benzo(a)pyrene	<5 ppb		8270
11/04/09	Benzo(b)fluoranthene	<5 ppb		8270
11/04/09	Benzo(g,h,i)perylene	<5 ppb		8270
11/04/09	Benzo(k)fluoranthene	<5 ppb		8270
11/04/09	Benzoic Acid	<5 ppb		8270
11/04/09	Benzyl Alcohol	<5 ppb		8270
11/04/09	Benzyl Butyl Phthalate	<5 ppb		8270
11/04/09	bis(2-Chloroethoxy)methane	<5 ppb		8270
11/04/09	bis(2-Chloroethyl) ether	<5 ppb		8270
11/04/09	bis(2-Chloroisopropyl) ether	<5 ppb		8270
11/04/09	bis(2-ethylhexyl)phthalate	<5 ppb		8270
11/04/09	Chrysene	<5 ppb		8270
11/04/09	Dibenz(a,h)anthracene	<5 ppb		8270
11/04/09	Dibenzofuran	<5 ppb		8270
11/04/09	Diethyl Phthalate	<5 ppb		8270
11/04/09	Dimethyl Phthalate	<5 ppb		8270
11/04/09	Di-n-Butyl phthalate	<5 ppb		8270
11/04/09	Di-n-octyl phthalate	<5 ppb		8270
11/04/09	Fluoranthene	<5 ppb		8270
11/04/09	Fluorene	<5 ppb		8270
11/04/09	Hexachlorobenzene	<5 ppb		8270
11/04/09	Hexachlorobutadiene	<5 ppb		8270
11/04/09	Hexachlorocyclopentadiene	<5 ppb		8270
11/04/09	Hexachloroethane	<5 ppb		8270
11/04/09	Indeno(1,2,3-cd)pyrene	<5 ppb		8270
11/04/09	Isophorone	<5 ppb		8270
11/04/09	m-Cresol	<5 ppb		8270
11/04/09	Naphthalene	<5 ppb		8270

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087530

Sample's Information: **Sample ID:** MW6

Site: MW6
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 2:50:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908506

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	Nitrobenzene	<5 ppb		8270
11/04/09	n-Nitrosodimethylamine	<5 ppb		8270
11/04/09	n-Nitrosodi-n-propylamine	<5 ppb		8270
11/04/09	n-Nitrosodiphenylamine	<5 ppb		8270
11/04/09	Pentachlorophenol	<5 ppb		8270
11/04/09	Phenanthrene	<5 ppb		8270
11/04/09	Phenol	<5 ppb		8270
11/04/09	Pyrene	<5 ppb		8270
11/04/09	Pyridine	<5 ppb		8270
11/02/09	1,1,1,2-Tetrachloroethane	<5 ppb		EPA 8260
11/02/09	1,1,1-Trichloroethane	<5 ppb		EPA 8260
11/02/09	1,1,2,2-Tetrachloroethane	<5 ppb		EPA 8260
11/02/09	1,1,2-Trichloroethane	<5 ppb		EPA 8260
11/02/09	1,1-Dichloroethane	<5 ppb		EPA 8260
11/02/09	1,1-Dichloroethene	<5 ppb		EPA 8260
11/02/09	1,1-Dichloropropene	<5 ppb		EPA 8260
11/02/09	1,2,3-Trichlorobenzene	<5 ppb		EPA 8260
11/02/09	1,2,3-Trichloropropane	<5 ppb		EPA 8260
11/02/09	1,2,4-Trichlorobenzene	<5 ppb		EPA 8260
11/02/09	1,2,4-Trimethylbenzene	<5 ppb		EPA 8260
11/02/09	1,2-Dibromo-3-Chloropropane	<5 ppb		EPA 8260
11/02/09	1,2-Dibromoethane	<5 ppb		EPA 8260
11/02/09	1,2-Dichlorobenzene	<5 ppb		EPA 8260
11/02/09	1,2-Dichloroethane	<5 ppb		EPA 8260
11/02/09	1,2-Dichloropropane	<5 ppb		EPA 8260
11/02/09	1,3,5-Trimethylbenzene	<5 ppb		EPA 8260
11/02/09	1,3-Dichlorobenzene	<5 ppb		EPA 8260
11/02/09	1,3-Dichloropropane	<5 ppb		EPA 8260
11/02/09	1,4-Dichlorobenzene	<5 ppb		EPA 8260
11/02/09	2,2-Dichloropropane	<5 ppb		EPA 8260

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087530

Sample's Information: **Sample ID:** MW6

Site: MW6
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 2:50:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908506

Date Analyzed	Test Name	Result	MCL	Method
11/02/09	2-Butanone (MEK)	<5 ppb		EPA 8260
11/02/09	2-Chlorotoluene	<5 ppb		EPA 8260
11/02/09	2-Hexanone	<5 ppb		EPA 8260
11/02/09	4-Chlorotoluene	<5 ppb		EPA 8260
11/02/09	4-Methyl-2-pentanone (MIBK)	<5 ppb		EPA 8260
11/02/09	Acetone	<5 ppb		EPA 8260
11/02/09	Acrolein	<5 ppb		EPA 8260
11/02/09	Acrylonitrile	<5 ppb		EPA 8260
11/02/09	Benzene	<5 ppb		EPA 8260
11/02/09	Bromobenzene	<5 ppb		EPA 8260
11/02/09	Bromochloromethane	<5 ppb		EPA 8260
11/02/09	Bromodichloromethane	<5 ppb		EPA 8260
11/02/09	Bromoform	<5 ppb		EPA 8260
11/02/09	Bromomethane	<5 ppb		EPA 8260
11/02/09	Carbon disulfide	<5 ppb		EPA 8260
11/02/09	Carbon tetrachloride	<5 ppb		EPA 8260
11/02/09	Chlorobenzene	<5 ppb		EPA 8260
11/02/09	Chlorodibromomethane	<5 ppb		EPA 8260
11/02/09	Chloroethane	<5 ppb		EPA 8260
11/02/09	Chloroform	<5 ppb		EPA 8260
11/02/09	Chloromethane	<5 ppb		EPA 8260
11/02/09	cis-1,2-Dichloroethene	<5 ppb		EPA 8260
11/02/09	cis-1,3-Dichloropropene	<5 ppb		EPA 8260
11/02/09	Dibromomethane	<5 ppb		EPA 8260
11/02/09	Dichlorodifluoromethane	<5 ppb		EPA 8260
11/02/09	Ethylbenzene	<5 ppb		EPA 8260
11/02/09	Isopropylbenzene	<5 ppb		EPA 8260
11/02/09	m&p xylene	<5 ppb		EPA 8260
11/02/09	Methylene Chloride	<5 ppb		EPA 8260
11/02/09	MTBE	<5 ppb		EPA 8260
11/02/09	Naphthalene	<5 ppb		EPA 8260

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087530

Sample's Information: **Sample ID:** MW6

Site: MW6
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 2:50:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908506

Date Analyzed	Test Name	Result	MCL	Method
11/02/09	n-Butylbenzene	<5 ppb		EPA 8260
11/02/09	n-Propylbenzene	<5 ppb		EPA 8260
11/02/09	o-Xylene	<5 ppb		EPA 8260
11/02/09	p-Isoproplytoluene	<5 ppb		EPA 8260
11/02/09	sec-Butylbenzene	<5 ppb		EPA 8260
11/02/09	Styrene	<5 ppb		EPA 8260
11/02/09	tert-Butylbenzene	<5 ppb		EPA 8260
11/02/09	Tetrachloroethene	<5 ppb		EPA 8260
11/02/09	Toluene	<5 ppb		EPA 8260
11/02/09	trans-1,2-Dichloroethene	<5 ppb		EPA 8260
11/02/09	trans-1,3-Dichloropropene	<5 ppb		EPA 8260
11/02/09	Trichloroethene	<5 ppb		EPA 8260
11/02/09	Trichlorofluoromethane	<5 ppb		EPA 8260
11/02/09	Vinyl Acetate	<5 ppb		EPA 8260
11/02/09	Vinyl chloride	<5 ppb		EPA 8260
11/04/09	PCB-1016	<0.5 ppb		SW 8082
11/04/09	PCB-1221	<0.5 ppb		SW 8082
11/04/09	PCB-1232	<0.5 ppb		SW 8082
11/04/09	PCB-1242	<0.5 ppb		SW 8082
11/04/09	PCB-1248	<0.5 ppb		SW 8082
11/04/09	PCB-1254	<0.5 ppb		SW 8082
11/04/09	PCB-1260	<0.5 ppb		SW 8082
11/04/09	PCB-1262	<0.5 ppb		SW 8082
11/04/09	PCB-1268	<0.5 ppb		SW 8082
11/04/09	4,4'-DDD	<0.02 ppb		SW8081
11/04/09	4,4'-DDE	<0.02 ppb		SW8081
11/04/09	4,4'-DDT	<0.02 ppb		SW8081
11/04/09	a-BHC	<0.02 ppb		SW8081
11/04/09	Aldrin	<0.02 ppb		SW8081

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City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087530

Sample's Information: **Sample ID:** MW6

Site: MW6
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 2:50:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908506

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	b-BHC	<0.02 ppb		SW8081
11/04/09	Chlordane	<0.02 ppb		SW8081
11/04/09	d-BHC	<0.02 ppb		SW8081
11/04/09	Dieldrin	<0.02 ppb		SW8081
11/04/09	Endosulfan I	<0.02 ppb		SW8081
11/04/09	Endosulfan II	<0.02 ppb		SW8081
11/04/09	Endosulfan Sulfate	<0.02 ppb		SW8081
11/04/09	Endrin	<0.02 ppb		SW8081
11/04/09	Endrin Aldehyde	<0.02 ppb		SW8081
11/04/09	Endrin Ketone	<0.02 ppb		SW8081
11/04/09	g-BHC	<0.02 ppb		SW8081
11/04/09	Heptachlor	<0.02 ppb		SW8081
11/04/09	Heptachlor epoxide	<0.02 ppb		SW8081
11/04/09	Methoxychlor	<0.02 ppb		SW8081
11/04/09	Mitotane	<0.02 ppb		SW8081
11/04/09	Toxaphene	<1 ppb		SW8081
11/05/09	Zinc	0.299 ppm	N/A	6010/E200.7
11/05/09	Vanadium	0.101 ppm	N/A	6010/E200.7
11/05/09	Thallium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Antimony	<0.1 ppm	N/A	6010/E200.7
11/05/09	Lead	0.16 ppm	N/A	6010/E200.7
11/05/09	Nickel	0.103 ppm	N/A	6010/E200.7
11/05/09	Sodium	46.1 ppm	N/A	6010/E200.7
11/05/09	Manganese	3.91 ppm	N/A	6010/E200.7
11/05/09	Magnesium	38.6 ppm	N/A	6010/E200.7
11/05/09	Potassium	12.4 ppm	N/A	6010/E200.7
11/06/09	Mercury	<0.001 ppm	N/A	SW-7471
11/05/09	Iron	91.9 ppm	N/A	6010/E200.7
11/05/09	Copper	0.172 ppm	N/A	6010/E200.7

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087530

Sample's Information: **Sample ID:** MW6

Site: MW6
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 2:50:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908506

Date Analyzed	Test Name	Result	MCL	Method
11/05/09	Chromium, Trivalent	<0.1 ppm	N/A	6010/E200.7
11/05/09	Chromium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Cobalt	<0.1 ppm	N/A	6010/E200.7
11/05/09	Cadmium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Calcium	91.4 ppm	N/A	6010/E200.7
11/05/09	Beryllium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Barium	0.421 ppm	N/A	6010/E200.7
11/05/09	Arsenic	<0.1 ppm	N/A	6010/E200.7
11/05/09	Aluminum	37 ppm	N/A	6010/E200.7
11/05/09	Silver	<0.1 ppm	N/A	6010/E200.7
11/06/09	Aluminum (Filtered)	0.24 ppm	N/A	6010/E200.7
11/06/09	Antimony (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Arsenic (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Barium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Beryllium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Cadmium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Calcium (Filtered)	28.2 ppm	N/A	6010/E200.7
11/06/09	Chromium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Cobalt (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Copper (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Iron (Filtered)	0.38 ppm	N/A	6010/E200.7
11/06/09	Lead (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Magnesium (Filtered)	8.93 ppm	N/A	6010/E200.7
11/06/09	Manganese (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Mercury (Filtered)	<0.001 ppm	N/A	SW-7471
11/06/09	Nickel (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Potassium (Filtered)	2.65 ppm	N/A	6010/E200.7
11/06/09	Selenium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Silver (Filtered)	<0.1 ppm	N/A	6010/E200.7

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087530

Sample's Information: **Sample ID:** MW6

Site: MW6
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 2:50:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908506

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Sodium (Filtered)	22.6 ppm	N/A	6010/E200.7
11/06/09	Thallium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Vanadium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Zinc (Filtered)	<0.1 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087531

Sample's Information: **Sample ID:** MW8

Site: MW8
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 3:35:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908507

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	1,2,4-Trichlorobenzene	<5 ppb		8270
11/04/09	1,2-Dichlorobenzene	<5 ppb		8270
11/04/09	1,3-Dichlorobenzene	<5 ppb		8270
11/04/09	1,4-Dichlorobenzene	<5 ppb		8270
11/04/09	2,4,5-Trichlorophenol	<5 ppb		8270
11/04/09	2,4,6-Trichlorophenol	<5 ppb		8270
11/04/09	2,4-Dichlorophenol	<5 ppb		8270
11/04/09	2,4-Dimethylphenol	<5 ppb		8270
11/04/09	2,4-Dinitrophenol	<5 ppb		8270
11/04/09	2,4-Dinitrotoluene	<5 ppb		8270
11/04/09	2,6-Dichlorophenol	<5 ppb		8270
11/04/09	2,6-Dinitrotoluene	<5 ppb		8270
11/04/09	2-Chloronaphthalene	<5 ppb		8270
11/04/09	2-Chlorophenol	<5 ppb		8270
11/04/09	2-Methyl-4,6-dinitrophenol	<5 ppb		8270
11/04/09	2-Methylnaphthalene	<5 ppb		8270
11/04/09	2-Methylphenol (o-Cresol)	<5 ppb		8270
11/04/09	2-Nitroaniline	<5 ppb		8270
11/04/09	2-Nitrophenol	<5 ppb		8270
11/04/09	3&4-Methylphenol (m,p-Cresol)	<5 ppb		8270
11/04/09	3,3'-Dichlorobenzidine	<5 ppb		8270
11/04/09	3-Nitroaniline	<5 ppb		8270
11/04/09	4-Bromophenyl Phenyl Ether	<5 ppb		8270
11/04/09	4-Chloro-3-Methylphenol	<5 ppb		8270
11/04/09	4-Chloroaniline	<5 ppb		8270
11/04/09	4-Chlorophenylphenyl ether	<5 ppb		8270
11/04/09	4-Nitroaniline	<5 ppb		8270
11/04/09	4-Nitrophenol	<5 ppb		8270
11/04/09	Acenaphthene	<5 ppb		8270
11/04/09	Acenaphthylene	<5 ppb		8270
11/04/09	Aniline	<5 ppb		8270

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087531

Sample's Information: **Sample ID:** MW8

Site: MW8
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 3:35:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908507

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	Anthracene	<5 ppb		8270
11/04/09	Benzidine	<5 ppb		8270
11/04/09	Benzo(a)anthracene	<5 ppb		8270
11/04/09	Benzo(a)pyrene	<5 ppb		8270
11/04/09	Benzo(b)fluoranthene	<5 ppb		8270
11/04/09	Benzo(g,h,i)perylene	<5 ppb		8270
11/04/09	Benzo(k)fluoranthene	<5 ppb		8270
11/04/09	Benzoic Acid	<5 ppb		8270
11/04/09	Benzyl Alcohol	<5 ppb		8270
11/04/09	Benzyl Butyl Phthalate	<5 ppb		8270
11/04/09	bis(2-Chloroethoxy)methane	<5 ppb		8270
11/04/09	bis(2-Chloroethyl) ether	<5 ppb		8270
11/04/09	bis(2-Chloroisopropyl) ether	<5 ppb		8270
11/04/09	bis(2-ethylhexyl)phthalate	<5 ppb		8270
11/04/09	Chrysene	<5 ppb		8270
11/04/09	Dibenz(a,h)anthracene	<5 ppb		8270
11/04/09	Dibenzofuran	<5 ppb		8270
11/04/09	Diethyl Phthalate	<5 ppb		8270
11/04/09	Dimethyl Phthalate	<5 ppb		8270
11/04/09	Di-n-Butyl phthalate	<5 ppb		8270
11/04/09	Di-n-octyl phthalate	<5 ppb		8270
11/04/09	Fluoranthene	<5 ppb		8270
11/04/09	Fluorene	<5 ppb		8270
11/04/09	Hexachlorobenzene	<5 ppb		8270
11/04/09	Hexachlorobutadiene	<5 ppb		8270
11/04/09	Hexachlorocyclopentadiene	<5 ppb		8270
11/04/09	Hexachloroethane	<5 ppb		8270
11/04/09	Indeno(1,2,3-cd)pyrene	<5 ppb		8270
11/04/09	Isophorone	<5 ppb		8270
11/04/09	m-Cresol	<5 ppb		8270
11/04/09	Naphthalene	<5 ppb		8270

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue
Danbury, Connecticut 06810 | Telephone 203-798-2229

Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information: **JMS ID:** 087531
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

Sample's Information: **Sample ID:** MW8

Site: MW8
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 3:35:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908507

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	Nitrobenzene	<5 ppb		8270
11/04/09	n-Nitrosodimethylamine	<5 ppb		8270
11/04/09	n-Nitrosodi-n-propylamine	<5 ppb		8270
11/04/09	n-Nitrosodiphenylamine	<5 ppb		8270
11/04/09	Pentachlorophenol	<5 ppb		8270
11/04/09	Phenanthrene	<5 ppb		8270
11/04/09	Phenol	<5 ppb		8270
11/04/09	Pyrene	<5 ppb		8270
11/04/09	Pyridine	<5 ppb		8270
11/02/09	1,1,1,2-Tetrachloroethane	<5 ppb		EPA 8260
11/02/09	1,1,1-Trichloroethane	<5 ppb		EPA 8260
11/02/09	1,1,2,2-Tetrachloroethane	<5 ppb		EPA 8260
11/02/09	1,1,2-Trichloroethane	<5 ppb		EPA 8260
11/02/09	1,1-Dichloroethane	<5 ppb		EPA 8260
11/02/09	1,1-Dichloroethene	<5 ppb		EPA 8260
11/02/09	1,1-Dichloropropene	<5 ppb		EPA 8260
11/02/09	1,2,3-Trichlorobenzene	<5 ppb		EPA 8260
11/02/09	1,2,3-Trichloropropane	<5 ppb		EPA 8260
11/02/09	1,2,4-Trichlorobenzene	<5 ppb		EPA 8260
11/02/09	1,2,4-Trimethylbenzene	<5 ppb		EPA 8260
11/02/09	1,2-Dibromo-3-Chloropropane	<5 ppb		EPA 8260
11/02/09	1,2-Dibromoethane	<5 ppb		EPA 8260
11/02/09	1,2-Dichlorobenzene	<5 ppb		EPA 8260
11/02/09	1,2-Dichloroethane	<5 ppb		EPA 8260
11/02/09	1,2-Dichloropropane	<5 ppb		EPA 8260
11/02/09	1,3,5-Trimethylbenzene	<5 ppb		EPA 8260
11/02/09	1,3-Dichlorobenzene	<5 ppb		EPA 8260
11/02/09	1,3-Dichloropropane	<5 ppb		EPA 8260
11/02/09	1,4-Dichlorobenzene	<5 ppb		EPA 8260
11/02/09	2,2-Dichloropropane	<5 ppb		EPA 8260

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State: NY **Zip:** 11598
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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087531

Sample's Information: **Sample ID:** MW8

Site: MW8
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 3:35:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908507

Date Analyzed	Test Name	Result	MCL	Method
11/02/09	2-Butanone (MEK)	<5 ppb		EPA 8260
11/02/09	2-Chlorotoluene	<5 ppb		EPA 8260
11/02/09	2-Hexanone	<5 ppb		EPA 8260
11/02/09	4-Chlorotoluene	<5 ppb		EPA 8260
11/02/09	4-Methyl-2-pentanone (MIBK)	<5 ppb		EPA 8260
11/02/09	Acetone	<5 ppb		EPA 8260
11/02/09	Acrolein	<5 ppb		EPA 8260
11/02/09	Acrylonitrile	<5 ppb		EPA 8260
11/02/09	Benzene	<5 ppb		EPA 8260
11/02/09	Bromobenzene	<5 ppb		EPA 8260
11/02/09	Bromochloromethane	<5 ppb		EPA 8260
11/02/09	Bromodichloromethane	<5 ppb		EPA 8260
11/02/09	Bromoform	<5 ppb		EPA 8260
11/02/09	Bromomethane	<5 ppb		EPA 8260
11/02/09	Carbon disulfide	<5 ppb		EPA 8260
11/02/09	Carbon tetrachloride	<5 ppb		EPA 8260
11/02/09	Chlorobenzene	<5 ppb		EPA 8260
11/02/09	Chlorodibromomethane	<5 ppb		EPA 8260
11/02/09	Chloroethane	<5 ppb		EPA 8260
11/02/09	Chloroform	<5 ppb		EPA 8260
11/02/09	Chloromethane	<5 ppb		EPA 8260
11/02/09	cis-1,2-Dichloroethene	<5 ppb		EPA 8260
11/02/09	cis-1,3-Dichloropropene	<5 ppb		EPA 8260
11/02/09	Dibromomethane	<5 ppb		EPA 8260
11/02/09	Dichlorodifluoromethane	<5 ppb		EPA 8260
11/02/09	Ethylbenzene	<5 ppb		EPA 8260
11/02/09	Isopropylbenzene	<5 ppb		EPA 8260
11/02/09	m&p xylene	<5 ppb		EPA 8260
11/02/09	Methylene Chloride	<5 ppb		EPA 8260
11/02/09	MTBE	<5 ppb		EPA 8260
11/02/09	Naphthalene	<5 ppb		EPA 8260

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State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087531

Sample's Information: **Sample ID:** MW8

Site: MW8
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 3:35:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908507

Date Analyzed	Test Name	Result	MCL	Method
11/02/09	n-Butylbenzene	<5 ppb		EPA 8260
11/02/09	n-Propylbenzene	<5 ppb		EPA 8260
11/02/09	o-Xylene	<5 ppb		EPA 8260
11/02/09	p-Isoproplytoluene	<5 ppb		EPA 8260
11/02/09	sec-Butylbenzene	<5 ppb		EPA 8260
11/02/09	Styrene	<5 ppb		EPA 8260
11/02/09	tert-Butylbenzene	<5 ppb		EPA 8260
11/02/09	Tetrachloroethene	<5 ppb		EPA 8260
11/02/09	Toluene	<5 ppb		EPA 8260
11/02/09	trans-1,2-Dichloroethene	<5 ppb		EPA 8260
11/02/09	trans-1,3-Dichloropropene	<5 ppb		EPA 8260
11/02/09	Trichloroethene	<5 ppb		EPA 8260
11/02/09	Trichlorofluoromethane	<5 ppb		EPA 8260
11/02/09	Vinyl Acetate	<5 ppb		EPA 8260
11/02/09	Vinyl chloride	<5 ppb		EPA 8260
11/04/09	PCB-1016	<0.5 ppb		SW 8082
11/04/09	PCB-1221	<0.5 ppb		SW 8082
11/04/09	PCB-1232	<0.5 ppb		SW 8082
11/04/09	PCB-1242	<0.5 ppb		SW 8082
11/04/09	PCB-1248	<0.5 ppb		SW 8082
11/04/09	PCB-1254	<0.5 ppb		SW 8082
11/04/09	PCB-1260	<0.5 ppb		SW 8082
11/04/09	PCB-1262	<0.5 ppb		SW 8082
11/04/09	PCB-1268	<0.5 ppb		SW 8082
11/04/09	4,4'-DDD	<0.02 ppb		SW8081
11/04/09	4,4'-DDE	<0.02 ppb		SW8081
11/04/09	4,4'-DDT	<0.02 ppb		SW8081
11/04/09	a-BHC	<0.02 ppb		SW8081
11/04/09	Aldrin	<0.02 ppb		SW8081

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City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087531

Sample's Information: **Sample ID:** MW8

Site: MW8
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 3:35:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908507

Date Analyzed	Test Name	Result	MCL	Method
11/04/09	b-BHC	<0.02 ppb		SW8081
11/04/09	Chlordane	<0.02 ppb		SW8081
11/04/09	d-BHC	<0.02 ppb		SW8081
11/04/09	Dieldrin	<0.02 ppb		SW8081
11/04/09	Endosulfan I	<0.02 ppb		SW8081
11/04/09	Endosulfan II	<0.02 ppb		SW8081
11/04/09	Endosulfan Sulfate	<0.02 ppb		SW8081
11/04/09	Endrin	<0.02 ppb		SW8081
11/04/09	Endrin Aldehyde	<0.02 ppb		SW8081
11/04/09	Endrin Ketone	<0.02 ppb		SW8081
11/04/09	g-BHC	<0.02 ppb		SW8081
11/04/09	Heptachlor	<0.02 ppb		SW8081
11/04/09	Heptachlor epoxide	<0.02 ppb		SW8081
11/04/09	Methoxychlor	<0.02 ppb		SW8081
11/04/09	Mitotane	<0.02 ppb		SW8081
11/04/09	Toxaphene	<1 ppb		SW8081
11/05/09	Zinc	<0.1 ppm	N/A	6010/E200.7
11/05/09	Vanadium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Thallium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Selenium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Antimony	<0.1 ppm	N/A	6010/E200.7
11/05/09	Lead	<0.1 ppm	N/A	6010/E200.7
11/05/09	Nickel	<0.1 ppm	N/A	6010/E200.7
11/05/09	Sodium	58 ppm	N/A	6010/E200.7
11/05/09	Manganese	0.844 ppm	N/A	6010/E200.7
11/05/09	Magnesium	11.7 ppm	N/A	6010/E200.7
11/05/09	Potassium	6.33 ppm	N/A	6010/E200.7
11/06/09	Mercury	<0.001 ppm	N/A	SW-7471
11/05/09	Iron	14.7 ppm	N/A	6010/E200.7
11/05/09	Copper	<0.1 ppm	N/A	6010/E200.7

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Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087531

Sample's Information: **Sample ID:** MW8

Site: MW8
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 3:35:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908507

Date Analyzed	Test Name	Result	MCL	Method
11/05/09	Chromium, Trivalent	<0.1 ppm	N/A	6010/E200.7
11/05/09	Chromium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Cobalt	<0.1 ppm	N/A	6010/E200.7
11/05/09	Cadmium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Calcium	44.8 ppm	N/A	6010/E200.7
11/05/09	Beryllium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Barium	<0.1 ppm	N/A	6010/E200.7
11/05/09	Arsenic	<0.1 ppm	N/A	6010/E200.7
11/05/09	Aluminum	7.85 ppm	N/A	6010/E200.7
11/05/09	Silver	<0.1 ppm	N/A	6010/E200.7
11/06/09	Aluminum (Filtered)	0.177 ppm	N/A	6010/E200.7
11/06/09	Antimony (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Arsenic (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Barium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Beryllium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Cadmium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Calcium (Filtered)	20.5 ppm	N/A	6010/E200.7
11/06/09	Chromium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Chromium, Trivalent (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Cobalt (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Copper (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Iron (Filtered)	0.303 ppm	N/A	6010/E200.7
11/06/09	Lead (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Magnesium (Filtered)	4.54 ppm	N/A	6010/E200.7
11/06/09	Manganese (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Mercury (Filtered)	<0.001 ppm	N/A	SW-7471
11/06/09	Nickel (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Potassium (Filtered)	2.31 ppm	N/A	6010/E200.7
11/06/09	Selenium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Silver (Filtered)	<0.1 ppm	N/A	6010/E200.7

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087531

Sample's Information: **Sample ID:** MW8

Site: MW8
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 3:35:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908507

Date Analyzed	Test Name	Result	MCL	Method
11/06/09	Sodium (Filtered)	28.7 ppm	N/A	6010/E200.7
11/06/09	Thallium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Vanadium (Filtered)	<0.1 ppm	N/A	6010/E200.7
11/06/09	Zinc (Filtered)	<0.1 ppm	N/A	6010/E200.7

MCL = Maximum Contaminant Level **N/A = Not Applicable** **ppb = parts per billion**
ppm = parts per million

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

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State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087532

Sample's Information:
Sample ID: MW-FB

Site: MW-FB
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 4:30:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908508

Date Analyzed	Test Name	Result	Method
11/04/09	1,2,4-Trichlorobenzene	<5 ppb	8270
11/04/09	1,2-Dichlorobenzene	<5 ppb	8270
11/04/09	1,3-Dichlorobenzene	<5 ppb	8270
11/04/09	1,4-Dichlorobenzene	<5 ppb	8270
11/04/09	2,4,5-Trichlorophenol	<5 ppb	8270
11/04/09	2,4,6-Trichlorophenol	<5 ppb	8270
11/04/09	2,4-Dichlorophenol	<5 ppb	8270
11/04/09	2,4-Dimethylphenol	<5 ppb	8270
11/04/09	2,4-Dinitrophenol	<5 ppb	8270
11/04/09	2,4-Dinitrotoluene	<5 ppb	8270
11/04/09	2,6-Dichlorophenol	<5 ppb	8270
11/04/09	2,6-Dinitrotoluene	<5 ppb	8270
11/04/09	2-Chloronaphthalene	<5 ppb	8270
11/04/09	2-Chlorophenol	<5 ppb	8270
11/04/09	2-Methyl-4,6-dinitrophenol	<5 ppb	8270
11/04/09	2-Methylnaphthalene	<5 ppb	8270
11/04/09	2-Methylphenol (o-Cresol)	<5 ppb	8270
11/04/09	2-Nitroaniline	<5 ppb	8270
11/04/09	2-Nitrophenol	<5 ppb	8270
11/04/09	3&4-Methylphenol (m,p-Cresol)	<5 ppb	8270
11/04/09	3,3'-Dichlorobenzidine	<5 ppb	8270
11/04/09	3-Nitroaniline	<5 ppb	8270
11/04/09	4-Bromophenyl Phenyl Ether	<5 ppb	8270
11/04/09	4-Chloro-3-Methylphenol	<5 ppb	8270
11/04/09	4-Chloroaniline	<5 ppb	8270
11/04/09	4-Chlorophenylphenyl ether	<5 ppb	8270
11/04/09	4-Nitroaniline	<5 ppb	8270
11/04/09	4-Nitrophenol	<5 ppb	8270
11/04/09	Acenaphthene	<5 ppb	8270
11/04/09	Acenaphthylene	<5 ppb	8270
11/04/09	Aniline	<5 ppb	8270

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Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087532

Sample's Information:
Sample ID: MW-FB

Site: MW-FB
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 4:30:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908508

Date Analyzed	Test Name	Result	Method
11/04/09	Anthracene	<5 ppb	8270
11/04/09	Benzidine	<5 ppb	8270
11/04/09	Benzo(a)anthracene	<5 ppb	8270
11/04/09	Benzo(a)pyrene	<5 ppb	8270
11/04/09	Benzo(b)fluoranthene	<5 ppb	8270
11/04/09	Benzo(g,h,i)perylene	<5 ppb	8270
11/04/09	Benzo(k)fluoranthene	<5 ppb	8270
11/04/09	Benzoic Acid	<5 ppb	8270
11/04/09	Benzyl Alcohol	<5 ppb	8270
11/04/09	Benzyl Butyl Phthalate	<5 ppb	8270
11/04/09	bis(2-Chloroethoxy)methane	<5 ppb	8270
11/04/09	bis(2-Chloroethyl) ether	<5 ppb	8270
11/04/09	bis(2-Chloroisopropyl) ether	<5 ppb	8270
11/04/09	bis(2-ethylhexyl)phthalate	<5 ppb	8270
11/04/09	Chrysene	<5 ppb	8270
11/04/09	Dibenz(a,h)anthracene	<5 ppb	8270
11/04/09	Dibenzofuran	<5 ppb	8270
11/04/09	Diethyl Phthalate	<5 ppb	8270
11/04/09	Dimethyl Phthalate	<5 ppb	8270
11/04/09	Di-n-Butyl phthalate	<5 ppb	8270
11/04/09	Di-n-octyl phthalate	<5 ppb	8270
11/04/09	Fluoranthene	<5 ppb	8270
11/04/09	Fluorene	<5 ppb	8270
11/04/09	Hexachlorobenzene	<5 ppb	8270
11/04/09	Hexachlorobutadiene	<5 ppb	8270
11/04/09	Hexachlorocyclopentadiene	<5 ppb	8270
11/04/09	Hexachloroethane	<5 ppb	8270
11/04/09	Indeno(1,2,3-cd)pyrene	<5 ppb	8270
11/04/09	Isophorone	<5 ppb	8270
11/04/09	m-Cresol	<5 ppb	8270
11/04/09	Naphthalene	<5 ppb	8270

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue
Danbury, Connecticut 06810 | Telephone 203-798-2229

Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087532

Sample's Information: **Sample ID:** MW-FB

Site: MW-FB
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 4:30:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908508

Date Analyzed	Test Name	Result	Method
11/04/09	Nitrobenzene	<5 ppb	8270
11/04/09	n-Nitrosodimethylamine	<5 ppb	8270
11/04/09	n-Nitrosodi-n-propylamine	<5 ppb	8270
11/04/09	n-Nitrosodiphenylamine	<5 ppb	8270
11/04/09	Pentachlorophenol	<5 ppb	8270
11/04/09	Phenanthrene	<5 ppb	8270
11/04/09	Phenol	<5 ppb	8270
11/04/09	Pyrene	<5 ppb	8270
11/04/09	Pyridine	<5 ppb	8270
11/02/09	1,1,1,2-Tetrachloroethane	<5 ppb	EPA 8260
11/02/09	1,1,1-Trichloroethane	<5 ppb	EPA 8260
11/02/09	1,1,2,2-Tetrachloroethane	<5 ppb	EPA 8260
11/02/09	1,1,2-Trichloroethane	<5 ppb	EPA 8260
11/02/09	1,1-Dichloroethane	<5 ppb	EPA 8260
11/02/09	1,1-Dichloroethene	<5 ppb	EPA 8260
11/02/09	1,1-Dichloropropene	<5 ppb	EPA 8260
11/02/09	1,2,3-Trichlorobenzene	<5 ppb	EPA 8260
11/02/09	1,2,3-Trichloropropane	<5 ppb	EPA 8260
11/02/09	1,2,4-Trichlorobenzene	<5 ppb	EPA 8260
11/02/09	1,2,4-Trimethylbenzene	<5 ppb	EPA 8260
11/02/09	1,2-Dibromo-3-Chloropropane	<5 ppb	EPA 8260
11/02/09	1,2-Dibromoethane	<5 ppb	EPA 8260
11/02/09	1,2-Dichlorobenzene	<5 ppb	EPA 8260
11/02/09	1,2-Dichloroethane	<5 ppb	EPA 8260
11/02/09	1,2-Dichloropropane	<5 ppb	EPA 8260
11/02/09	1,3,5-Trimethylbenzene	<5 ppb	EPA 8260
11/02/09	1,3-Dichlorobenzene	<5 ppb	EPA 8260
11/02/09	1,3-Dichloropropane	<5 ppb	EPA 8260
11/02/09	1,4-Dichlorobenzene	<5 ppb	EPA 8260
11/02/09	2,2-Dichloropropane	<5 ppb	EPA 8260

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue
Danbury, Connecticut 06810 | Telephone 203-798-2229

Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087532

Sample's Information: **Sample ID:** MW-FB

Site: MW-FB
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 4:30:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908508

Date Analyzed	Test Name	Result	Method
11/02/09	2-Butanone (MEK)	<5 ppb	EPA 8260
11/02/09	2-Chlorotoluene	<5 ppb	EPA 8260
11/02/09	2-Hexanone	<5 ppb	EPA 8260
11/02/09	4-Chlorotoluene	<5 ppb	EPA 8260
11/02/09	4-Methyl-2-pentanone (MIBK)	<5 ppb	EPA 8260
11/02/09	Acetone	<5 ppb	EPA 8260
11/02/09	Acrolein	<5 ppb	EPA 8260
11/02/09	Acrylonitrile	<5 ppb	EPA 8260
11/02/09	Benzene	<5 ppb	EPA 8260
11/02/09	Bromobenzene	<5 ppb	EPA 8260
11/02/09	Bromochloromethane	<5 ppb	EPA 8260
11/02/09	Bromodichloromethane	<5 ppb	EPA 8260
11/02/09	Bromoform	<5 ppb	EPA 8260
11/02/09	Bromomethane	<5 ppb	EPA 8260
11/02/09	Carbon disulfide	<5 ppb	EPA 8260
11/02/09	Carbon tetrachloride	<5 ppb	EPA 8260
11/02/09	Chlorobenzene	<5 ppb	EPA 8260
11/02/09	Chlorodibromomethane	<5 ppb	EPA 8260
11/02/09	Chloroethane	<5 ppb	EPA 8260
11/02/09	Chloroform	<5 ppb	EPA 8260
11/02/09	Chloromethane	<5 ppb	EPA 8260
11/02/09	cis-1,2-Dichloroethene	<5 ppb	EPA 8260
11/02/09	cis-1,3-Dichloropropene	<5 ppb	EPA 8260
11/02/09	Dibromomethane	<5 ppb	EPA 8260
11/02/09	Dichlorodifluoromethane	<5 ppb	EPA 8260
11/02/09	Ethylbenzene	<5 ppb	EPA 8260
11/02/09	Isopropylbenzene	<5 ppb	EPA 8260
11/02/09	m&p xylene	<5 ppb	EPA 8260
11/02/09	Methylene Chloride	<5 ppb	EPA 8260
11/02/09	MTBE	<5 ppb	EPA 8260
11/02/09	Naphthalene	<5 ppb	EPA 8260

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue
Danbury, Connecticut 06810 | Telephone 203-798-2229

Cosmos Environmental Services Inc: 579.2

Mailing Information:
Name: Cosmos Environmental Services Inc
Address: PO Box 349

City: Woodmere
State: NY **Zip:** 11598
Phone: (516) 374-7890 **Fax:** (516) 374-7891

Collector's Information:
Name: Alex Avracen
Address of site: Not Specified

City: LIC
State: NY **Zip:**
Phone:

JMS ID: 087532

Sample's Information: **Sample ID:** MW-FB

Site: MW-FB
Preservative: HCL
Temperature:
Matrix: Water

Date Collected: 11/1/2009
Time Collected: 4:30:00 PM

Date Received: 11/2/2009
Time Received: 4:00:00 PM
Lab No.: J0908508

Date Analyzed	Test Name	Result	Method
11/02/09	n-Butylbenzene	<5 ppb	EPA 8260
11/02/09	n-Propylbenzene	<5 ppb	EPA 8260
11/02/09	o-Xylene	<5 ppb	EPA 8260
11/02/09	p-Isoproplytoluene	<5 ppb	EPA 8260
11/02/09	sec-Butylbenzene	<5 ppb	EPA 8260
11/02/09	Styrene	<5 ppb	EPA 8260
11/02/09	tert-Butylbenzene	<5 ppb	EPA 8260
11/02/09	Tetrachloroethene	<5 ppb	EPA 8260
11/02/09	Toluene	<5 ppb	EPA 8260
11/02/09	trans-1,2-Dichloroethene	<5 ppb	EPA 8260
11/02/09	trans-1,3-Dichloropropene	<5 ppb	EPA 8260
11/02/09	Trichloroethene	<5 ppb	EPA 8260
11/02/09	Trichlorofluoromethane	<5 ppb	EPA 8260
11/02/09	Vinyl Acetate	<5 ppb	EPA 8260
11/02/09	Vinyl chloride	<5 ppb	EPA 8260

ppb = parts per billion

Signature: Michael Lapman
Michael Lapman
President

Reviewed By: Sharon Houlahan
Sharon Houlahan, Director

State #: PH-0218 **ELAP #: 11715** **Ref Lab: 11301**

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue | Danbury, Connecticut 06810 | Telephone 203-798-2229

Chain of Custody/Request for Analysis Document

Client Name/Address	Fax # (516) 374-7891	Turnaround Required	Sample Receipt	Comments/Instructions
Aosmos Environmental Services Inc. P.O. Box 349 Woodmere, NY	Email1 cesalax1@HSN.com	Normal X	Sample Temp 5.3 °C	P.O. 579.2 (1)
	Email2	STAT	Rec'd on Ice X	
	Email3	24 48	pH check	
Contact Phone (516) 374-7890	Type: G=Grab; C= Composite; SS=Split Spoon	By:	Chlor. Res.	
Project Location LIC. NY		Report Type: Hard Copy E-mail	Note: Sample Temp. upon receipt must be <6.0°C	
Project ID. 579.2	Matrix: S=soil; L=liquid; SL=sludge; A=Air; P=Paint Chips; B=Bulk material			

Sampler Name (Print)	Date	Time
A. Avgacey		
Sampler Signature	10/30	17:00

Laboratory ID # (For lab use only)	Sampling Info: Date	Time	Matrix	Type	Client Sample #/Location	Total # of Containers	40ml glass HCL	Liter glass HCL	Liter Amber Plain	250ml Plastic HNO3	250ml Plastic	Liter Plastic	125ml Sterile	8oz Glass	4oz Glass	250ml Pl. NaOH/ZnAc	Analysis Requested
J0908522	10.29	8:20	S	SS	B-3.1	2				X	X			X			8260 VOC
8523	10.29	9:25	S	SS	B-3.2	2				X	X			X			8270 SVOC
8524	10.29	11:30	S	SS	B-5.1	2				X	X			X			8081/8082 Pest./PCB
8525	10.29	12:05	S	SS	B-5.2	2				X	X			X			TAL Metals
8526	10.29	15:00	S	SS	B-4.1	2				X	X			X			
8527	10.29	16:10	S	SS	B-4.2	2				X	X			X			
8528	10.25	14:03	S	SS	B-1.1	2				X	X			X			
8529	10.25	15:00	S	SS	B-1.2	2				X	X			X			
8530	10.25	9:40	S	SS	B-8.1	2				X	X			X			
8531	10.25	10:05	S	SS	B-8.2	2				X	X			X			

Relinquished by: A. Avgacey	Date 11/01/09	Time 9:00	Received by:	Date 11/2	Time 2:30
Relinquished by:	Date	Time	Received by:	Date 11-2-09	Time 4:00
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

NOV - 2 2009

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue | Danbury, Connecticut 06810 | Telephone 203-798-2229

Chain of Custody/Request for Analysis Document

Client Name/Address	Fax # (516) 374-7891	Turnaround Required	Sample Receipt	Comments/Instructions
Cosmos Environmental Services Inc.	Email1 CESalex1@MSN.COM	Normal	Sample Temp 5.2 °C	P.O. 579.2 (2)
P.O. Box 349, Woodmere	Email2	STAT	Rec'd on Ice X	
Contact	Email3	24 48	pH check	
Phone (516) 374-7890	Type: G=Grab; C= Composite; SS=Split Spoon	By:	Chlor. Res.	
Project Location LRC, NY	Matrix: S=soil; L=liquid; SL=sludge; A=Air; P=Paint Chips; B=Bulk material	Report Type: Hard Copy E-mail	Note: Sample Temp. upon receipt must be <6.0°C	
Project ID. 579.2				

Sampler Name (Print)	A. Avrgeen	Date	Time
Sampler Signature		11/01/09	9:00

Laboratory ID # For lab use only	Sampling Info: Date	Time	Matrix	Type	Client Sample #/Location	Total # of Containers	40ml glass HCL	Liter glass HCL	Liter Amber Plain	250ml Plastic HNO3	250ml Plastic	Liter Plastic	125ml Sterile	8oz Glass	4oz Glass	250ml Pl. NaOH/ZnAc	Analysis Requested
J090 8514	10.25	11:24	S	SS	B-2.1	2				X	X			X			8260 VOC
8515	10.25	11:41	S	SS	B-2.2	2				X	X			X			8270 SVOC
8516	10.25	01:11	S	SS	B-9.1	2				X	X			X			8081/8082 Pest/PCB
8517	10.25	02:18	S	SS	B-7.1	2				X	X			X			TAL Metals
8518	10.25	02:30	S	SS	B-7.2	2				X	X			X			
8519	10.25	07:45	S	SS	B-6.1	2				X	X			X			
8520	10.25	08:10	S	SS	B-6.2	2				X	X			X			
[illegible]	10.25		S	SS													

Relinquished by:	Date 11/01/09	Time 9:00	Received by:		Date 11/2	Time 2:30
Relinquished by:	Date	Time	Received by:		Date 11-2-09	Time 4:00
Relinquished by:	Date	Time	Received by:		Date	Time
Relinquished by:	Date	Time	Received by:		Date	Time

NOV - 2 2009

JMS Environmental Services, Inc.
WATER, SOIL AND AIR ANALYSIS
41 Kenosia Avenue | Danbury, Connecticut 06810 | Telephone 203-798-2229

Chain of Custody/Request for Analysis Document

Client Name/Address	Fax # (516) 374-7891
Cosmos Environmental Services Inc.	Email1 cesalex1@HSN.com
P.O. Box 349, Woodmere.	Email2
Contact	Email3
Phone (516) 374-7891	Type: G=Grab; C= Composite; SS=Split Spoon
Project Location LIC. NY	Matrix: S=soil; L=liquid; SL=sludge; A=Air; P=Paint Chips; B=Bulk material
Project ID. 579.2	
Sampler Name (Print) R. Avraces	Date 11/01/09 Time 18:00
Sampler Signature	

Turnaround Required: Normal X; STAT; 24; 48; By:; Report Type: Hard Copy E-mail

Sample Receipt: Sample Temp 5.4 °C; Rec'd on Ice X; pH check; Chlor. Res.

Note: Sample Temp. upon receipt must be <6.0°C

Comments/Instructions: P.O. 579.2 (3)

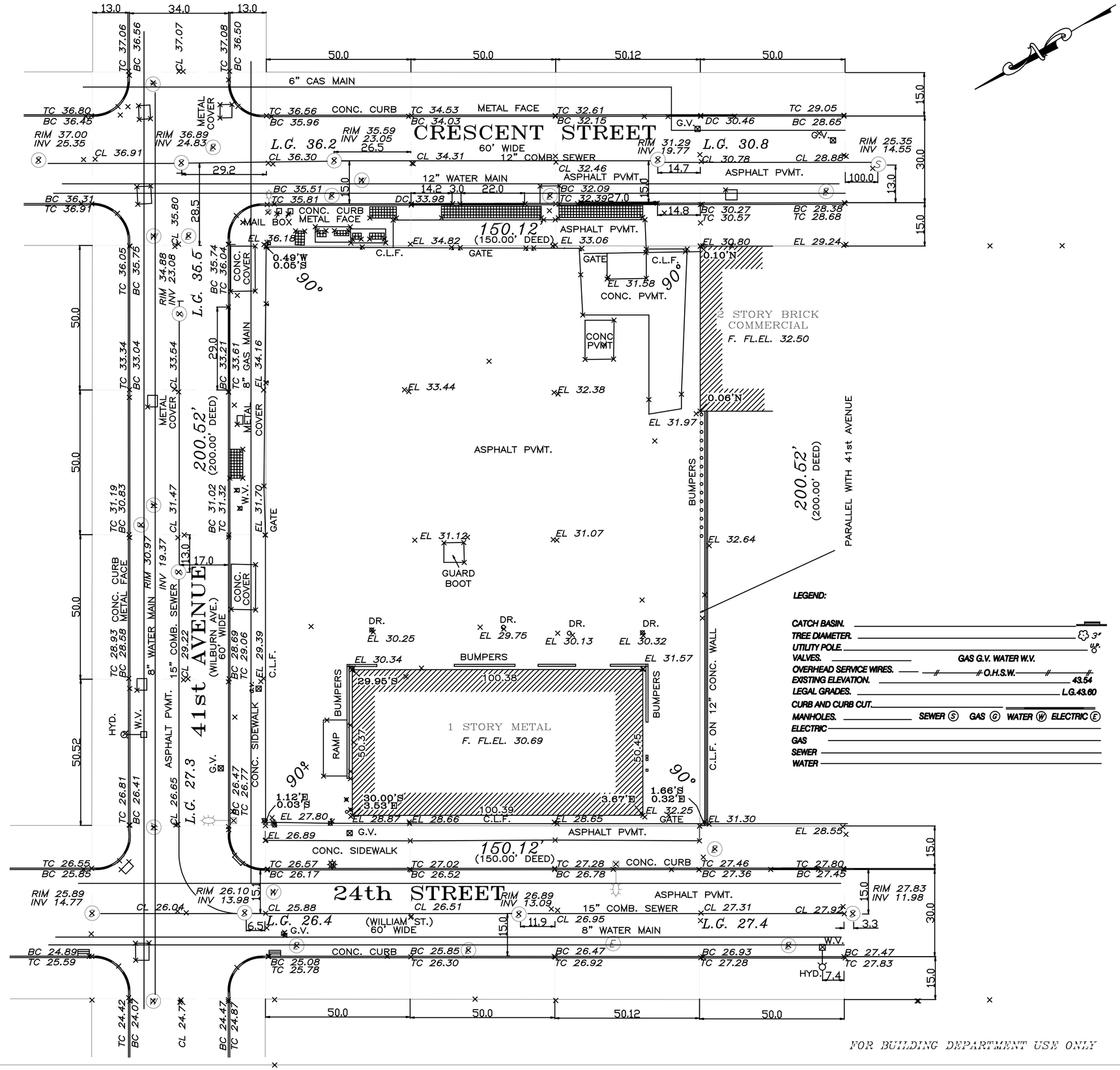
Laboratory ID # (For lab use only)	Sampling Info: Date	Time	Matrix	Type	Client Sample #/Location	Total # of Containers	40ml glass HCL	Liter glass HCL	Liter Amber Plain	250ml Plastic HNO3	250ml Plastic	½ Liter Plastic	125ml Sterile	½ Liter Glass	4oz Glass	250ml Pl. NaOH/ZnAc	Analysis Requested
8503	11.01	11:30	L	G	MW-1	7	X		X	X	X	X		X			8260 VOC
8504	11.01	12:50	L	G	MW-2	7	X		X	X	X	X		X			8270 SVOC
8505	11.01	14:05	L	G	MW-4	7	X		X	X	X	X		X			8081/8082 Pest/PCB
8506	11.01	14:50	L	G	MW-6	7	X		X	X	X	X		X			TAL Metals Filtered
8507	11.01	15:35	L	G	MW-8	7	X		X	X	X	X		X			TAL Metals Un-filtered
8508	11.01	16:30	L	G	MW-FB	3	X		X								SV + VOAs only PC not 11/2/09

Relinquished by: R. Avraces	Date 11/01/09	Time 9:00	Received by:	Date 11/2	Time 2:30
Relinquished by:	Date	Time	Received by:	Date 11/2-09	Time 4:00
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

NOV - 2 2009

APPENDIX VII

Site Survey and Geotechnical Borings' Test Results



NOTE:
UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS SURVEY MAP NOT BEARING THE LAND SURVEYORS BLACK INKED OR EMBOSSED SEAL SHALL NOT BE CONSIDERED TO BE A VALID TRUE COPY.
GUARANTEES OR CERTIFICATIONS INDICATED HEREON SHALL RUN ONLY TO THE PERSON AND/OR PERSONS FOR WHOM THE SURVEY IS PREPARED, AND ONLY ON HIS/HER BEHALF TO THE TITLE COMPANY, GOVERNMENTAL AGENCY AND LENDING INSTITUTION LISTED HEREON, AND TO THE ASSIGNEES OF THE LENDING INSTITUTION GUARANTEES OR CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS.

NOTE:
1. *CONSULT WITH THE HIGHWAY DEPARTMENT BEFORE DESIGNING, INSTALLING OR MODIFYING ANY NEW OR EXISTING CURBS, WALKS OR ROADWAYS IN THE STREETS SHOWN HEREON.*
2. *THE LOCATION OF SUBSURFACE UTILITY INFORMATION SHOULD BE CONSIDERED APPROXIMATE AND MUST BE CONFIRMED BY THE USER OF THIS SURVEY PRIOR TO DESIGN AND/OR CONSTRUCTION. SUBSURFACE UTILITY INFORMATION SHOWN HEREON WAS OBTAINED FROM VARIOUS CITY DEPARTMENTS AND/OR PRIVATE UTILITY COMPANIES. THE SURVEYOR DOES NOT CERTIFY AS TO ITS ACCURACY AND/OR COMPLETENESS AND IS NOT LIABLE FOR ANY DAMAGES ARISING FROM OR INCIDENTIAL TO THE USE OF THIS DATA.*
3. *THIS IS TO CERTIFY THAT THERE ARE NO VISIBLE STREAMS OR NATURAL COURSES IN THE PROPERTY AS SHOWN ON THE SURVEY.*
4. *ELEVATIONS REFER TO OFFICIAL DATUM OF THE BOROUGH OF QUEENS WHICH IS 2.725 FEET ABOVE THE U.S. COAST AND GEODETIC SURVEY MEAN SEA LEVEL DATUM AT SANDY HOOK.*
5. *THE SURVEYOR DID NOT ATTEMPT TO LOCATE ANY SUBSURFACE ENTITIES WITHIN THE PROPERTY. CONTACT ONE CALL OR THE APPLICABLE UTILITY COMPANY TO HAVE ALL SUBSURFACE ENTITIES AND/OR UTILITIES WITHIN THE PROPERTY MARKED OUT (LOCATED) PRIOR TO CONSTRUCTION. THE SURVEYOR DOES NOT CERTIFY AS TO THE ACCURACY AND/OR COMPLETENESS OF ANY SUBSURFACE DATA PROVIDED HEREON AND IS NOT LIABLE FOR ANY DAMAGES ARISING FROM OR INCIDENTIAL TO THE USE OF THIS DATA.*
6. *THIS SURVEY IS NOT VALID FOR CONVEYANCE.*

LEGEND:

- *CATCH BASIN.*
- *TREE DIAMETER.* 3' up
- *UTILITY POLE.*
- *VALVES.* GAS G.V. WATER W.V.
- *OVERHEAD SERVICE WIRES.* # O.H.S.W. #
- *EXISTING ELEVATION.* 43.54
- *LEGAL GRADES.* L.G.43.60
- *CURB AND CURB CUT.*
- *MANHOLES.* SEWER (S) GAS (G) WATER (W) ELECTRIC (E)
- *ELECTRIC*
- *GAS*
- *SEWER*
- *WATER*

FOR BUILDING DEPARTMENT USE ONLY

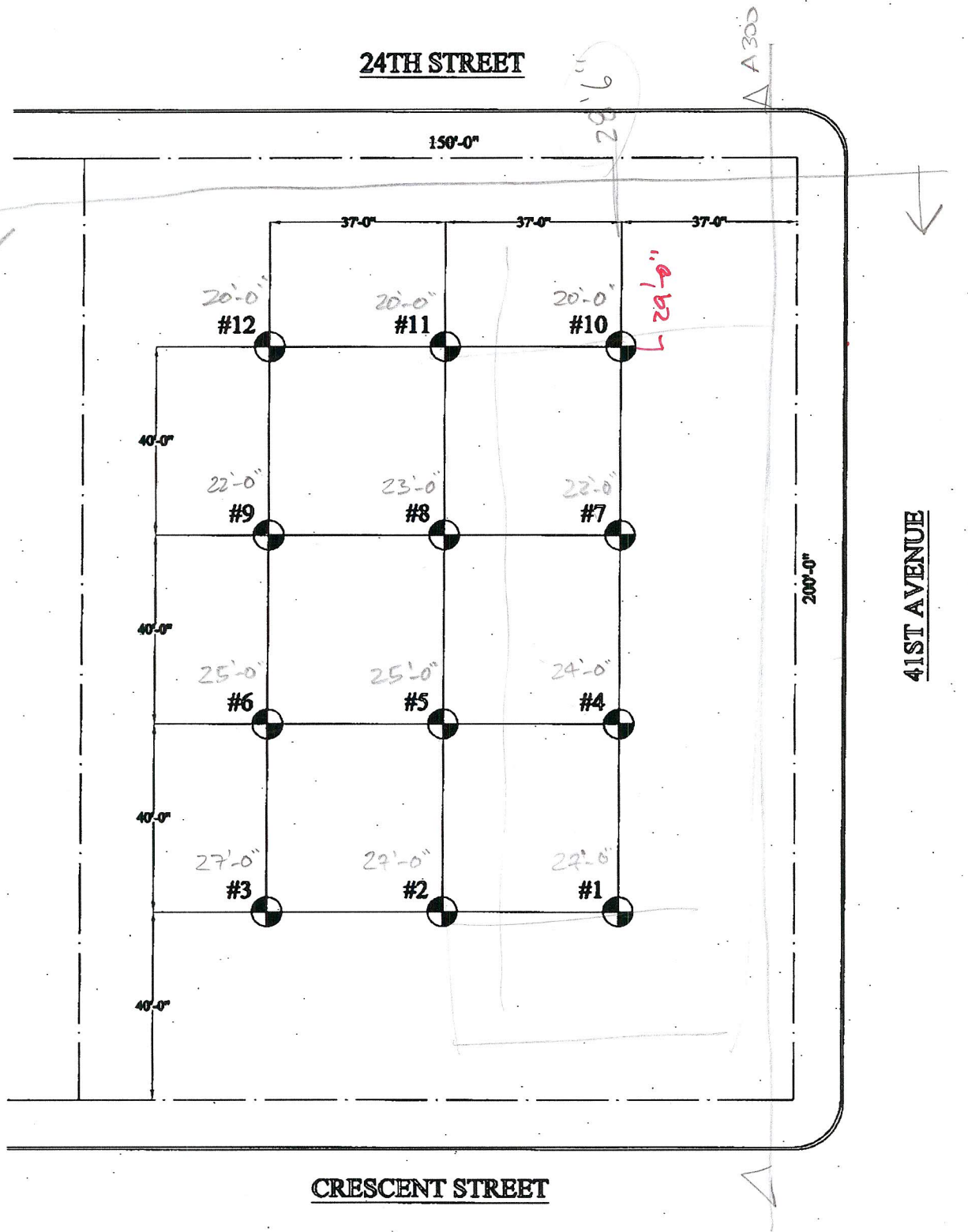
TOPOGRAPHIC SURVEY

LOCATED AT:
41–10 Crescent Street L.I.C.
Borough And County Of Queens,
City and State of New York.

TAX DESIG: Block 414, Lot 23

Precision Surveys
TITLE ◦ ARCHITECTURAL ◦ BOUNDARY ◦ CONSTRUCTION
40 FRANKLIN AVE. FRANKLIN SQUARE, N.Y. 11010
Phone (718)472–1571 ◦ (516)488–1608◦ Fax(516)488–2039
CHRISTOPHER M. BUCKLEY
PROFESSIONAL LAND SURVEYOR

CERTIFIED TO: Anthony Pecora
DATE: January 5, 2003
SCALE: 1" = 30'
DRAWN BY MD
JOB No: 6310



BORING LOCATION PLAN

N.T.S.

DENOTES BORING LOCATION

BORING #1

DATE STARTED: MARCH 07, 2008

DATE COMPLETED: MARCH 07, 2008

DEPTH (FT.)	SAMPLE NUMBER	SPOON BLOWS 0 TO 6 (IN.)	SPOON BLOWS 6 TO 12 (IN.)	MATERIAL DESCRIPTION
	1		6	2" ASPHALT + BASE 0'-6"
		5	7	BROWN SAND TRACE BRICK TRACE GRAVEL TRACE SILT (11-65) FILL
				3'-0"
5	2	5	5	BROWN FINE SAND TRACE SILT (08-65)
		6	6	
10	3	4	5	
		6	5	
				12'-6"
15	4	7	7	BROWN FINE SAND TRACE GRAVEL TRACE SILT (08-65)
		8	9	
20	5	6	8	
		7	9	
25	6	8	8	
		9	10	
				27'-0" ▽
				27'-6"
30	7	5	4	BROWN FINE SAND TRACE SILT (08-65)
		4	5	
				31'-0"
				END OF BORING (S2)

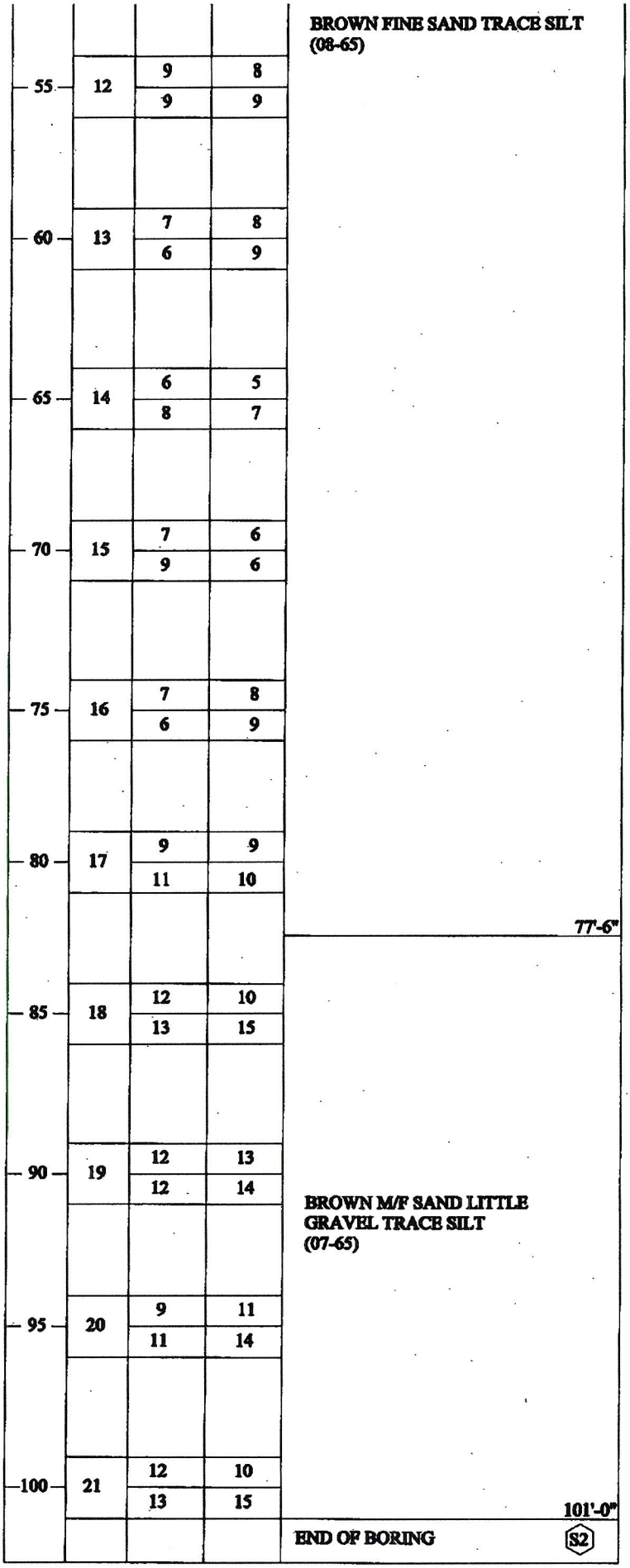
BORING #2

DATE STARTED: MARCH 07, 2008

DATE COMPLETED: MARCH 07, 2008

DEPTH (FT.)	SAMPLE NUMBER	SPOON BLOWS 0 TO 6 (IN.)	SPOON BLOWS 6 TO 12 (IN.)	MATERIAL DESCRIPTION
	1	/	6	2" ASPHALT + BASE 0'-6"
		6	4	BROWN SAND TRACE BRICK TRACE GRAVEL TRACE SILT (11-65) FILL 3'-0"
5	2	5	6	
		5	5	
				BROWN FINE SAND TRACE SILT (08-65)
10	3	4	3	
		4	5	
				12'-6"
15	4	6	7	
		7	9	
				BROWN FINE SAND TRACE GRAVEL TRACE SILT (08-65)
20	5	8	6	
		7	10	
25	6	7	8	
		8	8	
				27'-0" 27'-6" ▽
30	7	3	3	
		3	4	
35	8	4	5	
		7	8	
40	9	3	4	
		6	4	
45	10	4	7	
		5	8	
50	11	8	7	
		9	10	

50' - 100'


BROWN FINE SAND TRACE SILT
(08-65)
55
12
9
8
9
9
60
13
7
8
6
9
65
14
6
5
8
7
70
15
7
6
9
6
75
16
7
8
6
9
80
17
9
9
11
10
77'-6"
85
18
12
10
13
15
90
19
12
13
12
14
BROWN M/F SAND LITTLE
GRAVEL TRACE SILT
(07-65)
95
20
9
11
11
14
100
21
12
10
13
15
101'-0"
END OF BORING
S2

UNIFIED SOIL CLASSIFICATION

SOIL GROUPS	TYPICAL NAMES
GW	WELL GRADED GRAVELS, GRAVEL SAND MIXTURES, LITTLE OR NO FINES
GP	POORLY GRADED GRAVELS OR GRAVEL SAND MIXTURES, LITTLE OR NO FINES
GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURE
GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURE
SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
SP	POORLY GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES
SM	SILTY SANDS, SAND - SILT MIXTURES
SC	CLAYEY SANDS, SAND - CLAY MIXTURES
ML	INORGANIC SILTS, VERY FINE SANDS, CLAYEY SILTS, SLIGHT PLASTICITY
CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS
OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
PT	PEAT AND OTHER HIGHLY ORGANIC SOILS

ALLOWABLE SOIL BEARING PRESSURES, N.Y.C. BLDG CODE C26 - 1103

CLASS OF MATERIALS	DESCRIPTION	ALLOWABLE BEARING TONS/SQ. FT.
01-65	HARD SOUND ROCK	60
02-65	MEDIUM HARD ROCK	40
03-65	INTERMEDIATE ROCK	20
04-65	SOFT ROCK	8
05-65	HARDPAN	8 - 12
06-65	GRAVEL AND GRAVEL SOILS (SOIL GROUPS GW, GP, GM & GC AND GROUPS SW, SP AND SM CONTAINING MORE THAN 50% GRAVEL)	4 - 10
07-65	SANDS (OTHER THAN FINE SANDS) (SOIL GROUPS SW, SP & SM BUT CONTAINING NO MORE THAN 50% GRAVEL)	3 - 6
08-65	FINE SAND	2 - 4
09-65	CLAYS AND CLAY SOILS (SOIL GROUPS SC, CL, & CH) HARD MEDIUM SOFT	5 MAX 2 MAX BY TEST
10-65	SILTS AND SILT SOILS (SOIL GROUPS ML & MH) DENSE MEDIUM LOOSE	3 1.5 BY TEST
11-65	NOMINALLY UNSATISFACTORY BEARING MATERIAL	BY TEST

C.E. BOSS CO., INC.

INSPECTION ○ TESTING ○ ENGINEERING

3319 MERRITT AVENUE ○ BRONX, NY 10475

(718) 994-3200 ○FAX (718) 994-5406

CLIENT: DAN IONESCU ARCHITECTS
37 WEST 28TH STREET
NEW YORK, NY 10001

PROJECT: 41-10 CRESCENT STREET
LONG ISLAND CITY, NY

REVISED:

DATE: 03/17/08

JOB NO.: 08056A

SUBSURFACE INVESTIGATION - TEST BORINGS

DRAWING NO.

B-2 OF 2

BORING #3

DATE STARTED: FEBRUARY 27, 2008

DATE COMPLETED: FEBRUARY 27, 2008

DEPTH (FT.)	SAMPLE NUMBER	SPOON BLOWS 0 TO 6 (IN.)	SPOON BLOWS 6 TO 12 (IN.)	MATERIAL DESCRIPTION
	1		7	2" ASPHALT + BASE 0'-6"
		9	7	BROWN SAND TRACE BRICK TRACE GRAVEL TRACE SILT (11-65) FILL
				3'-0"
5	2	5	5	
		6	6	BROWN FINE SAND TRACE SILT (08-65)
10	3	5	6	
		5	5	
				12'-6"
15	4	6	5	
		7	7	
20	5	8	6	BROWN FINE SAND TRACE GRAVEL TRACE SILT (08-65)
		7	9	
25	6	7	8	
		8	8	
				27'-0" ▽
				27'-6"
30	7	5	4	BROWN FINE SAND TRACE SILT (08-65)
		5	5	
				31'-0"
				END OF BORING (S2)

BORING #4

DATE STARTED: FEBRUARY 28, 2008

DATE COMPLETED: FEBRUARY 28, 2008

DEPTH (FT.)	SAMPLE NUMBER	SPOON BLOWS 0 TO 6 (IN.)	SPOON BLOWS 6 TO 12 (IN.)	MATERIAL DESCRIPTION
	1	5	5	2" ASPHALT + BASE 0'-6"
		5	6	BROWN SAND TRACE BRICK TRACE GRAVEL TRACE SILT (11-65) FILL 3'-0"
5	2	4	5	
		5	6	BROWN FINE SAND TRACE SILT (08-65)
10	3	4	6	
		7	5	12'-6"
15	4	7	8	
		7	8	
20	5	8	7	BROWN FINE SAND TRACE GRAVEL TRACE SILT (08-65)
		9	11	24'-0" ▽
25	6	7	9	
		9	8	27'-6"
30	7	3	4	BROWN FINE SAND TRACE SILT (08-65)
		4	5	31'-0"
				END OF BORING S2

BORING #5

DATE STARTED: FEBRUARY 28, 2008

DATE COMPLETED: FEBRUARY 28, 2008

DEPTH (FT.)	SAMPLE NUMBER	SPOON BLOWS 0 TO 6 (IN.)	SPOON BLOWS 6 TO 12 (IN.)	MATERIAL DESCRIPTION
	1	4	4	2" ASPHALT + BASE 0'-6"
		4	6	BROWN SAND TRACE BRICK TRACE GRAVEL TRACE SILT (11-65) FILL 3'-0"
5	2	3	5	
		5	5	BROWN FINE SAND TRACE SILT (08-65)
10	3	4	5	
		5	6	12'-6"
15	4	8	8	
		9	8	
20	5	8	9	BROWN FINE SAND TRACE GRAVEL TRACE SILT (08-65)
		9	10	25'-0" ▽
25	6	8	6	
		9	10	27'-6"
30	7	4	6	BROWN FINE SAND TRACE SILT (08-65)
		5	5	31'-0"
				END OF BORING S2

BORING #6

DATE STARTED: FEBRUARY 27, 2008

DATE COMPLETED: FEBRUARY 27, 2008

DEPTH (FT.)	SAMPLE NUMBER	SPOON BLOWS 0 TO 6 (IN.)	SPOON BLOWS 6 TO 12 (IN.)	MATERIAL DESCRIPTION
	1	9	9	2" ASPHALT + BASE 0'-6"
		9	5	BROWN SAND TRACE BRICK TRACE GRAVEL TRACE SILT (11-65) FILL 3'-0"
5	2	6	5	BROWN FINE SAND TRACE SILT (08-65)
		5	6	
10	3	4	4	12'-6"
		3	4	
15	4	6	7	BROWN FINE SAND TRACE GRAVEL TRACE SILT (08-65)
		7	8	
20	5	9	9	
		8	8	
25	6	8	7	25'-0" ▽
		9	9	27'-6"
30	7	5	5	BROWN FINE SAND TRACE SILT (08-65)
		5	6	31'-0"
				END OF BORING (S2)

BORING #7

DATE STARTED: MARCH 01, 2008

DATE COMPLETED: MARCH 01, 2008

DEPTH (FT.)	SAMPLE NUMBER	SPOON BLOWS 0 TO 6 (IN.)	SPOON BLOWS 6 TO 12 (IN.)	MATERIAL DESCRIPTION
	1	5	5	2" ASPHALT + BASE 0'-6"
		4	6	BROWN SAND TRACE BRICK TRACE GRAVEL TRACE SILT (11-65) FILL 3'-0"
5	2	5	4	BROWN FINE SAND TRACE SILT (08-65)
		5	5	
10	3	6	5	12'-6"
		7	7	
15	4	8	7	BROWN FINE SAND TRACE GRAVEL TRACE SILT (08-65)
		9	9	
20	5	6	6	22'-0" ▽
		8	8	25'-6"
25	6	7	6	BROWN FINE SAND TRACE SILT (08-65)
		7	5	
30	7	5	4	31'-0"
		5	5	
				END OF BORING (S2)

BORING #8

DATE STARTED: FEBRUARY 27, 2008

DATE COMPLETED: FEBRUARY 27, 2008

DEPTH (FT.)	SAMPLE NUMBER	SPOON BLOWS 0 TO 6 (IN.)	SPOON BLOWS 6 TO 12 (IN.)	MATERIAL DESCRIPTION
	1	7	7	2" ASPHALT + BASE 0'-6"
		7	5	BROWN SAND TRACE BRICK TRACE GRAVEL TRACE SILT (11-65) FILL 3'-0"
5	2	6	5	BROWN FINE SAND TRACE SILT (08-65)
		5	6	
10	3	5	4	
		5	4	12'-6"
15	4	6	5	BROWN FINE SAND TRACE GRAVEL TRACE SILT (08-65)
		8	7	
20	5	9	10	
		9	10	23'-0" ▽
25	6	8	9	
		9	11	27'-6"
30	7	5	4	BROWN FINE SAND TRACE SILT (08-65)
		4	4	31'-0"
				END OF BORING (S2)

BORING #9

DATE STARTED: MARCH 01, 2008

DATE COMPLETED: MARCH 01, 2008

DEPTH (FT.)	SAMPLE NUMBER	SPOON BLOWS 0 TO 6 (IN.)	SPOON BLOWS 6 TO 12 (IN.)	MATERIAL DESCRIPTION
	1	7	5	2" ASPHALT + BASE 0'-6"
				BROWN SAND TRACE BRICK TRACE GRAVEL TRACE SILT (11-65) FILL 3'-0"
5	2	4 6	5 6	BROWN FINE SAND TRACE SILT (08-65)
10	3	5 4	3 4	12'-6"
15	4	7 8	6 8	
20	5	9 9	8 9	BROWN FINE SAND TRACE GRAVEL TRACE SILT (08-65) 22'-0"
25	6	8 9	7 8	27'-6"
30	7	3 3	4 5	BROWN FINE SAND TRACE SILT (08-65) 31'-0"
				END OF BORING S2

BORING #10

DATE STARTED: MARCH 07, 2008

DATE COMPLETED: MARCH 07, 2008

DEPTH (FT.)	SAMPLE NUMBER	SPOON BLOWS 0 TO 6 (IN.)	SPOON BLOWS 6 TO 12 (IN.)	MATERIAL DESCRIPTION
	1	5	5	2" ASPHALT + BASE 0'-6"
				BROWN SAND TRACE BRICK TRACE GRAVEL TRACE SILT (11-65) FILL 3'-0"
5	2	8 5	7 6	BROWN FINE SAND TRACE SILT (08-65)
10	3	6 5	9 6	12'-6"
15	4	8 9	8 9	
20	5	7 9	9 10	BROWN FINE SAND TRACE GRAVEL TRACE SILT (08-65) 20'-0"
25	6	7 8	7 9	27'-6"
30	7	4 5	4 4	BROWN FINE SAND TRACE SILT (08-65) 31'-0"
				END OF BORING S2

BORING #11

DATE STARTED: MARCH 07, 2008

DATE COMPLETED: MARCH 07, 2008

DEPTH (FT.)	SAMPLE NUMBER	SPOON BLOWS 0 TO 6 (IN.)	SPOON BLOWS 6 TO 12 (IN.)	MATERIAL DESCRIPTION
	1	6	7	3" CONCRETE SLAB + BASE 0'-6"
		6	6	BROWN SAND TRACE BRICK TRACE GRAVEL TRACE SILT (11-65) FILL 3'-6"
5	2	6	5	BROWN FINE SAND TRACE SILT (08-65)
		6	6	
10	3	6	4	
		6	4	12'-6"
15	4	7	9	
		8	10	
20	5	8	6	BROWN FINE SAND TRACE GRAVEL TRACE SILT (08-65) 20'-0" ▽
		7	8	
25	6	8	8	
		7	9	27'-6"
30	7	3	5	BROWN FINE SAND TRACE SILT (08-65)
		4	5	31'-0"
				END OF BORING S2

BORING #12

DATE STARTED: MARCH 07, 2008

DATE COMPLETED: MARCH 07, 2008

DEPTH (FT.)	SAMPLE NUMBER	SPOON BLOWS 0 TO 6 (IN.)	SPOON BLOWS 6 TO 12 (IN.)	MATERIAL DESCRIPTION
	1	6	6	3" CONCRETE SLAB + BASE 0'-6"
		6	6	BROWN SAND TRACE BRICK TRACE GRAVEL TRACE SILT (11-65) FILL 3'-6"
5	2	5	5	BROWN FINE SAND TRACE SILT (08-65)
		4	6	
10	3	5	4	
		5	4	12'-6"
15	4	8	10	
		9	10	
20	5	8	9	BROWN FINE SAND TRACE GRAVEL TRACE SILT (08-65) 20'-0" ▽
		10	12	
25	6	9	8	
		9	10	27'-6"
30	7	5	5	BROWN FINE SAND TRACE SILT (08-65)
		6	5	31'-0"
				END OF BORING S2

Appendix 8

Limited Soil Vapor Testing and Analysis by Cosmos Environmental, February 2011

COSMOS
Environmental Services, Inc.
938 Northfield Rd. - Woodmere, NY 11598
Phone (516) 374-7890 – Fax (516) 374-7891
Email: CESalex1@msn.com

February 22, 2011

Mr. Anthony Pecora
President
FORTE ITALIA
1352 First Avenue
New York, NY 10011

Project No. 579.2VC

Re: Limited Soil Vapor Testing & Analysis on the property located at: 41-02/10 Crescent Street, Long Island City, NY 11101

Dear Mr. Pecora:

As per our agreement, on January 31, 2011, **Cosmos Environmental Services, Inc. (CES)** performed a **Limited Soil Vapor Testing & Analysis** at the above referenced property.

The singular goal of this project was to determine the presence/absence of soil contamination vapors in the areas described in the scope of work below and possibly effected by the use of the subject site as a gasoline dispensing station and a parking lot.

This phase of the project consisted of the following:

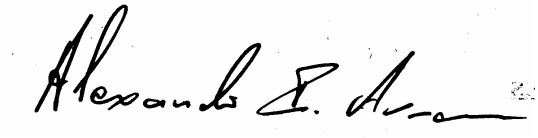
- Based on the results of the Ground-penetrating Radar (GPR) survey and drilling locations discussed with the **NYC DEP / NYC OER /NYC BFR** and **Client**, **CES** installed a total of five (5) soil vapor test borings in accordance with the **Installation Procedure and Sampling Protocol** (see **Appendix I**).
- Two (2) of these borings were located in the area formerly occupied by a Service Station and a Garage as depicted in the **Site Plan & Vapor Sampling Locations** presented (see **Figure B** below).
- Three (3) other boring were spread through the property as depicted in the **Site Plan & Vapor Sampling Locations** presented (see **Figure B** below).
- Vapor samples were collected from an approximate depth of 7-8 feet depending on the drilling conditions at each particular area.

- Vapor samples were collected, using conventional sampling methods, in an appropriate container — one which meets the objectives of the sampling (e.g., investigation of areas where low or high concentrations of volatile chemicals are expected; to minimize losses of volatile chemicals that are susceptible to photo degradation), meets the requirements of the sampling and analytical methods (e.g., low flow rate; Summa® canisters if analyzing by using EPA Method TO-15), and is certified clean by the laboratory.
- All canisters with vapor samples were immediately couriered to a New York State Department of Health (DOH) Environmental Laboratory Analysis Program (ELAP) certified laboratory for analysis. The vapor samples were analyzed for the targeted compound list specified in EPA Method TO-15.
- The results of the analysis (see attached **Tables** and **Appendix III**) revealed the presence of several organic compounds in concentrations above the Method Detection Limit.

Site photographs taken in the course of the sampling are presented in **Appendix II.**

We trust this information is satisfactory for your needs. Should you have any questions regarding this project or any other matter, please do not hesitate to contact us at (516) 374-7890.

Yours very truly,
Cosmos Environmental Services, Inc.



Alexander I. Avracen
Field Operations Manager

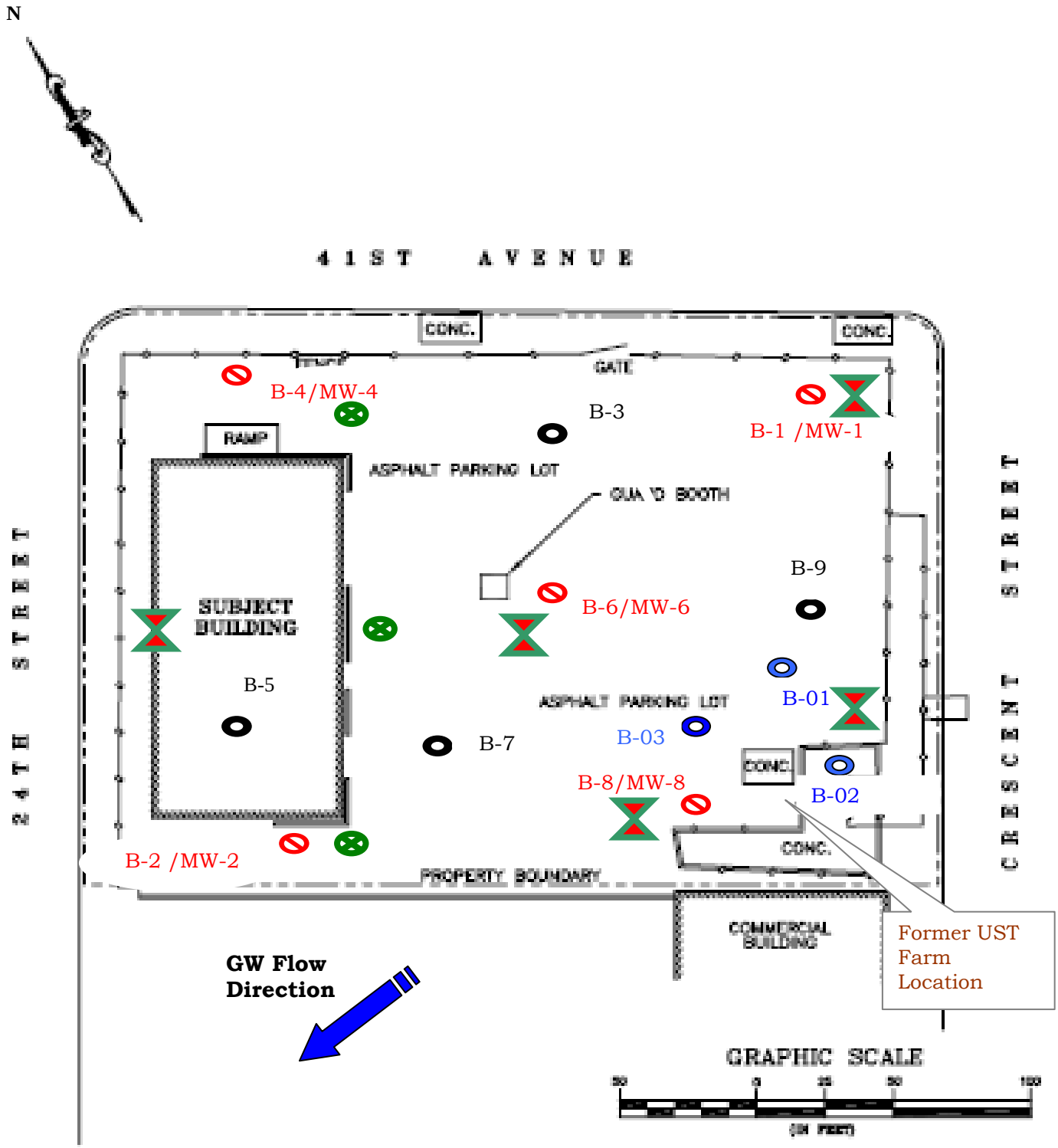
cc: **Mr. Zach Schreiber, PhD**
NY City Department of Environmental Protection

Mr. Shaminder Chawla
Brownfield Program

Mr. Daniel C. Walsh, PhD
Mayor's Office of Operations

Ms. Denise J. Pisani
NY City Department of Health

FIGURE A SITE PLAN & SAMPLING LOCATIONS



Locations of temporary groundwater monitoring wells (MW)

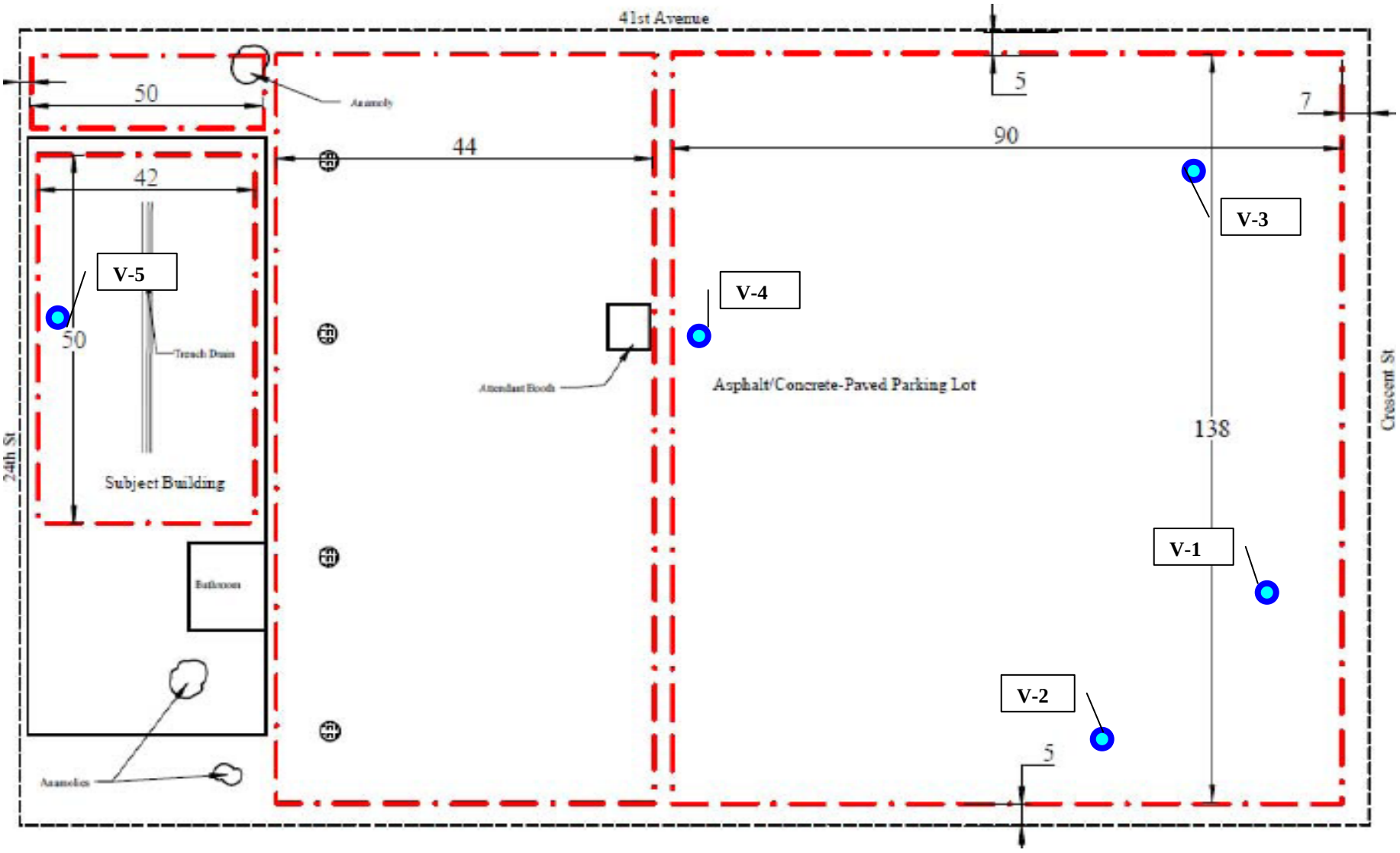
Locations of test borings (B)

Locations of additioOnal test borings (B)

Locations of 3 Drywells

Proposed Vapor Sampling Points

FIGURE B SITE PLAN & VAPOR SAMPLING LOCATIONS



- Vapor Sampling Points

SOIL VAPOR ANALYSIS RESULTS

ONLY DETECTED COMPOUNDA ARE LISTED

TABLE 1

SOURCE OF SAMPLE **Project #579.2V / Crescent Street**

ANALYTE / Sample ID	V-1	V-2	V-3	V-4	V-5
124-Trimethylbenzene	3.3				4.1
2,2,4-Trimethylpentane	9.2				
Acetone	4.3	1.2	1.5		1.9
Benzene	2.9				0.55
Ethyl alcohol	21				23
Ethyl Benzene	1.8				0.98
Hexane	2.2				
m + p Xylene	6				4.5
Methyl Ethyl Ketone	9.3				
o Xylene	1.5				0.94
p-Ethyltoluene	2.9	0.74			2.6
Tetrachloroethene			0.32		19
Toluene	23	2.2	0.89	0.75	11
Total	87.4	4.14	2.71	0.75	68.57

ALL CONCENTRATIONS IN PPBV

TABLE 2

SOURCE OF SAMPLE **Project #579.2V / Crescent Street**

ANALYTE / Sample ID	V-1	V-2	V-3	V-4	V-5
124-Trimethylbenzene	16.23				20.17
2,2,4-Trimethylpentane	42.92				
Acetone	10.23	2.85	3.57		4.52
Benzene	9.26				1.76
Ethyl alcohol	39.54				43.31
Ethyl Benzene	7.81				4.25
Hexane	7.76				
m + p Xylene	26.08				19.56
Methyl Ethyl Ketone	27.40				
o Xylene	6.52				4.09
p-Ethyltoluene	14.24	3.63			12.77
Tetrachloroethene					128.92
Toluene	86.60	8.28	3.35	2.82	41.42
Total	294.58	14.77	6.92	2.82	280.75

ALL CONCENTRATIONS IN UG/M3

APENDIX I

SOIL VAPOR SAMPLING

Installation Procedure
and
Sampling Protocol

SOIL VAPOR SAMPLING

Installation Procedure and Sampling Protocol

Prior to installation of the sub-slab vapor probe, the building floor will be inspected and any penetrations (cracks, floor drains, utility perforations, sumps, etc.) will be noted and recorded. Probes will be installed at locations where the potential for ambient air infiltration via floor penetrations is minimal.

A. Sampling Implant Installation

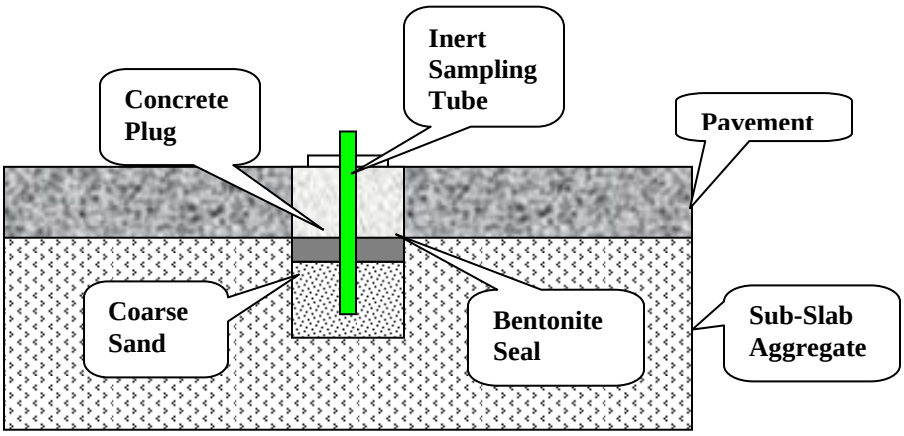
The following procedures will be included in construction protocol for installation of temporary sub-slab soil vapor probes and subsequent vapor sampling:

a. Pavement will be pre-drilled utilizing a ½-inch Carbide drill.

b. Implants will be fitted with an inert 1/8 inch diameter Teflon® tubing. Tubing would not extend further than 6-8 feet into the sub-slab material via a dedicated Stainless Steel tip attached to hollow rods and an electric hammer;

c. Coarse sand will be added to fill the created void to approximately 6 inches below the surface; and

d. Implants will be sealed to the surface with a 2-inch layer of Bentonite and a 4-inch cement plug.



B. Sample Collection Procedure

Sub-slab vapor samples will be collected in the following manner:

a. After installation of the probes, one to three volumes (i.e., the volume of the sample probe and tube) must be purged prior to collecting the samples to ensure samples collected are representative;

b. Flow rates for both purging and collecting will not exceed 0.2 liters per minute to minimize outdoor air infiltration, if any, during sampling;

c. Samples will be collected, using conventional sampling methods, in an appropriate container — one which meets the objectives of the sampling (e.g., investigation of areas where low or high concentrations of volatile chemicals are expected; to minimize losses of volatile chemicals that are susceptible to photo degradation), meets the requirements of the sampling and analytical methods (e.g., low flow rate; Summa® canisters if analyzing by using EPA Method TO-15), and is certified clean by the laboratory.

When sub-slab vapor samples are collected, the following actions will be taken to document conditions during sampling and ultimately to aid in the interpretation of the sampling results:

a. uses of volatile chemicals in commercial or industrial processes and/or during building maintenance will be identified;

b. the use of heating or air conditioning systems during sampling will be noted;

c. a floor plan sketch will be drawn that include the floor layout with sample locations, chemical storage areas, garages, doorways, stairways, location of basement sumps or subsurface drains and utility perforations through building foundations, HVAC system air supply and return registers, compass orientation (north), and any other pertinent information will be completed;

d. site photographs will accompany a property sketch;

e. outdoor plot sketches will be drawn that include the building site, area streets, compass orientation (north), footings that create separate foundation sections, and paved areas;

f. weather conditions (e.g., precipitation, indoor and outdoor temperature, and barometric pressure) and ventilation conditions (e.g., heating system active and windows closed) will be reported;

g. any pertinent observations, such as spills, floor stains, smoke tube results, odors and readings from field instrumentation (e.g., vapors via PID), will be recorded.

The field sampling team will maintain a sample log sheet summarizing the following:

a. sample identification and a date and time of sample collection,

b. sampling depth,

c. identity of samplers,

d. sampling methods and devices,

e. soil vapor purge volumes,

f. volume of soil vapor extracted,

g. vacuum measurements of canisters before and after samples collected,

h. apparent moisture content (dry, moist, saturated, etc.) of the sampling zone, and

i. Chain of Custody protocols and records used to track samples from sampling point to analysis.

APENDIX II

Sampling Location V-1

Sampling Location V-1

Sampling Location V-4

Sampling Location V-4

Sampling Location V-3

Sampling Location V-5

Soil vapor samples V-1 - V-5

APENDIX III

Laboratory Report

ECOTEST LABORATORIES, INC. *ENVIRONMENTAL TESTING*

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777• FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.110415.01 02/09/11

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: 579.2V/Crescent
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:01/31/11 RECEIVED:02/01/11
TIME COL'D:*
MATRIX:Air SAMPLE: V-1

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE OF ANALYSIS	LRL	ANALYTICAL METHOD
Propylene	ppbv	< 0.5		020711	0.5	EPATO-15
Dichlorodifluoromethane	ppbv	< 0.2		020711	0.2	EPATO-15
1,2-Dichlorotetrafluoroethan	ppbv	< 0.2		020711	0.2	EPATO-15
Chloromethane	ppbv	< 1		020711	1	EPATO-15
1,3 Butadiene	ppbv	< 1		020711	1	EPATO-15
Vinyl Chloride	ppbv	< 0.2		020711	0.2	EPATO-15
Bromomethane	ppbv	< 0.2		020711	0.2	EPATO-15
Chloroethane	ppbv	< 1		020711	1	EPATO-15
Vinyl Bromide	ppbv	< 0.2		020711	0.2	EPATO-15
Trichlorofluoromethane	ppbv	< 0.2		020711	0.2	EPATO-15
Ethyl alcohol	ppbv	21		020711	2	EPATO-15
Freon 113	ppbv	< 0.1		020711	0.1	EPATO-15
1,1 Dichloroethene	ppbv	< 0.1		020711	0.1	EPATO-15
Acetone	ppbv	4.3		020711	1	EPATO-15
Carbon disulfide	ppbv	< 0.5		020711	0.5	EPATO-15
Isopropyl Alcohol	ppbv	< 5		020711	5	EPATO-15
3-Chloropropene	ppbv	< 0.5		020711	0.5	EPATO-15
Methylene Chloride	ppbv	< 0.2		020711	0.2	EPATO-15
tert. Butyl Alcohol	ppbv	< 2		020711	2	EPATO-15
ter.ButylMethylEther	ppbv	< 0.2		020711	0.2	EPATO-15
t-1,2-Dichloroethene	ppbv	< 0.2		020711	0.2	EPATO-15
Acrylonitrile	ppbv	< 1		020711	1	EPATO-15
Hexane	ppbv	2.2		020711	0.5	EPATO-15
Vinyl Acetate	ppbv	< 0.5		020711	0.5	EPATO-15
1,1 Dichloroethane	ppbv	< 0.2		020711	0.2	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: * Collected between 08:30 - 10:28.
The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR

rn = 2358 NYSDOH ID # 10320

ECOTEST LABORATORIES, INC. *ENVIRONMENTAL TESTING*

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777• FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.110415.01 02/09/11

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: 579.2V/Crescent
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:01/31/11 RECEIVED:02/01/11
TIME COL'D:*
MATRIX:Air SAMPLE: V-1

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
c-1,2-Dichloroethene	ppbv	< 0.2		020711	0.2	EPATO-15
Methyl Ethyl Ketone	ppbv	9.3		020711	1	EPATO-15
Ethyl Acetate	ppbv	< 5		020711	5	EPATO-15
Tetrahydrofuran	ppbv	< 0.5		020711	0.5	EPATO-15
Chloroform	ppbv	< 0.2		020711	0.2	EPATO-15
Cyclohexane	ppbv	< 0.2		020711	0.2	EPATO-15
111 Trichloroethane	ppbv	< 0.2		020711	0.2	EPATO-15
Carbon Tetrachloride	ppbv	< 0.4		020711	0.4	EPATO-15
Benzene	ppbv	2.9		020711	0.2	EPATO-15
2,2,4-Trimethylpentane	ppbv	9.2		020711	0.5	EPATO-15
1,2 Dichloroethane	ppbv	< 0.5		020711	0.5	EPATO-15
Heptane	ppbv	< 0.5		020711	0.5	EPATO-15
Trichloroethene	ppbv	< 0.2		020711	0.2	EPATO-15
1,2 Dichloropropane	ppbv	< 0.5		020711	0.5	EPATO-15
1,4-Dioxane	ppbv	< 1		020711	1	EPATO-15
Bromodichloromethane	ppbv	< 0.2		020711	0.2	EPATO-15
c-1,3Dichloropropene	ppbv	< 0.5		020711	0.5	EPATO-15
Methylisobutylketone	ppbv	< 1		020711	1	EPATO-15
Toluene	ppbv	23		020711	0.2	EPATO-15
t-1,3Dichloropropene	ppbv	< 0.2		020711	0.2	EPATO-15
112 Trichloroethane	ppbv	< 0.2		020711	0.2	EPATO-15
Tetrachloroethene	ppbv	< 0.2		020711	0.2	EPATO-15
2-Hexanone	ppbv	< 0.5		020711	0.5	EPATO-15
Chlorodibromomethane	ppbv	< 0.2		020711	0.2	EPATO-15
1,2 Dibromoethane	ppbv	< 0.2		020711	0.2	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: * Collected between 08:30 - 10:28.
The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR

rn = 2359 NYSDOH ID # 10320

ECOTEST LABORATORIES, INC. *ENVIRONMENTAL TESTING*

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777• FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.110415.01 02/09/11

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: 579.2V/Crescent
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:01/31/11 RECEIVED:02/01/11
TIME COL'D:*
MATRIX:Air SAMPLE: V-1

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
Chlorobenzene	ppbv	< 0.2		020711	0.2	EPATO-15
Ethyl Benzene	ppbv	1.8		020711	0.2	EPATO-15
m + p Xylene	ppbv	6.0		020711	0.5	EPATO-15
o Xylene	ppbv	1.5		020711	0.2	EPATO-15
Styrene	ppbv	< 0.2		020711	0.2	EPATO-15
Bromoform	ppbv	< 0.2		020711	0.2	EPATO-15
1122Tetrachloroethane	ppbv	< 0.2		020711	0.2	EPATO-15
p-Ethyltoluene	ppbv	2.9		020711	0.5	EPATO-15
135-Trimethylbenzene	ppbv	< 0.5		020711	0.5	EPATO-15
124-Trimethylbenzene	ppbv	3.3		020711	0.5	EPATO-15
1,3 Dichlorobenzene (v)	ppbv	< 0.2		020711	0.2	EPATO-15
1,4 Dichlorobenzene (v)	ppbv	< 0.5		020711	0.5	EPATO-15
Benzyl Chloride	ppbv	< 0.2		020711	0.2	EPATO-15
1,2 Dichlorobenzene (v)	ppbv	< 0.5		020711	0.5	EPATO-15
Hexachlorobutadiene	ppbv	< 0.5		020711	0.5	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: * Collected between 08:30 - 10:28.
The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR

rn = 2360 NYSDOH ID # 10320

ECOTEST ID	**110415.01**				
SOURCE OF SAMPLE	**579.2V/Crescent**				
SAMPLE ID	**V-1**				
DATE SAMPLED	**1/31/2011**				
MATRIX	**Air**				
ANALYTICAL METHOD	**EPA TO-15**				
ANALYTE	**CAS NO**	**DATE OF ANALYSIS**		**CONC UG/M3**	**LRL UG/M3**
1,1 Dichloroethane	75-34-3	2/7/2011	<	0.81	0.81
1,1 Dichloroethene	75-35-4	2/7/2011	<	0.40	0.40
1,2 Dibromoethane	106-93-4	2/7/2011	<	1.54	1.54
1,2 Dichlorobenzene (v)	95-50-1	2/7/2011	<	3.01	3.01
1,2 Dichloroethane	107-06-2	2/7/2011	<	2.03	2.03
1,2 Dichloropropane	78-87-5	2/7/2011	<	2.31	2.31
1,2-Dichlorotetrafluoroethane	76-14-2	2/7/2011	<	1.40	1.40
1,3 Butadiene	106-99-0	2/7/2011	<	2.21	2.21
1,3 Dichlorobenzene (v)	541-73-1	2/7/2011	<	1.20	1.20
1,4 Dichlorobenzene (v)	106-46-7	2/7/2011	<	3.01	3.01
1,4-Dioxane	123-91-1	2/7/2011	<	3.60	3.60
111 Trichloroethane	71-55-6	2/7/2011	<	1.09	1.09
112 Trichloroethane	79-00-5	2/7/2011	<	1.09	1.09
1122Tetrachloroethane	79-34-5	2/7/2011	<	1.37	1.37
124-Trimethylbenzene	95-63-6	2/7/2011		16.23	2.46
135-Trimethylbenzene	108-67-8	2/7/2011	<	2.46	2.46
2,2,4-Trimethylpentane	540-84-1	2/7/2011		42.92	2.33
2-Hexanone	591-78-6	2/7/2011	<	2.05	2.05
3-Chloropropene	107-05-1	2/7/2011	<	1.57	1.57
Acetone	67-64-1	2/7/2011		10.23	2.38
Acrylonitrile	107-13-1	2/7/2011	<	2.17	2.17
Benzene	71-43-2	2/7/2011		9.26	0.64
Benzyl Chloride	100-44-7	2/7/2011	<	1.04	1.04
Bromodichloromethane	75-27-4	2/7/2011	<	1.33	1.33
Bromoform	75-25-2	2/7/2011	<	2.07	2.07
Bromomethane	74-83-9	2/7/2011	<	0.78	0.78
c-1,2-Dichloroethene	156-59-2	2/7/2011	<	0.79	0.79
c-1,3Dichloropropene	10061-01-5	2/7/2011	<	2.27	2.27
Carbon disulfide	75-15-0	2/7/2011	<	1.56	1.56
Carbon Tetrachloride	56-23-5	2/7/2011	<	2.52	2.52
Chlorobenzene	108-90-7	2/7/2011	<	0.92	0.92
Chlorodibromomethane	124-48-1	2/7/2011	<	1.69	1.69
Chloroethane	75-00-3	2/7/2011	<	2.64	2.64
Chloroform	67-66-3	2/7/2011	<	0.97	0.97
Chloromethane	74-87-3	2/7/2011	<	2.07	2.07
Cyclohexane	110-82-7	2/7/2011	<	0.69	0.69
Dichlorodifluoromethane	75-71-8	2/7/2011	<	0.99	0.99
Ethyl Acetate	141-78-6	2/7/2011	<	18.01	18.01
Ethyl alcohol	64-17-5	2/7/2011		39.54	3.77
Ethyl Benzene	100-41-4	2/7/2011		7.81	0.87
Freon 113	76-13-1	2/7/2011	<	0.77	0.77

ECOTEST ID	**110415.01**				
SOURCE OF SAMPLE	**579.2V/Crescent**				
SAMPLE ID	**V-1**				
DATE SAMPLED	**1/31/2011**				
MATRIX	**Air**				
ANALYTICAL METHOD	**EPA TO-15**				
ANALYTE	**CAS NO**	**DATE OF ANALYSIS**		**CONC UG/M3**	**LRL UG/M3**
Heptane	142-82-5	2/7/2011	<	2.05	2.05
Hexachlorobutadiene	87-68-3	2/7/2011	<	5.34	5.34
Hexane	110-54-3	2/7/2011		7.76	1.76
Isopropyl Alcohol	67-63-0	2/7/2011	<	12.28	12.28
m + p Xylene	XYL-MP	2/7/2011		26.08	2.17
Methyl Ethyl Ketone	78-93-3	2/7/2011		27.40	2.95
Methylene Chloride	75-09-2	2/7/2011	<	0.69	0.69
Methylisobutylketone	108-10-1	2/7/2011	<	4.10	4.10
o Xylene	95-47-6	2/7/2011		6.52	0.87
p-Ethyltoluene	622-96-8	2/7/2011		14.24	2.46
Propylene	115-07-1	2/7/2011	<	0.86	0.86
Styrene	100-42-5	2/7/2011	<	0.85	0.85
t-1,2-Dichloroethene	156-60-5	2/7/2011	<	0.79	0.79
t-1,3Dichloropropene	10061-02-6	2/7/2011	<	0.91	0.91
ter.ButylMethylEther	1634-04-4	2/7/2011	<	0.70	0.70
tert. Butyl Alcohol	75-65-0	2/7/2011	<	6.06	6.06
Tetrachloroethene	127-18-4	2/7/2011	<	1.36	1.36
Tetrahydrofuran	109-99-9	2/7/2011	<	1.47	1.47
Toluene	108-88-3	2/7/2011		86.60	0.75
Trichloroethene	79-01-6	2/7/2011	<	1.07	1.07
Trichlorofluoromethane	75-69-4	2/7/2011	<	1.12	1.12
Vinyl Acetate	108-05-4	2/7/2011	<	1.76	1.76
Vinyl Bromide	593-60-2	2/7/2011	<	0.88	0.88
Vinyl Chloride	75-01-4	2/7/2011	<	0.51	0.51

ECOTEST LABORATORIES, INC. *ENVIRONMENTAL TESTING*

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Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.110415.02 02/09/11

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: 579.2V/Crescent
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:01/31/11 RECEIVED:02/01/11
TIME COL'D:*
MATRIX:Air SAMPLE: V-2

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE OF ANALYSIS	LRL	ANALYTICAL METHOD
Propylene	ppbv	< 0.5		020711	0.5	EPATO-15
Dichlorodifluoromethane	ppbv	< 0.2		020711	0.2	EPATO-15
1,2-Dichlorotetrafluoroethan	ppbv	< 0.2		020711	0.2	EPATO-15
Chloromethane	ppbv	< 1		020711	1	EPATO-15
1,3 Butadiene	ppbv	< 1		020711	1	EPATO-15
Vinyl Chloride	ppbv	< 0.2		020711	0.2	EPATO-15
Bromomethane	ppbv	< 0.2		020711	0.2	EPATO-15
Chloroethane	ppbv	< 1		020711	1	EPATO-15
Vinyl Bromide	ppbv	< 0.2		020711	0.2	EPATO-15
Trichlorofluoromethane	ppbv	< 0.2		020711	0.2	EPATO-15
Ethyl alcohol	ppbv	< 2		020711	2	EPATO-15
Freon 113	ppbv	< 0.1		020711	0.1	EPATO-15
1,1 Dichloroethene	ppbv	< 0.1		020711	0.1	EPATO-15
Acetone	ppbv	1.2		020711	1	EPATO-15
Carbon disulfide	ppbv	< 0.5		020711	0.5	EPATO-15
Isopropyl Alcohol	ppbv	< 5		020711	5	EPATO-15
3-Chloropropene	ppbv	< 0.5		020711	0.5	EPATO-15
Methylene Chloride	ppbv	< 0.2		020711	0.2	EPATO-15
tert. Butyl Alcohol	ppbv	< 2		020711	2	EPATO-15
ter.ButylMethylEther	ppbv	< 0.2		020711	0.2	EPATO-15
t-1,2-Dichloroethene	ppbv	< 0.2		020711	0.2	EPATO-15
Acrylonitrile	ppbv	< 1		020711	1	EPATO-15
Hexane	ppbv	< 0.5		020711	0.5	EPATO-15
Vinyl Acetate	ppbv	< 0.5		020711	0.5	EPATO-15
1,1 Dichloroethane	ppbv	< 0.2		020711	0.2	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: * Collected between 08:52 - 11:03.
The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR

rn = 2361 NYSDOH ID # 10320

ECOTEST LABORATORIES, INC. *ENVIRONMENTAL TESTING*

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777• FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.110415.02 02/09/11

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: 579.2V/Crescent
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:01/31/11 RECEIVED:02/01/11
TIME COL'D:*
MATRIX:Air SAMPLE: V-2

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
c-1,2-Dichloroethene	ppbv	< 0.2		020711	0.2	EPATO-15
Methyl Ethyl Ketone	ppbv	< 1		020711	1	EPATO-15
Ethyl Acetate	ppbv	< 5		020711	5	EPATO-15
Tetrahydrofuran	ppbv	< 0.5		020711	0.5	EPATO-15
Chloroform	ppbv	< 0.2		020711	0.2	EPATO-15
Cyclohexane	ppbv	< 0.2		020711	0.2	EPATO-15
111 Trichloroethane	ppbv	< 0.2		020711	0.2	EPATO-15
Carbon Tetrachloride	ppbv	< 0.4		020711	0.4	EPATO-15
Benzene	ppbv	< 0.2		020711	0.2	EPATO-15
2,2,4-Trimethylpentane	ppbv	< 0.5		020711	0.5	EPATO-15
1,2 Dichloroethane	ppbv	< 0.5		020711	0.5	EPATO-15
Heptane	ppbv	< 0.5		020711	0.5	EPATO-15
Trichloroethene	ppbv	< 0.2		020711	0.2	EPATO-15
1,2 Dichloropropane	ppbv	< 0.5		020711	0.5	EPATO-15
1,4-Dioxane	ppbv	< 1		020711	1	EPATO-15
Bromodichloromethane	ppbv	< 0.2		020711	0.2	EPATO-15
c-1,3Dichloropropene	ppbv	< 0.5		020711	0.5	EPATO-15
Methylisobutylketone	ppbv	< 1		020711	1	EPATO-15
Toluene	ppbv	2.2		020711	0.2	EPATO-15
t-1,3Dichloropropene	ppbv	< 0.2		020711	0.2	EPATO-15
112 Trichloroethane	ppbv	< 0.2		020711	0.2	EPATO-15
Tetrachloroethene	ppbv	< 0.2		020711	0.2	EPATO-15
2-Hexanone	ppbv	< 0.5		020711	0.5	EPATO-15
Chlorodibromomethane	ppbv	< 0.2		020711	0.2	EPATO-15
1,2 Dibromoethane	ppbv	< 0.2		020711	0.2	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: * Collected between 08:52 - 11:03.
The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR

rn = 2362 NYSDOH ID # 10320

ECOTEST LABORATORIES, INC. *ENVIRONMENTAL TESTING*

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777• FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.110415.02 02/09/11

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: 579.2V/Crescent
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:01/31/11 RECEIVED:02/01/11
TIME COL'D:*
MATRIX:Air SAMPLE: V-2

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
Chlorobenzene	ppbv	< 0.2		020711	0.2	EPATO-15
Ethyl Benzene	ppbv	< 0.2		020711	0.2	EPATO-15
m + p Xylene	ppbv	< 0.5		020711	0.5	EPATO-15
o Xylene	ppbv	< 0.2		020711	0.2	EPATO-15
Styrene	ppbv	< 0.2		020711	0.2	EPATO-15
Bromoform	ppbv	< 0.2		020711	0.2	EPATO-15
1122Tetrachloroethane	ppbv	< 0.2		020711	0.2	EPATO-15
p-Ethyltoluene	ppbv	0.74		020711	0.5	EPATO-15
135-Trimethylbenzene	ppbv	< 0.5		020711	0.5	EPATO-15
124-Trimethylbenzene	ppbv	< 0.5		020711	0.5	EPATO-15
1,3 Dichlorobenzene (v)	ppbv	< 0.2		020711	0.2	EPATO-15
1,4 Dichlorobenzene (v)	ppbv	< 0.5		020711	0.5	EPATO-15
Benzyl Chloride	ppbv	< 0.2		020711	0.2	EPATO-15
1,2 Dichlorobenzene (v)	ppbv	< 0.5		020711	0.5	EPATO-15
Hexachlorobutadiene	ppbv	< 0.5		020711	0.5	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: * Collected between 08:52 - 11:03.
The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR

rn = 2363 NYSDOH ID # 10320

ECOTEST ID	**110415.02**				
SOURCE OF SAMPLE	**579.2V/Crescent**				
SAMPLE ID	**V-2**				
DATE SAMPLED	**1/31/2011**				
MATRIX	**Air**				
ANALYTICAL METHOD	**EPA TO-15**				
ANALYTE	**CAS NO**	**DATE OF ANALYSIS**		**CONC UG/M3**	**LRL UG/M3**
1,1 Dichloroethane	75-34-3	2/7/2011	<	0.81	0.81
1,1 Dichloroethene	75-35-4	2/7/2011	<	0.40	0.40
1,2 Dibromoethane	106-93-4	2/7/2011	<	1.54	1.54
1,2 Dichlorobenzene (v)	95-50-1	2/7/2011	<	3.01	3.01
1,2 Dichloroethane	107-06-2	2/7/2011	<	2.03	2.03
1,2 Dichloropropane	78-87-5	2/7/2011	<	2.31	2.31
1,2-Dichlorotetrafluoroethane	76-14-2	2/7/2011	<	1.40	1.40
1,3 Butadiene	106-99-0	2/7/2011	<	2.21	2.21
1,3 Dichlorobenzene (v)	541-73-1	2/7/2011	<	1.20	1.20
1,4 Dichlorobenzene (v)	106-46-7	2/7/2011	<	3.01	3.01
1,4-Dioxane	123-91-1	2/7/2011	<	3.60	3.60
111 Trichloroethane	71-55-6	2/7/2011	<	1.09	1.09
112 Trichloroethane	79-00-5	2/7/2011	<	1.09	1.09
1122Tetrachloroethane	79-34-5	2/7/2011	<	1.37	1.37
124-Trimethylbenzene	95-63-6	2/7/2011	<	2.46	2.46
135-Trimethylbenzene	108-67-8	2/7/2011	<	2.46	2.46
2,2,4-Trimethylpentane	540-84-1	2/7/2011	<	2.33	2.33
2-Hexanone	591-78-6	2/7/2011	<	2.05	2.05
3-Chloropropene	107-05-1	2/7/2011	<	1.57	1.57
Acetone	67-64-1	2/7/2011		2.85	2.38
Acrylonitrile	107-13-1	2/7/2011	<	2.17	2.17
Benzene	71-43-2	2/7/2011	<	0.64	0.64
Benzyl Chloride	100-44-7	2/7/2011	<	1.04	1.04
Bromodichloromethane	75-27-4	2/7/2011	<	1.33	1.33
Bromoform	75-25-2	2/7/2011	<	2.07	2.07
Bromomethane	74-83-9	2/7/2011	<	0.78	0.78
c-1,2-Dichloroethene	156-59-2	2/7/2011	<	0.79	0.79
c-1,3Dichloropropene	10061-01-5	2/7/2011	<	2.27	2.27
Carbon disulfide	75-15-0	2/7/2011	<	1.56	1.56
Carbon Tetrachloride	56-23-5	2/7/2011	<	2.52	2.52
Chlorobenzene	108-90-7	2/7/2011	<	0.92	0.92
Chlorodibromomethane	124-48-1	2/7/2011	<	1.69	1.69
Chloroethane	75-00-3	2/7/2011	<	2.64	2.64
Chloroform	67-66-3	2/7/2011	<	0.97	0.97
Chloromethane	74-87-3	2/7/2011	<	2.07	2.07
Cyclohexane	110-82-7	2/7/2011	<	0.69	0.69
Dichlorodifluoromethane	75-71-8	2/7/2011	<	0.99	0.99
Ethyl Acetate	141-78-6	2/7/2011	<	18.01	18.01
Ethyl alcohol	64-17-5	2/7/2011	<	3.77	3.77
Ethyl Benzene	100-41-4	2/7/2011	<	0.87	0.87
Freon 113	76-13-1	2/7/2011	<	0.77	0.77

ECOTEST ID	**110415.02**				
SOURCE OF SAMPLE	**579.2V/Crescent**				
SAMPLE ID	**V-2**				
DATE SAMPLED	**1/31/2011**				
MATRIX	**Air**				
ANALYTICAL METHOD	**EPA TO-15**				
ANALYTE	**CAS NO**	**DATE OF ANALYSIS**		**CONC UG/M3**	**LRL UG/M3**
Heptane	142-82-5	2/7/2011	<	2.05	2.05
Hexachlorobutadiene	87-68-3	2/7/2011	<	5.34	5.34
Hexane	110-54-3	2/7/2011	<	1.76	1.76
Isopropyl Alcohol	67-63-0	2/7/2011	<	12.28	12.28
m + p Xylene	XYL-MP	2/7/2011	<	2.17	2.17
Methyl Ethyl Ketone	78-93-3	2/7/2011	<	2.95	2.95
Methylene Chloride	75-09-2	2/7/2011	<	0.69	0.69
Methylisobutylketone	108-10-1	2/7/2011	<	4.10	4.10
o Xylene	95-47-6	2/7/2011	<	0.87	0.87
p-Ethyltoluene	622-96-8	2/7/2011		3.63	2.46
Propylene	115-07-1	2/7/2011	<	0.86	0.86
Styrene	100-42-5	2/7/2011	<	0.85	0.85
t-1,2-Dichloroethene	156-60-5	2/7/2011	<	0.79	0.79
t-1,3Dichloropropene	10061-02-6	2/7/2011	<	0.91	0.91
ter.ButylMethylEther	1634-04-4	2/7/2011	<	0.70	0.70
tert. Butyl Alcohol	75-65-0	2/7/2011	<	6.06	6.06
Tetrachloroethene	127-18-4	2/7/2011	<	1.36	1.36
Tetrahydrofuran	109-99-9	2/7/2011	<	1.47	1.47
Toluene	108-88-3	2/7/2011		8.28	0.75
Trichloroethene	79-01-6	2/7/2011	<	1.07	1.07
Trichlorofluoromethane	75-69-4	2/7/2011	<	1.12	1.12
Vinyl Acetate	108-05-4	2/7/2011	<	1.76	1.76
Vinyl Bromide	593-60-2	2/7/2011	<	0.88	0.88
Vinyl Chloride	75-01-4	2/7/2011	<	0.51	0.51

ECOTEST LABORATORIES, INC. *ENVIRONMENTAL TESTING*

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Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.110415.03 02/09/11

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: 579.2V/Crescent
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:01/31/11 RECEIVED:02/01/11
TIME COL'D:*
MATRIX:Air SAMPLE: V-3

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE OF ANALYSIS	LRL	ANALYTICAL METHOD
Propylene	ppbv	< 0.5		020711	0.5	EPATO-15
Dichlorodifluoromethane	ppbv	< 0.2		020711	0.2	EPATO-15
1,2-Dichlorotetrafluoroethan	ppbv	< 0.2		020711	0.2	EPATO-15
Chloromethane	ppbv	< 1		020711	1	EPATO-15
1,3 Butadiene	ppbv	< 1		020711	1	EPATO-15
Vinyl Chloride	ppbv	< 0.2		020711	0.2	EPATO-15
Bromomethane	ppbv	< 0.2		020711	0.2	EPATO-15
Chloroethane	ppbv	< 1		020711	1	EPATO-15
Vinyl Bromide	ppbv	< 0.2		020711	0.2	EPATO-15
Trichlorofluoromethane	ppbv	< 0.2		020711	0.2	EPATO-15
Ethyl alcohol	ppbv	< 2		020711	2	EPATO-15
Freon 113	ppbv	< 0.1		020711	0.1	EPATO-15
1,1 Dichloroethene	ppbv	< 0.1		020711	0.1	EPATO-15
Acetone	ppbv	1.5		020711	1	EPATO-15
Carbon disulfide	ppbv	< 0.5		020711	0.5	EPATO-15
Isopropyl Alcohol	ppbv	< 5		020711	5	EPATO-15
3-Chloropropene	ppbv	< 0.5		020711	0.5	EPATO-15
Methylene Chloride	ppbv	< 0.2		020711	0.2	EPATO-15
tert. Butyl Alcohol	ppbv	< 2		020711	2	EPATO-15
ter.ButylMethylEther	ppbv	< 0.2		020711	0.2	EPATO-15
t-1,2-Dichloroethene	ppbv	< 0.2		020711	0.2	EPATO-15
Acrylonitrile	ppbv	< 1		020711	1	EPATO-15
Hexane	ppbv	< 0.5		020711	0.5	EPATO-15
Vinyl Acetate	ppbv	< 0.5		020711	0.5	EPATO-15
1,1 Dichloroethane	ppbv	< 0.2		020711	0.2	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: * Collected between 10:28 - 12:49.
The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR

ECOTEST LABORATORIES, INC. *ENVIRONMENTAL TESTING*

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777• FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.110415.03 02/09/11

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: 579.2V/Crescent
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:01/31/11 RECEIVED:02/01/11
TIME COL'D:*
MATRIX:Air SAMPLE: V-3

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
c-1,2-Dichloroethene	ppbv	< 0.2		020711	0.2	EPATO-15
Methyl Ethyl Ketone	ppbv	< 1		020711	1	EPATO-15
Ethyl Acetate	ppbv	< 5		020711	5	EPATO-15
Tetrahydrofuran	ppbv	< 0.5		020711	0.5	EPATO-15
Chloroform	ppbv	< 0.2		020711	0.2	EPATO-15
Cyclohexane	ppbv	< 0.2		020711	0.2	EPATO-15
111 Trichloroethane	ppbv	< 0.2		020711	0.2	EPATO-15
Carbon Tetrachloride	ppbv	< 0.4		020711	0.4	EPATO-15
Benzene	ppbv	< 0.2		020711	0.2	EPATO-15
2,2,4-Trimethylpentane	ppbv	< 0.5		020711	0.5	EPATO-15
1,2 Dichloroethane	ppbv	< 0.5		020711	0.5	EPATO-15
Heptane	ppbv	< 0.5		020711	0.5	EPATO-15
Trichloroethene	ppbv	< 0.2		020711	0.2	EPATO-15
1,2 Dichloropropane	ppbv	< 0.5		020711	0.5	EPATO-15
1,4-Dioxane	ppbv	< 1		020711	1	EPATO-15
Bromodichloromethane	ppbv	< 0.2		020711	0.2	EPATO-15
c-1,3Dichloropropene	ppbv	< 0.5		020711	0.5	EPATO-15
Methylisobutylketone	ppbv	< 1		020711	1	EPATO-15
Toluene	ppbv	0.89		020711	0.2	EPATO-15
t-1,3Dichloropropene	ppbv	< 0.2		020711	0.2	EPATO-15
112 Trichloroethane	ppbv	< 0.2		020711	0.2	EPATO-15
Tetrachloroethene	ppbv	0.32		020711	0.2	EPATO-15
2-Hexanone	ppbv	< 0.5		020711	0.5	EPATO-15
Chlorodibromomethane	ppbv	< 0.2		020711	0.2	EPATO-15
1,2 Dibromoethane	ppbv	< 0.2		020711	0.2	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: * Collected between 10:28 - 12:49.
The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR

rn = 2365 NYSDOH ID # 10320

ECOTEST LABORATORIES, INC. *ENVIRONMENTAL TESTING*

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Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.110415.03 02/09/11

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: 579.2V/Crescent
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:01/31/11 RECEIVED:02/01/11
TIME COL'D:*
MATRIX:Air SAMPLE: V-3

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE OF ANALYSIS	TIME LRL	ANALYTICAL METHOD
Chlorobenzene	ppbv	< 0.2		020711	0.2	EPATO-15
Ethyl Benzene	ppbv	< 0.2		020711	0.2	EPATO-15
m + p Xylene	ppbv	< 0.5		020711	0.5	EPATO-15
o Xylene	ppbv	< 0.2		020711	0.2	EPATO-15
Styrene	ppbv	< 0.2		020711	0.2	EPATO-15
Bromoform	ppbv	< 0.2		020711	0.2	EPATO-15
1122Tetrachloroethane	ppbv	< 0.2		020711	0.2	EPATO-15
p-Ethyltoluene	ppbv	< 0.5		020711	0.5	EPATO-15
135-Trimethylbenzene	ppbv	< 0.5		020711	0.5	EPATO-15
124-Trimethylbenzene	ppbv	< 0.5		020711	0.5	EPATO-15
1,3 Dichlorobenzene (v)	ppbv	< 0.2		020711	0.2	EPATO-15
1,4 Dichlorobenzene (v)	ppbv	< 0.5		020711	0.5	EPATO-15
Benzyl Chloride	ppbv	< 0.2		020711	0.2	EPATO-15
1,2 Dichlorobenzene (v)	ppbv	< 0.5		020711	0.5	EPATO-15
Hexachlorobutadiene	ppbv	< 0.5		020711	0.5	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: * Collected between 10:28 - 12:49.
The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR

rn = 2366 NYSDOH ID # 10320

ECOTEST ID	**110415.03**				
SOURCE OF SAMPLE	**579.2V/Crescent**				
SAMPLE ID	**V-3**				
DATE SAMPLED	**1/31/2011**				
MATRIX	**Air**				
ANALYTICAL METHOD	**EPA TO-15**				
ANALYTE	**CAS NO**	**DATE OF ANALYSIS**		**CONC UG/M3**	**LRL UG/M3**
1,1 Dichloroethane	75-34-3	2/7/2011	<	0.81	0.81
1,1 Dichloroethene	75-35-4	2/7/2011	<	0.40	0.40
1,2 Dibromoethane	106-93-4	2/7/2011	<	1.54	1.54
1,2 Dichlorobenzene (v)	95-50-1	2/7/2011	<	3.01	3.01
1,2 Dichloroethane	107-06-2	2/7/2011	<	2.03	2.03
1,2 Dichloropropane	78-87-5	2/7/2011	<	2.31	2.31
1,2-Dichlorotetrafluoroethane	76-14-2	2/7/2011	<	1.40	1.40
1,3 Butadiene	106-99-0	2/7/2011	<	2.21	2.21
1,3 Dichlorobenzene (v)	541-73-1	2/7/2011	<	1.20	1.20
1,4 Dichlorobenzene (v)	106-46-7	2/7/2011	<	3.01	3.01
1,4-Dioxane	123-91-1	2/7/2011	<	3.60	3.60
111 Trichloroethane	71-55-6	2/7/2011	<	1.09	1.09
112 Trichloroethane	79-00-5	2/7/2011	<	1.09	1.09
1122Tetrachloroethane	79-34-5	2/7/2011	<	1.37	1.37
124-Trimethylbenzene	95-63-6	2/7/2011	<	2.46	2.46
135-Trimethylbenzene	108-67-8	2/7/2011	<	2.46	2.46
2,2,4-Trimethylpentane	540-84-1	2/7/2011	<	2.33	2.33
2-Hexanone	591-78-6	2/7/2011	<	2.05	2.05
3-Chloropropene	107-05-1	2/7/2011	<	1.57	1.57
Acetone	67-64-1	2/7/2011		3.57	2.38
Acrylonitrile	107-13-1	2/7/2011	<	2.17	2.17
Benzene	71-43-2	2/7/2011	<	0.64	0.64
Benzyl Chloride	100-44-7	2/7/2011	<	1.04	1.04
Bromodichloromethane	75-27-4	2/7/2011	<	1.33	1.33
Bromoform	75-25-2	2/7/2011	<	2.07	2.07
Bromomethane	74-83-9	2/7/2011	<	0.78	0.78
c-1,2-Dichloroethene	156-59-2	2/7/2011	<	0.79	0.79
c-1,3Dichloropropene	10061-01-5	2/7/2011	<	2.27	2.27
Carbon disulfide	75-15-0	2/7/2011	<	1.56	1.56
Carbon Tetrachloride	56-23-5	2/7/2011	<	2.52	2.52
Chlorobenzene	108-90-7	2/7/2011	<	0.92	0.92
Chlorodibromomethane	124-48-1	2/7/2011	<	1.69	1.69
Chloroethane	75-00-3	2/7/2011	<	2.64	2.64
Chloroform	67-66-3	2/7/2011	<	0.97	0.97
Chloromethane	74-87-3	2/7/2011	<	2.07	2.07
Cyclohexane	110-82-7	2/7/2011	<	0.69	0.69
Dichlorodifluoromethane	75-71-8	2/7/2011	<	0.99	0.99
Ethyl Acetate	141-78-6	2/7/2011	<	18.01	18.01
Ethyl alcohol	64-17-5	2/7/2011	<	3.77	3.77
Ethyl Benzene	100-41-4	2/7/2011	<	0.87	0.87
Freon 113	76-13-1	2/7/2011	<	0.77	0.77

ECOTEST ID	**110415.03**				
SOURCE OF SAMPLE	**579.2V/Crescent**				
SAMPLE ID	**V-3**				
DATE SAMPLED	**1/31/2011**				
MATRIX	**Air**				
ANALYTICAL METHOD	**EPA TO-15**				
ANALYTE	**CAS NO**	**DATE OF ANALYSIS**		**CONC UG/M3**	**LRL UG/M3**
Heptane	142-82-5	2/7/2011	<	2.05	2.05
Hexachlorobutadiene	87-68-3	2/7/2011	<	5.34	5.34
Hexane	110-54-3	2/7/2011	<	1.76	1.76
Isopropyl Alcohol	67-63-0	2/7/2011	<	12.28	12.28
m + p Xylene	XYL-MP	2/7/2011	<	2.17	2.17
Methyl Ethyl Ketone	78-93-3	2/7/2011	<	2.95	2.95
Methylene Chloride	75-09-2	2/7/2011	<	0.69	0.69
Methylisobutylketone	108-10-1	2/7/2011	<	4.10	4.10
o Xylene	95-47-6	2/7/2011	<	0.87	0.87
p-Ethyltoluene	622-96-8	2/7/2011	<	2.46	2.46
Propylene	115-07-1	2/7/2011	<	0.86	0.86
Styrene	100-42-5	2/7/2011	<	0.85	0.85
t-1,2-Dichloroethene	156-60-5	2/7/2011	<	0.79	0.79
t-1,3Dichloropropene	10061-02-6	2/7/2011	<	0.91	0.91
ter.ButylMethylEther	1634-04-4	2/7/2011	<	0.70	0.70
tert. Butyl Alcohol	75-65-0	2/7/2011	<	6.06	6.06
Tetrachloroethene	127-18-4	2/7/2011		2.17	1.36
Tetrahydrofuran	109-99-9	2/7/2011	<	1.47	1.47
Toluene	108-88-3	2/7/2011		3.35	0.75
Trichloroethene	79-01-6	2/7/2011	<	1.07	1.07
Trichlorofluoromethane	75-69-4	2/7/2011	<	1.12	1.12
Vinyl Acetate	108-05-4	2/7/2011	<	1.76	1.76
Vinyl Bromide	593-60-2	2/7/2011	<	0.88	0.88
Vinyl Chloride	75-01-4	2/7/2011	<	0.51	0.51

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Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.110415.04 02/09/11

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: 579.2V/Crescent
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:01/31/11 RECEIVED:02/01/11
TIME COL'D:*
MATRIX:Air SAMPLE: V-4

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
Propylene	ppbv	< 0.5		020711	0.5	EPATO-15
Dichlorodifluoromethane	ppbv	< 0.2		020711	0.2	EPATO-15
1,2-Dichlorotetrafluoroethan	ppbv	< 0.2		020711	0.2	EPATO-15
Chloromethane	ppbv	< 1		020711	1	EPATO-15
1,3 Butadiene	ppbv	< 1		020711	1	EPATO-15
Vinyl Chloride	ppbv	< 0.2		020711	0.2	EPATO-15
Bromomethane	ppbv	< 0.2		020711	0.2	EPATO-15
Chloroethane	ppbv	< 1		020711	1	EPATO-15
Vinyl Bromide	ppbv	< 0.2		020711	0.2	EPATO-15
Trichlorofluoromethane	ppbv	< 0.2		020711	0.2	EPATO-15
Ethyl alcohol	ppbv	< 2		020711	2	EPATO-15
Freon 113	ppbv	< 0.1		020711	0.1	EPATO-15
1,1 Dichloroethene	ppbv	< 0.1		020711	0.1	EPATO-15
Acetone	ppbv	< 1		020711	1	EPATO-15
Carbon disulfide	ppbv	< 0.5		020711	0.5	EPATO-15
Isopropyl Alcohol	ppbv	< 5		020711	5	EPATO-15
3-Chloropropene	ppbv	< 0.5		020711	0.5	EPATO-15
Methylene Chloride	ppbv	< 0.2		020711	0.2	EPATO-15
tert. Butyl Alcohol	ppbv	< 2		020711	2	EPATO-15
ter.ButylMethylEther	ppbv	< 0.2		020711	0.2	EPATO-15
t-1,2-Dichloroethene	ppbv	< 0.2		020711	0.2	EPATO-15
Acrylonitrile	ppbv	< 1		020711	1	EPATO-15
Hexane	ppbv	< 0.5		020711	0.5	EPATO-15
Vinyl Acetate	ppbv	< 0.5		020711	0.5	EPATO-15
1,1 Dichloroethane	ppbv	< 0.2		020711	0.2	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: * Collected between 09:33 - 11:53.
The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR

rn = 2367 NYSDOH ID # 10320

ECOTEST LABORATORIES, INC. *ENVIRONMENTAL TESTING*

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Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.110415.04 02/09/11

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: 579.2V/Crescent
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:01/31/11 RECEIVED:02/01/11
TIME COL'D:*
MATRIX:Air SAMPLE: V-4

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
c-1,2-Dichloroethene	ppbv	< 0.2		020711	0.2	EPATO-15
Methyl Ethyl Ketone	ppbv	< 1		020711	1	EPATO-15
Ethyl Acetate	ppbv	< 5		020711	5	EPATO-15
Tetrahydrofuran	ppbv	< 0.5		020711	0.5	EPATO-15
Chloroform	ppbv	< 0.2		020711	0.2	EPATO-15
Cyclohexane	ppbv	< 0.2		020711	0.2	EPATO-15
111 Trichloroethane	ppbv	< 0.2		020711	0.2	EPATO-15
Carbon Tetrachloride	ppbv	< 0.4		020711	0.4	EPATO-15
Benzene	ppbv	< 0.2		020711	0.2	EPATO-15
2,2,4-Trimethylpentane	ppbv	< 0.5		020711	0.5	EPATO-15
1,2 Dichloroethane	ppbv	< 0.5		020711	0.5	EPATO-15
Heptane	ppbv	< 0.5		020711	0.5	EPATO-15
Trichloroethene	ppbv	< 0.2		020711	0.2	EPATO-15
1,2 Dichloropropane	ppbv	< 0.5		020711	0.5	EPATO-15
1,4-Dioxane	ppbv	< 1		020711	1	EPATO-15
Bromodichloromethane	ppbv	< 0.2		020711	0.2	EPATO-15
c-1,3Dichloropropene	ppbv	< 0.5		020711	0.5	EPATO-15
Methylisobutylketone	ppbv	< 1		020711	1	EPATO-15
Toluene	ppbv	0.75		020711	0.2	EPATO-15
t-1,3Dichloropropene	ppbv	< 0.2		020711	0.2	EPATO-15
112 Trichloroethane	ppbv	< 0.2		020711	0.2	EPATO-15
Tetrachloroethene	ppbv	< 0.2		020711	0.2	EPATO-15
2-Hexanone	ppbv	< 0.5		020711	0.5	EPATO-15
Chlorodibromomethane	ppbv	< 0.2		020711	0.2	EPATO-15
1,2 Dibromoethane	ppbv	< 0.2		020711	0.2	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: * Collected between 09:33 - 11:53.
The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR

ECOTEST LABORATORIES, INC. *ENVIRONMENTAL TESTING*

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777• FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.110415.04 02/09/11

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: 579.2V/Crescent
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:01/31/11 RECEIVED:02/01/11
TIME COL'D:*
MATRIX:Air SAMPLE: V-4

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE OF ANALYSIS	LRL	ANALYTICAL METHOD
Chlorobenzene	ppbv	< 0.2		020711	0.2	EPATO-15
Ethyl Benzene	ppbv	< 0.2		020711	0.2	EPATO-15
m + p Xylene	ppbv	< 0.5		020711	0.5	EPATO-15
o Xylene	ppbv	< 0.2		020711	0.2	EPATO-15
Styrene	ppbv	< 0.2		020711	0.2	EPATO-15
Bromoform	ppbv	< 0.2		020711	0.2	EPATO-15
1122Tetrachloroethane	ppbv	< 0.2		020711	0.2	EPATO-15
p-Ethyltoluene	ppbv	< 0.5		020711	0.5	EPATO-15
135-Trimethylbenzene	ppbv	< 0.5		020711	0.5	EPATO-15
124-Trimethylbenzene	ppbv	< 0.5		020711	0.5	EPATO-15
1,3 Dichlorobenzene (v)	ppbv	< 0.2		020711	0.2	EPATO-15
1,4 Dichlorobenzene (v)	ppbv	< 0.5		020711	0.5	EPATO-15
Benzyl Chloride	ppbv	< 0.2		020711	0.2	EPATO-15
1,2 Dichlorobenzene (v)	ppbv	< 0.5		020711	0.5	EPATO-15
Hexachlorobutadiene	ppbv	< 0.5		020711	0.5	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: * Collected between 09:33 - 11:53.
The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR

rn = 2369 NYSDOH ID # 10320

ECOTEST ID	**110415.04**				
SOURCE OF SAMPLE	**579.2V/Crescent**				
SAMPLE ID	**V-4**				
DATE SAMPLED	**1/31/2011**				
MATRIX	**Air**				
ANALYTICAL METHOD	**EPA TO-15**				
ANALYTE	**CAS NO**	**DATE OF ANALYSIS**		**CONC UG/M3**	**LRL UG/M3**
1,1 Dichloroethane	75-34-3	2/7/2011	<	0.81	0.81
1,1 Dichloroethene	75-35-4	2/7/2011	<	0.40	0.40
1,2 Dibromoethane	106-93-4	2/7/2011	<	1.54	1.54
1,2 Dichlorobenzene (v)	95-50-1	2/7/2011	<	3.01	3.01
1,2 Dichloroethane	107-06-2	2/7/2011	<	2.03	2.03
1,2 Dichloropropane	78-87-5	2/7/2011	<	2.31	2.31
1,2-Dichlorotetrafluoroethane	76-14-2	2/7/2011	<	1.40	1.40
1,3 Butadiene	106-99-0	2/7/2011	<	2.21	2.21
1,3 Dichlorobenzene (v)	541-73-1	2/7/2011	<	1.20	1.20
1,4 Dichlorobenzene (v)	106-46-7	2/7/2011	<	3.01	3.01
1,4-Dioxane	123-91-1	2/7/2011	<	3.60	3.60
111 Trichloroethane	71-55-6	2/7/2011	<	1.09	1.09
112 Trichloroethane	79-00-5	2/7/2011	<	1.09	1.09
1122Tetrachloroethane	79-34-5	2/7/2011	<	1.37	1.37
124-Trimethylbenzene	95-63-6	2/7/2011	<	2.46	2.46
135-Trimethylbenzene	108-67-8	2/7/2011	<	2.46	2.46
2,2,4-Trimethylpentane	540-84-1	2/7/2011	<	2.33	2.33
2-Hexanone	591-78-6	2/7/2011	<	2.05	2.05
3-Chloropropene	107-05-1	2/7/2011	<	1.57	1.57
Acetone	67-64-1	2/7/2011	<	2.38	2.38
Acrylonitrile	107-13-1	2/7/2011	<	2.17	2.17
Benzene	71-43-2	2/7/2011	<	0.64	0.64
Benzyl Chloride	100-44-7	2/7/2011	<	1.04	1.04
Bromodichloromethane	75-27-4	2/7/2011	<	1.33	1.33
Bromoform	75-25-2	2/7/2011	<	2.07	2.07
Bromomethane	74-83-9	2/7/2011	<	0.78	0.78
c-1,2-Dichloroethene	156-59-2	2/7/2011	<	0.79	0.79
c-1,3Dichloropropene	10061-01-5	2/7/2011	<	2.27	2.27
Carbon disulfide	75-15-0	2/7/2011	<	1.56	1.56
Carbon Tetrachloride	56-23-5	2/7/2011	<	2.52	2.52
Chlorobenzene	108-90-7	2/7/2011	<	0.92	0.92
Chlorodibromomethane	124-48-1	2/7/2011	<	1.69	1.69
Chloroethane	75-00-3	2/7/2011	<	2.64	2.64
Chloroform	67-66-3	2/7/2011	<	0.97	0.97
Chloromethane	74-87-3	2/7/2011	<	2.07	2.07
Cyclohexane	110-82-7	2/7/2011	<	0.69	0.69
Dichlorodifluoromethane	75-71-8	2/7/2011	<	0.99	0.99
Ethyl Acetate	141-78-6	2/7/2011	<	18.01	18.01
Ethyl alcohol	64-17-5	2/7/2011	<	3.77	3.77
Ethyl Benzene	100-41-4	2/7/2011	<	0.87	0.87
Freon 113	76-13-1	2/7/2011	<	0.77	0.77

ECOTEST ID	**110415.04**				
SOURCE OF SAMPLE	**579.2V/Crescent**				
SAMPLE ID	**V-4**				
DATE SAMPLED	**1/31/2011**				
MATRIX	**Air**				
ANALYTICAL METHOD	**EPA TO-15**				
ANALYTE	**CAS NO**	**DATE OF ANALYSIS**		**CONC UG/M3**	**LRL UG/M3**
Heptane	142-82-5	2/7/2011	<	2.05	2.05
Hexachlorobutadiene	87-68-3	2/7/2011	<	5.34	5.34
Hexane	110-54-3	2/7/2011	<	1.76	1.76
Isopropyl Alcohol	67-63-0	2/7/2011	<	12.28	12.28
m + p Xylene	XYL-MP	2/7/2011	<	2.17	2.17
Methyl Ethyl Ketone	78-93-3	2/7/2011	<	2.95	2.95
Methylene Chloride	75-09-2	2/7/2011	<	0.69	0.69
Methylisobutylketone	108-10-1	2/7/2011	<	4.10	4.10
o Xylene	95-47-6	2/7/2011	<	0.87	0.87
p-Ethyltoluene	622-96-8	2/7/2011	<	2.46	2.46
Propylene	115-07-1	2/7/2011	<	0.86	0.86
Styrene	100-42-5	2/7/2011	<	0.85	0.85
t-1,2-Dichloroethene	156-60-5	2/7/2011	<	0.79	0.79
t-1,3Dichloropropene	10061-02-6	2/7/2011	<	0.91	0.91
ter.ButylMethylEther	1634-04-4	2/7/2011	<	0.70	0.70
tert. Butyl Alcohol	75-65-0	2/7/2011	<	6.06	6.06
Tetrachloroethene	127-18-4	2/7/2011	<	1.36	1.36
Tetrahydrofuran	109-99-9	2/7/2011	<	1.47	1.47
Toluene	108-88-3	2/7/2011		2.82	0.75
Trichloroethene	79-01-6	2/7/2011	<	1.07	1.07
Trichlorofluoromethane	75-69-4	2/7/2011	<	1.12	1.12
Vinyl Acetate	108-05-4	2/7/2011	<	1.76	1.76
Vinyl Bromide	593-60-2	2/7/2011	<	0.88	0.88
Vinyl Chloride	75-01-4	2/7/2011	<	0.51	0.51

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LAB NO.110415.05 02/09/11

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: 579.2V/Crescent
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:01/31/11 RECEIVED:02/01/11
TIME COL'D:*
MATRIX:Air SAMPLE: V-5

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
Propylene	ppbv	< 0.5		020711	0.5	EPATO-15
Dichlorodifluoromethane	ppbv	< 0.2		020711	0.2	EPATO-15
1,2-Dichlorotetrafluoroethan	ppbv	< 0.2		020711	0.2	EPATO-15
Chloromethane	ppbv	< 1		020711	1	EPATO-15
1,3 Butadiene	ppbv	< 1		020711	1	EPATO-15
Vinyl Chloride	ppbv	< 0.2		020711	0.2	EPATO-15
Bromomethane	ppbv	< 0.2		020711	0.2	EPATO-15
Chloroethane	ppbv	< 1		020711	1	EPATO-15
Vinyl Bromide	ppbv	< 0.2		020711	0.2	EPATO-15
Trichlorofluoromethane	ppbv	< 0.2		020711	0.2	EPATO-15
Ethyl alcohol	ppbv	23		020711	2	EPATO-15
Freon 113	ppbv	< 0.1		020711	0.1	EPATO-15
1,1 Dichloroethene	ppbv	< 0.1		020711	0.1	EPATO-15
Acetone	ppbv	1.9		020711	1	EPATO-15
Carbon disulfide	ppbv	< 0.5		020711	0.5	EPATO-15
Isopropyl Alcohol	ppbv	< 5		020711	5	EPATO-15
3-Chloropropene	ppbv	< 0.5		020711	0.5	EPATO-15
Methylene Chloride	ppbv	< 0.2		020711	0.2	EPATO-15
tert. Butyl Alcohol	ppbv	< 2		020711	2	EPATO-15
ter.ButylMethylEther	ppbv	< 0.2		020711	0.2	EPATO-15
t-1,2-Dichloroethene	ppbv	< 0.2		020711	0.2	EPATO-15
Acrylonitrile	ppbv	< 1		020711	1	EPATO-15
Hexane	ppbv	< 0.5		020711	0.5	EPATO-15
Vinyl Acetate	ppbv	< 0.5		020711	0.5	EPATO-15
1,1 Dichloroethane	ppbv	< 0.2		020711	0.2	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: * Collected between 11:41 - 13:44.
The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR

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LAB NO.110415.05 02/09/11

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: 579.2V/Crescent
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:01/31/11 RECEIVED:02/01/11
TIME COL'D:*
MATRIX:Air SAMPLE: V-5

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
c-1,2-Dichloroethene	ppbv	< 0.2		020711	0.2	EPATO-15
Methyl Ethyl Ketone	ppbv	< 1		020711	1	EPATO-15
Ethyl Acetate	ppbv	< 5		020711	5	EPATO-15
Tetrahydrofuran	ppbv	< 0.5		020711	0.5	EPATO-15
Chloroform	ppbv	< 0.2		020711	0.2	EPATO-15
Cyclohexane	ppbv	< 0.2		020711	0.2	EPATO-15
111 Trichloroethane	ppbv	< 0.2		020711	0.2	EPATO-15
Carbon Tetrachloride	ppbv	< 0.4		020711	0.4	EPATO-15
Benzene	ppbv	0.55		020711	0.2	EPATO-15
2,2,4-Trimethylpentane	ppbv	< 0.5		020711	0.5	EPATO-15
1,2 Dichloroethane	ppbv	< 0.5		020711	0.5	EPATO-15
Heptane	ppbv	< 0.5		020711	0.5	EPATO-15
Trichloroethene	ppbv	< 0.2		020711	0.2	EPATO-15
1,2 Dichloropropane	ppbv	< 0.5		020711	0.5	EPATO-15
1,4-Dioxane	ppbv	< 1		020711	1	EPATO-15
Bromodichloromethane	ppbv	< 0.2		020711	0.2	EPATO-15
c-1,3Dichloropropene	ppbv	< 0.5		020711	0.5	EPATO-15
Methylisobutylketone	ppbv	< 1		020711	1	EPATO-15
Toluene	ppbv	11		020711	0.2	EPATO-15
t-1,3Dichloropropene	ppbv	< 0.2		020711	0.2	EPATO-15
112 Trichloroethane	ppbv	< 0.2		020711	0.2	EPATO-15
Tetrachloroethene	ppbv	19		020711	0.2	EPATO-15
2-Hexanone	ppbv	< 0.5		020711	0.5	EPATO-15
Chlorodibromomethane	ppbv	< 0.2		020711	0.2	EPATO-15
1,2 Dibromoethane	ppbv	< 0.2		020711	0.2	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: * Collected between 11:41 - 13:44.
The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR

rn = 2371 NYSDOH ID # 10320

ECOTEST LABORATORIES, INC. *ENVIRONMENTAL TESTING*

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LAB NO.110415.05 02/09/11

Cosmos Environmental
132 Franklin Avenue, P.O. Box 349
Woodmere, NY 11598
ATTN: Alexander I. Avracen PO#:

SOURCE OF SAMPLE: 579.2V/Crescent
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:01/31/11 RECEIVED:02/01/11
TIME COL'D:*
MATRIX:Air SAMPLE: V-5

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
Chlorobenzene	ppbv	< 0.2		020711	0.2	EPATO-15
Ethyl Benzene	ppbv	0.98		020711	0.2	EPATO-15
m + p Xylene	ppbv	4.5		020711	0.5	EPATO-15
o Xylene	ppbv	0.94		020711	0.2	EPATO-15
Styrene	ppbv	< 0.2		020711	0.2	EPATO-15
Bromoform	ppbv	< 0.2		020711	0.2	EPATO-15
1122Tetrachloroethane	ppbv	< 0.2		020711	0.2	EPATO-15
p-Ethyltoluene	ppbv	2.6		020711	0.5	EPATO-15
135-Trimethylbenzene	ppbv	< 0.5		020711	0.5	EPATO-15
124-Trimethylbenzene	ppbv	4.1		020711	0.5	EPATO-15
1,3 Dichlorobenzene (v)	ppbv	< 0.2		020711	0.2	EPATO-15
1,4 Dichlorobenzene (v)	ppbv	< 0.5		020711	0.5	EPATO-15
Benzyl Chloride	ppbv	< 0.2		020711	0.2	EPATO-15
1,2 Dichlorobenzene (v)	ppbv	< 0.5		020711	0.5	EPATO-15
Hexachlorobutadiene	ppbv	< 0.5		020711	0.5	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: * Collected between 11:41 - 13:44.
The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR

rn = 2372 NYSDOH ID # 10320

ECOTEST ID	**110415.05**				
SOURCE OF SAMPLE	**579.2V/Crescent**				
SAMPLE ID	**V-5**				
DATE SAMPLED	**1/31/2011**				
MATRIX	**Air**				
ANALYTICAL METHOD	**EPA TO-15**				
ANALYTE	**CAS NO**	**DATE OF ANALYSIS**		**CONC UG/M3**	**LRL UG/M3**
1,1 Dichloroethane	75-34-3	2/7/2011	<	0.81	0.81
1,1 Dichloroethene	75-35-4	2/7/2011	<	0.40	0.40
1,2 Dibromoethane	106-93-4	2/7/2011	<	1.54	1.54
1,2 Dichlorobenzene (v)	95-50-1	2/7/2011	<	3.01	3.01
1,2 Dichloroethane	107-06-2	2/7/2011	<	2.03	2.03
1,2 Dichloropropane	78-87-5	2/7/2011	<	2.31	2.31
1,2-Dichlorotetrafluoroethane	76-14-2	2/7/2011	<	1.40	1.40
1,3 Butadiene	106-99-0	2/7/2011	<	2.21	2.21
1,3 Dichlorobenzene (v)	541-73-1	2/7/2011	<	1.20	1.20
1,4 Dichlorobenzene (v)	106-46-7	2/7/2011	<	3.01	3.01
1,4-Dioxane	123-91-1	2/7/2011	<	3.60	3.60
111 Trichloroethane	71-55-6	2/7/2011	<	1.09	1.09
112 Trichloroethane	79-00-5	2/7/2011	<	1.09	1.09
1122Tetrachloroethane	79-34-5	2/7/2011	<	1.37	1.37
124-Trimethylbenzene	95-63-6	2/7/2011		20.17	2.46
135-Trimethylbenzene	108-67-8	2/7/2011	<	2.46	2.46
2,2,4-Trimethylpentane	540-84-1	2/7/2011	<	2.33	2.33
2-Hexanone	591-78-6	2/7/2011	<	2.05	2.05
3-Chloropropene	107-05-1	2/7/2011	<	1.57	1.57
Acetone	67-64-1	2/7/2011		4.52	2.38
Acrylonitrile	107-13-1	2/7/2011	<	2.17	2.17
Benzene	71-43-2	2/7/2011		1.76	0.64
Benzyl Chloride	100-44-7	2/7/2011	<	1.04	1.04
Bromodichloromethane	75-27-4	2/7/2011	<	1.33	1.33
Bromoform	75-25-2	2/7/2011	<	2.07	2.07
Bromomethane	74-83-9	2/7/2011	<	0.78	0.78
c-1,2-Dichloroethene	156-59-2	2/7/2011	<	0.79	0.79
c-1,3Dichloropropene	10061-01-5	2/7/2011	<	2.27	2.27
Carbon disulfide	75-15-0	2/7/2011	<	1.56	1.56
Carbon Tetrachloride	56-23-5	2/7/2011	<	2.52	2.52
Chlorobenzene	108-90-7	2/7/2011	<	0.92	0.92
Chlorodibromomethane	124-48-1	2/7/2011	<	1.69	1.69
Chloroethane	75-00-3	2/7/2011	<	2.64	2.64
Chloroform	67-66-3	2/7/2011	<	0.97	0.97
Chloromethane	74-87-3	2/7/2011	<	2.07	2.07
Cyclohexane	110-82-7	2/7/2011	<	0.69	0.69
Dichlorodifluoromethane	75-71-8	2/7/2011	<	0.99	0.99
Ethyl Acetate	141-78-6	2/7/2011	<	18.01	18.01
Ethyl alcohol	64-17-5	2/7/2011		43.31	3.77
Ethyl Benzene	100-41-4	2/7/2011		4.25	0.87
Freon 113	76-13-1	2/7/2011	<	0.77	0.77

ECOTEST ID	**110415.05**				
SOURCE OF SAMPLE	**579.2V/Crescent**				
SAMPLE ID	**V-5**				
DATE SAMPLED	**1/31/2011**				
MATRIX	**Air**				
ANALYTICAL METHOD	**EPA TO-15**				
ANALYTE	**CAS NO**	**DATE OF ANALYSIS**		**CONC UG/M3**	**LRL UG/M3**
Heptane	142-82-5	2/7/2011	<	2.05	2.05
Hexachlorobutadiene	87-68-3	2/7/2011	<	5.34	5.34
Hexane	110-54-3	2/7/2011	<	1.76	1.76
Isopropyl Alcohol	67-63-0	2/7/2011	<	12.28	12.28
m + p Xylene	XYL-MP	2/7/2011		19.56	2.17
Methyl Ethyl Ketone	78-93-3	2/7/2011	<	2.95	2.95
Methylene Chloride	75-09-2	2/7/2011	<	0.69	0.69
Methylisobutylketone	108-10-1	2/7/2011	<	4.10	4.10
o Xylene	95-47-6	2/7/2011		4.09	0.87
p-Ethyltoluene	622-96-8	2/7/2011		12.77	2.46
Propylene	115-07-1	2/7/2011	<	0.86	0.86
Styrene	100-42-5	2/7/2011	<	0.85	0.85
t-1,2-Dichloroethene	156-60-5	2/7/2011	<	0.79	0.79
t-1,3Dichloropropene	10061-02-6	2/7/2011	<	0.91	0.91
ter.ButylMethylEther	1634-04-4	2/7/2011	<	0.70	0.70
tert. Butyl Alcohol	75-65-0	2/7/2011	<	6.06	6.06
Tetrachloroethene	127-18-4	2/7/2011		128.92	1.36
Tetrahydrofuran	109-99-9	2/7/2011	<	1.47	1.47
Toluene	108-88-3	2/7/2011		41.42	0.75
Trichloroethene	79-01-6	2/7/2011	<	1.07	1.07
Trichlorofluoromethane	75-69-4	2/7/2011	<	1.12	1.12
Vinyl Acetate	108-05-4	2/7/2011	<	1.76	1.76
Vinyl Bromide	593-60-2	2/7/2011	<	0.88	0.88
Vinyl Chloride	75-01-4	2/7/2011	<	0.51	0.51

Appendix 9

Non-Hazardous Soil Disposal Manifest

(SAMPLE)

CLEANEARTH

Manifest # 462438

GLOBAL JOB NUMBER: _____ **FACILITY APPROVAL NUMBER:** _____

Please Check One:

☐ Clean Earth of Carteret
24 Middlesex Avenue
Carteret, NJ 07008
Ph: 732-541-8909

☐ Clean Earth of Maryland
1469 Oak Ridge Place
Hagerstown, MD 21740
Ph: 301-791-6220

☐ Clean Earth of New Castle
94 Pyles Lane
New Castle, DE 19720
Ph: 302-427-6633

☐ Other
_____
_____
_____

☐ Clean Earth of Philadelphia
3201 S. 61st Street
Philadelphia, PA 19153
Ph: 215-724-5520

☐ Clean Earth of North Jersey
115 Jacobus Avenue
Kearny, NJ 07032
Ph: 973-344-4004

☐ Clean Earth of Southeast Pennsylvania
7 Steel Road East
Morrisville, PA 19067
Ph: 215-428-1700

Non-Hazardous Material Manifest

(Type or Print Clearly)

GENERATOR'S NAME & SITE ADDRESS:	GROSS WEIGHT: ☐Tons ☐Yards	
	TARE WEIGHT: ☐Tons ☐Yards	
GENERATOR'S PHONE: _____	NET WEIGHT: ☐Tons ☐Yards	

DESCRIPTION OF MATERIAL/SAMPLE ID AND LOCATION

GENERATOR'S CERTIFICATION – Incomplete and/or unsigned manifests will cause the load to be delayed and/or rejected.

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, is not a DOT hazardous substance as defined by 49 CFR Part 172 or any applicable state law, has been fully and accurately described above, classified, packaged and is in proper condition for transportation according to all applicable state and federal regulations.

Name: _____ Title: _____

Signature: _____ Date and Time: _____

TRANSPORTER

Company: _____ Phone Number: _____

Address: _____ Truck # and License Plate: _____

Driver: _____ SW Haulers Permit #: _____

(Type or Print Clearly) (applicable state permit #)

I hereby certify that the above named material was picked up at the site listed above.

Driver Signature: _____ Date and Time: _____

DESTINATION

I hereby certify that the above named material was delivered without incident to the facility noted above.

Driver Signature: _____ Date and Time: _____

I hereby certify that the above named material has been accepted at the above referenced facility.

Authorized Signature: _____ Date and Time: _____

FACILITY

Appendix 10

Vapor Intrusion Control Materials

GRACE

PREPRUFE® 300R & 160R

Pre-applied waterproofing membranes that bond integrally to poured concrete for use below slabs or behind basement walls on confined sites

Description

Preprufe® 300R & 160R membranes are unique composite sheets comprising a thick HDPE film, an aggressive pressure sensitive adhesive and a weather resistant protective coating.

Unlike conventional non-adhering membranes, which are vulnerable to water ingress tracking between the unbonded membrane and structure, the unique Preprufe bond to concrete prevents ingress or migration of water around the structure.

The Preprufe R System includes:

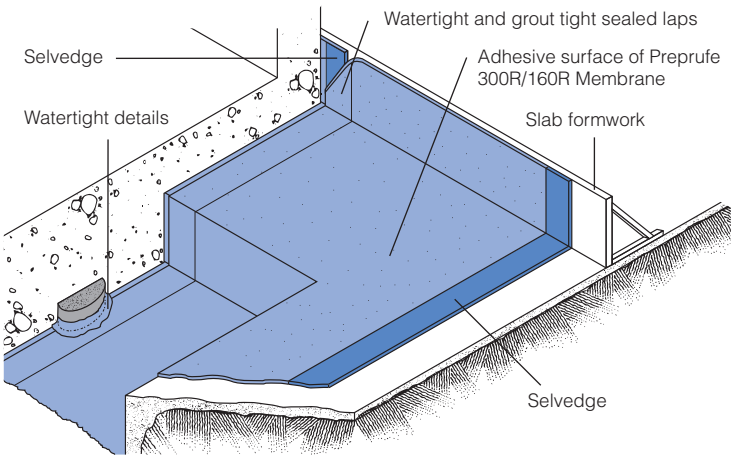
- **Preprufe 300R**—heavy-duty grade for use below slabs and on rafts (i.e. mud slabs). Designed to accept the placing of heavy reinforcement using conventional concrete spacers.
- **Preprufe 160R**—thinner grade for blindside, zero property line applications against soil retention systems.
- **Preprufe Tape LT**—for covering cut edges, roll ends, penetrations and detailing (temperatures between 25°F (-4°C) and 86°F (+30°C)).
- **Preprufe Tape HC**—as above for use in Hot Climates (minimum 50°F (10°C)).
- **Bituthene® Liquid Membrane**—for sealing around penetrations, etc.
- **Adcor™ ES**—waterstop for joints in concrete walls and floors
- **Preprufe Tieback Covers**—preformed cover for soil retention wall tieback heads
- **Preprufe Preformed Corners**—preformed inside and outside corners

Preprufe 300R & 160R membranes are applied either horizontally to smooth prepared concrete, carton forms or well rolled and compacted earth or crushed stone substrate; or vertically to permanent formwork or adjoining structures. Concrete is then cast directly against the adhesive side of the membranes. The specially developed Preprufe adhesive layers work together to form a continuous and integral seal to the structure.

Preprufe can be returned up the inside face of slab formwork but is not recommended for conventional twin-sided formwork on walls, etc. Use Bituthene self-adhesive membrane or Procor® fluid applied membrane to walls after removal of formwork for a fully bonded system to all structural surfaces.

Advantages

- **Forms a unique continuous adhesive bond to concrete poured against it**—prevents water migration and makes it unaffected by ground settlement beneath slabs
- **Fully-adhered watertight laps** and detailing
- **Provides a barrier to water, moisture and gas**—physically isolates the structure from the surrounding ground
- **BBA Certified** for basement Grades 2, 3, & 4 to BS 8102:1990
- **Zero permeance** to moisture
- **Solar reflective**—reduced temperature gain
- **Simple and quick to install**—requiring no priming or fillets
- **Can be applied to permanent formwork**—allows maximum use of confined sites
- **Self protecting**—can be trafficked immediately after application and ready for immediate placing of reinforcement
- **Unaffected by wet conditions**—cannot activate prematurely
- **Inherently waterproof, non-reactive system:**
  - not reliant on confining pressures or hydration
  - unaffected by freeze/thaw, wet/dry cycling
- **Chemical resistant**—effective in most types of soils and waters, protects structure from salt or sulphate attack



Drawings are for illustration purposes only.
Please refer to graceconstruction.com for specific application details.

BBA BRITISH BOARD OF AGREMENT CERTIFICATE No. 97/3325

Installation

The most current application instructions, detail drawings and technical letters can be viewed at graceconstruction.com. For other technical information contact your local Grace representative.

Preprufe 300R & 160R membranes are supplied in rolls 4 ft (1.2 m) wide, with a selvedge on one side to provide self-adhered laps for continuity between rolls. The rolls of Preprufe Membrane and Preprufe Tape are interwound with a disposable plastic release liner which must be removed before placing reinforcement and concrete.

Substrate Preparation

All surfaces—It is essential to create a sound and solid substrate to eliminate movement during the concrete pour. Substrates must be regular and smooth with no gaps or voids greater than 0.5 in. (12 mm). Grout around all penetrations such as utility conduits, etc. for stability (see Figure 1).

Horizontal—The substrate must be free of loose aggregate and sharp protrusions. Avoid curved or rounded substrates. When installing over earth or crushed stone, ensure substrate is well compacted to avoid displacement of substrate due to traffic or concrete pour. The surface does not need to be dry, but standing water must be removed.

Vertical—Use concrete, plywood, insulation or other approved facing to sheet piling to provide support to the membrane. Board systems such as timber lagging must be close butted to provide support and not more than 0.5 in. (12 mm) out of alignment.

Membrane Installation

Preprufe can be applied at temperatures of 25°F (-4°C) or above. When installing Preprufe in cold or marginal weather conditions 55°F (<13°C) the use of Preprufe Tape LT is recommended at all laps and detailing. Preprufe Tape LT should be applied to clean, dry surfaces and the release liner must be removed immediately after application. Alternatively, Preprufe Low Temperature (LT) is available for low temperature condition applications. Refer to Preprufe LT data sheet for more information.

Horizontal substrates—Place the membrane HDPE film side to the substrate with the clear plastic release liner facing towards the concrete pour. End laps should be staggered to avoid a build up of layers. Leave plastic release liner in position until overlap procedure is completed (see Figure 2).

Accurately position succeeding sheets to overlap the previous sheet 3 in. (75 mm) along the marked selvedge. Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to overlap. Peel back the plastic release liner from between the overlaps as the two layers are bonded together. Ensure a continuous bond is achieved without creases and roll firmly with a heavy roller. Completely remove the plastic liner to expose the protective coating. Any initial tack will quickly disappear.

Refer to Grace Tech Letter 15 for information on suitable rebar chairs for Preprufe.

Vertical substrates—Mechanically fasten the membrane vertically using fasteners appropriate to the substrate with the the clear plastic release liner facing towards the concrete pour. The membrane may be installed in any convenient length. Fastening can be made through the selvedge using a small and low profile head fastener so that the membrane lays flat and allows firmly rolled overlaps. Immediately remove the plastic release liner.

Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to overlap. Roll firmly to ensure a watertight seal.

Roll ends and cut edges—Overlap all roll ends and cut edges by a minimum 3 in. (75 mm) and ensure the area is clean and free from contamination, wiping with a damp cloth if necessary. Allow to dry and apply Preprufe Tape LT (or HC in hot climates) centered over the lap edges and roll firmly (see Figure 3). Immediately remove printed plastic release liner from the tape.

Details

Refer to Preprufe Field Application Manual, Section V Application Instructions or visit graceconstruction.com. This manual gives comprehensive guidance and standard details.

Membrane Repair

Inspect the membrane before installation of reinforcement steel, formwork and final placement of concrete. The membrane can be easily cleaned by power washing if required. Repair damage by wiping the area with a damp cloth to ensure the area is clean and free from dust, and allow to dry. Repair small punctures (0.5 in. (12 mm) or less) and slices by applying Preprufe Tape centered over the damaged area and roll firmly. Remove the release liner from the tape. Repair holes and large punctures by applying a patch of Preprufe membrane, which extends 6 in. (150 mm) beyond the damaged area. Seal all edges of the patch with Preprufe Tape, remove the release liner from the tape and roll firmly. Any areas of damaged adhesive should be covered with Preprufe Tape. Remove printed plastic release liner from tape. Where exposed selvedge has lost adhesion or laps have not been sealed, ensure the area is clean and dry and cover with fresh Preprufe Tape, rolling firmly. Alternatively, use a hot air gun or similar to activate adhesive and firmly roll lap to achieve continuity.

Pouring of Concrete

Ensure the plastic release liner is removed from all areas of Preprufe membrane and tape.

It is recommended that concrete be poured within 56 days (42 days in hot climates) of application of the membrane. Following proper ACI guidelines, concrete must be placed carefully and consolidated properly to avoid damage to the membrane. Never use a sharp object to consolidate the concrete.

Removal of Formwork

Preprufe membranes can be applied to removable formwork, such as slab perimeters, elevator and lift pits, etc. Once the concrete is poured the formwork must remain in place until the concrete has gained sufficient compressive strength to develop the surface bond. Preprufe membranes are not recommended for conventional twin-sided wall forming systems.

A minimum concrete compressive strength of 1500 psi (10 N/mm^2) is recommended prior to stripping formwork supporting Preprufe membranes. Premature stripping may result in displacement of the membrane and/or spalling of the concrete.

Refer to Grace Tech Letter 17 for information on removal of formwork for Preprufe.

Figure 1

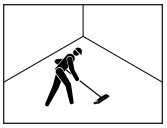


Figure 2

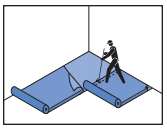
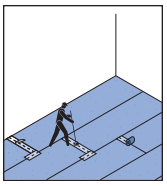
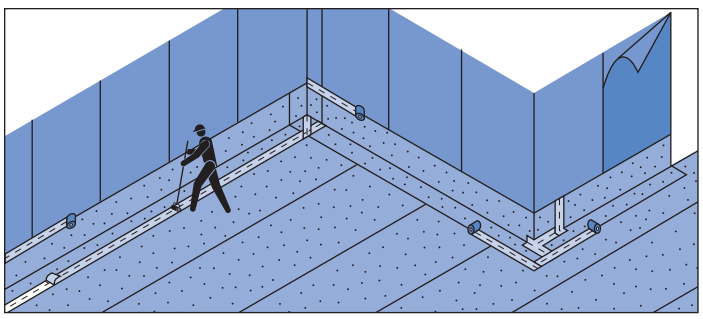


Figure 3

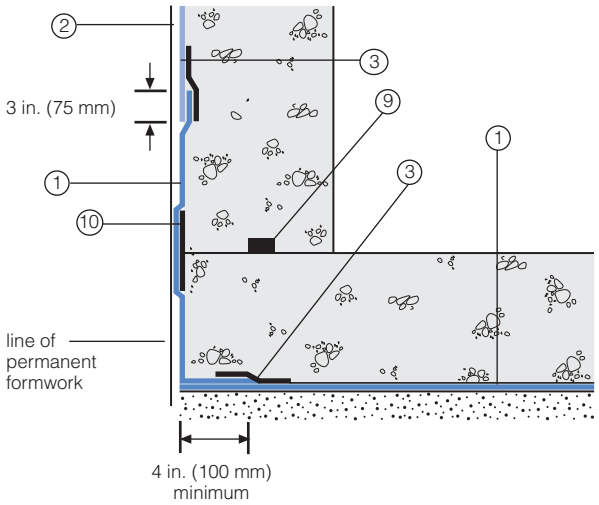




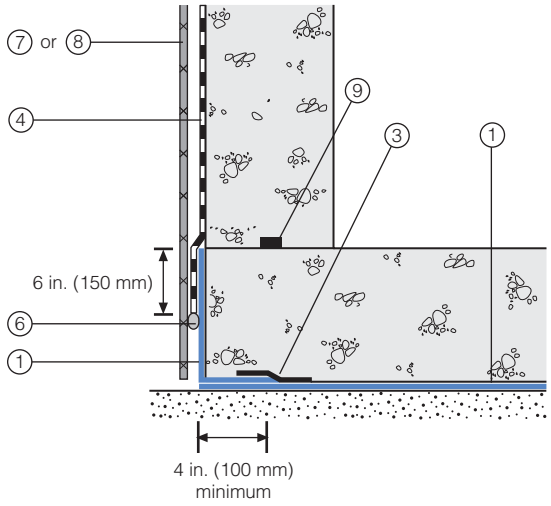
Detail Drawings

Details shown are typical illustrations and not working details. For a list of the most current details, visit us at graceconstruction.com. For technical assistance with detailing and problem solving please call toll free at 866-333-3SBM (3726).

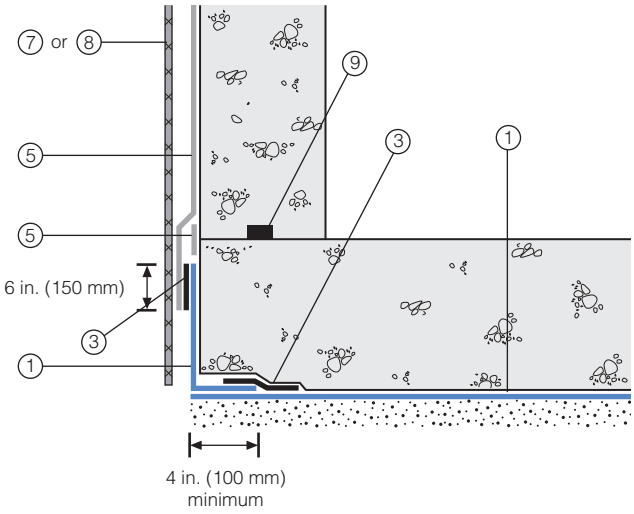
Wall base detail against permanent shutter



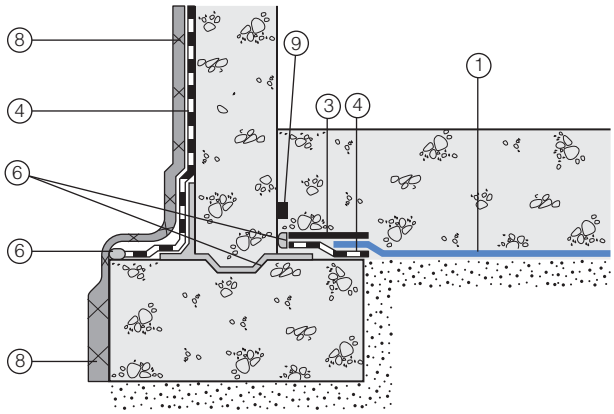
Bituthene wall base detail (Option 1)



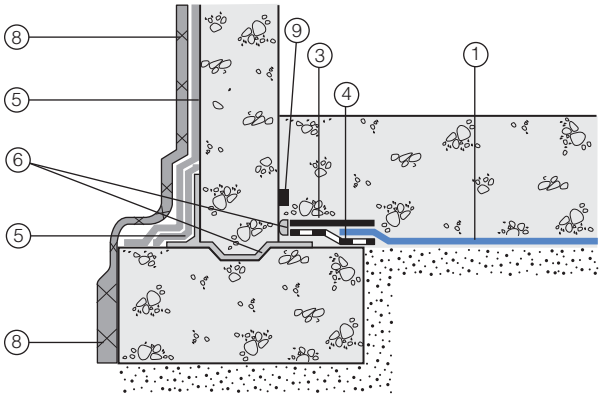
Procor wall base detail (Option 1)



Bituthene wall base detail (Option 2)



Procor wall base detail (Option 2)



1 Preprufe 300R
2 Preprufe 160R
3 Preprufe Tape
4 Bituthene
5 Procor
6 Bituthene Liquid Membrane
7 Protection
8 Hydroduct®
9 Adcor ES
10 Preprufe CJ Tape

Supply

Dimensions (Nominal)	Preprufe 300R Membrane	Preprufe 160R Membrane	Preprufe Tape (LT or HC*)
Thickness	0.046 in. (1.2 mm)	0.032 in. (0.8 mm)	
Roll size	4 ft x 98 ft (1.2 m x 30 m)	4 ft x 115 ft (1.2 m x 35 m)	4 in. x 49 ft (100 mm x 15 m)
Roll area	392 ft^2 (36 m^2)	460 ft^2 (42 m^2)	
Roll weight	108 lbs (50 kg)	92 lbs (42 kg)	4.3 lbs (2 kg)
Minimum side/end laps	3 in. (75 mm)	3 in. (75 mm)	3 in. (75 mm)
* LT denotes Low Temperature (between 25°F (-4°C) and 86°F (+30°C)) HC denotes Hot Climate (50°F (>+10°C))			
Ancillary Products			
Bituthene Liquid Membrane—1.5 US gal (5.7 liter) or 4 US gal (15.1 liter)			

Physical Properties

Property	Typical Value 300R	Typical Value 160R	Test Method
Color	white	white	
Thickness	0.046 in. (1.2 mm)	0.032 in. (0.8 mm)	ASTM D3767
Lateral Water Migration Resistance	Pass at 231 ft (71 m) of hydrostatic head pressure	Pass at 231 ft (71 m) of hydrostatic head pressure	ASTM D5385, modified[1]
Low temperature flexibility	Unaffected at -20°F (-29°C)	Unaffected at -20°F (-29°C)	ASTM D1970
Resistance to hydrostatic head	231 ft (71 m)	231 ft (71 m)	ASTM D5385, modified[2]
Elongation	500%	500%	ASTM D412, modified[3]
Tensile strength, film	4000 psi (27.6 MPa)	4000 psi (27.6 MPa)	ASTM D412
Crack cycling at -9.4°F (-23°C), 100 cycles	Unaffected, Pass	Unaffected, Pass	ASTM C836
Puncture resistance	221 lbs (990 N)	100 lbs (445 N)	ASTM E154
Peel adhesion to concrete	5 lbs/in. (880 N/m)	5 lbs/in. (880 N/m)	ASTM D903, modified[4]
Lap peel adhesion	5 lbs/in. (880 N/m)	5 lbs/in. (880 N/m)	ASTM D1876, modified[5]
Permeance to water vapor transmission	0.01 perms (0.6 ng/(Pa x s x m^2))	0.01 perms (0.6 ng/(Pa x s x m^2))	ASTM E96, method B
Water absorption	0.5%	0.5%	ASTM D570

Footnotes:

1. Lateral water migration resistance is tested by casting concrete against membrane with a hole and subjecting the membrane to hydrostatic head pressure with water. The test measures the resistance of lateral water migration between the concrete and the membrane.
2. Hydrostatic head tests of Preprufe Membranes are performed by casting concrete against the membrane with a lap. Before the concrete cures, a 0.125 in. (3 mm) spacer is inserted perpendicular to the membrane to create a gap. The cured block is placed in a chamber where water is introduced to the membrane surface up to the head indicated.
3. Elongation of membrane is run at a rate of 2 in. (50 mm) per minute.
4. Concrete is cast against the protective coating surface of the membrane and allowed to properly dry (7 days minimum). Peel adhesion of membrane to concrete is measured at a rate of 2 in. (50 mm) per minute at room temperature.
5. The test is conducted 15 minutes after the lap is formed (per Grace published recommendations) and run at a rate of 2 in. (50 mm) per minute.

Specification Clauses

Preprufe 300R or 160R shall be applied with its adhesive face presented to receive fresh concrete to which it will integrally bond. Only Grace Construction Products approved membranes shall be bonded to Preprufe 300R/160R. All Preprufe 300R/160R system materials shall be supplied by Grace Construction Products, and applied strictly in accordance with their instructions. Specimen performance and formatted clauses are also available.

NOTE: Use Preprufe Tape to tie-in Procor with Preprufe.

Health and Safety

Refer to relevant Material Safety data sheet. Complete rolls should be handled by a minimum of two persons.

www.graceconstruction.com

For technical assistance call toll free at 866-333-3SBM (3726)

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